



High Power Filters

**RF Specifications
Technical Data**

Version 008



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Contents

MRI Filters

1

MEDSPEC S300

1.1

Lowpass Filter

1.1.1

Figure 1.1. Lowpass Filter HQ 125MHz Diagram

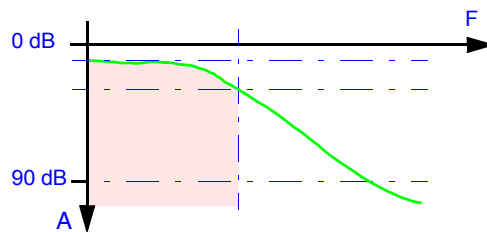


Table 1.1. W1346495 - Filter HQ 125 0-³¹P LP (¹H)

RF Power Specification		
Maximum Power Operating	4kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 50	
Maximum Insertion Loss (dB)	0.3	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹ H	123...125	
Minimum Rejection (dB)	100	
Mechanical Dimensions and Weight		
Case 2R126MRI (mm)	177 x 162 x 50	
Weight (kg)	1.6	

Figure 1.2. Bandpass Filter HQ 125MHz Diagram

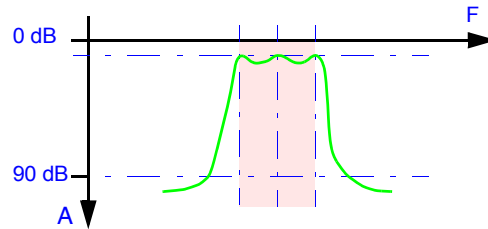


Table 1.2. W1346494 - Filter HQ 125 ¹H BP (-³¹P)

RF Power Specification		
Maximum Power Operating	4kW @ 10ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	123...125	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P	< 50	
Minimum Rejection (dB)	130	
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Figure 1.3. Diplexer Filter HQ 168MHz Diagram

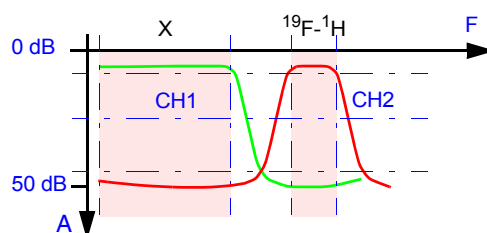


Table 1.3. W1346645 - Diplexer HQ 168 X / $^{19}F-^1H$

RF Power Specification		
Maximum Power Operating	4kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : X, $^{19}F...^1H$	< 68.2	158.3...168.3
Maximum Insertion Loss (dB)	0.2	0.7
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : $^{19}F...^1H$, X	158.3...168.3	< 68.2
Minimum Rejection (dB)	90	110
Mechanical Dimensions and Weight		
Case 2D178-7R155 (mm)	336 x 194 x 100	
Weight (kg)	0.0	

Figure 1.4. Lowpass Filter HQ 170MHz Diagram

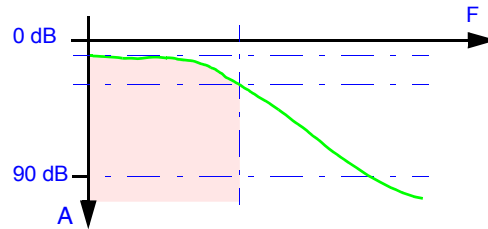


Table 1.4. W1346497 - Filter HQ 170 0-³¹P LP (¹H)

RF Power Specification		
Maximum Power Operating	4kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 70	
Maximum Insertion Loss (dB)	0.3	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹ H	168...170	
Minimum Rejection (dB)	100	
Mechanical Dimensions and Weight		
Case 2R126MRI (mm)	177 x 162 x 50	
Weight (kg)	1.6	

Figure 1.5. Bandpass Filter HQ 170MHz Diagram

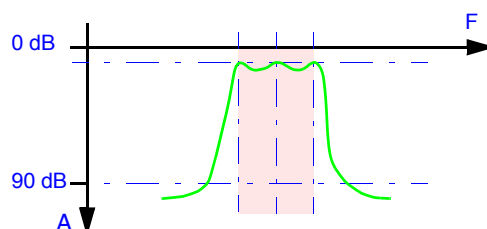


Table 1.5. W1346496 - Filter HQ 170 ¹H BP (-³¹P)

RF Power Specification		
Maximum Power Operating	4kW @ 10ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	168...170	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P	< 70	
Minimum Rejection (dB)	130	
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

NMR Filters

2

Quick search

2.1

Table 2.1. AVANCE 300MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346369	W1346239	W1346239	W1346239	W1346239
¹⁹ F	W1346253		W1346249	W1346249	W1346249	W1346249
³¹ P	W1346269	W1346269		W1346372	W1346372	W1346372
¹³ C	W1346271	W1346271	W1346271		W1346459	W1346275
² H	W1346452	W1346452	W1346452	W1346273		W1346273
¹⁵ N	W1346278	W1346278	W1346278	W1346278	W1346274	

Table 2.2. AVANCE 400MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346370	W1346240	W1346240	W1346240	W1346240
¹⁹ F	W1346254		W1346250	W1346250	W1346250	W1346250
³¹ P	W1346256	W1346256		W1346349	W1346349	W1346349
¹³ C	W1346488	W1346488	W1346488		W1346440	W1346226
² H	W1346442	W1346442	W1346442	W1346260		W1346260
¹⁵ N	W1346628	W1346628	W1346628	W1346628	W1346261	

Table 2.3. AVANCE 500MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346358	W1346223	W1346223	W1346223	W1346223
¹⁹ F	W1346232		W1346251	W1346251	W1346251	W1346251
³¹ P	W1346262	W1346262		W1346351	W1346351	W1346351
¹³ C	W1346489	W1346489	W1346489		W1346460	W1346224
² H	W1346453	W1346453	W1346453	W1346266		W1346266
¹⁵ N	W1346629	W1346629	W1346629	W1346629	W1346267	

NMR Filters

Table 2.4. AVANCE 600MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346371	W1346241	W1346241	W1346241	W1346241
¹⁹ F	W1346255		W1346252	W1346252	W1346252	W1346252
³¹ P	W1346279	W1346279		W1346367	W1346367	W1346367
¹³ C	W1346490	W1346490	W1346490		W1346461	W1346230
² H	W1346454	W1346454	W1346454	W1346282		W1346282
¹⁵ N	W1346630	W1346630	W1346630	W1346630	W1346277	

Table 2.5. AVANCE 700MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346387	W1346296	W1346296	W1346296	W1346296
¹⁹ F	W1346284		W1346300	W1346300	W1346300	W1346300
³¹ P	W1346304	W1346304		W1346304	W1346304	W1346304
¹³ C	W1346491	W1346491	W1346491		W1346462	W1346316
² H	W1346455	W1346455	W1346455	W1346492		W1346492
¹⁵ N	W1346659	W1346659	W1346659	W1346659	W1346328	

Table 2.6. AVANCE 750MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346385	W1346297	W1346297	W1346297	W1346297
¹⁹ F	W1346285		W1346301	W1346301	W1346301	W1346301
³¹ P	W1346305	W1346305		W1346305	W1346305	W1346305
¹³ C	W1346313	W1346313	W1346313		W1346463	W1346317
² H	W1346456	W1346456	W1346456	W1346493		W1346493
¹⁵ N	W1346660	W1346660	W1346660	W1346660	W1346329	

Table 2.7. AVANCE 800MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346386	W1346298	W1346298	W1346298	W1346298
¹⁹ F	W1346286		W1346302	W1346302	W1346302	W1346302
³¹ P	W1346306	W1346306		W1346306	W1346306	W1346306
¹³ C	W1346314	W1346314	W1346314		W1346464	W1346318
² H	W1346457	W1346457	W1346457	W1346326		W1346326
¹⁵ N	W1346661	W1346661	W1346661	W1346661	W1346330	

Table 2.8. AVANCE 850MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346711	W1346655	W1346655	W1346655	W1346655
¹⁹ F	W1346712		W1346675	W1346675	W1346675	W1346675
³¹ P	W1346715	W1346715		W1346715	W1346715	W1346715
¹³ C	W1346710	W1346710	W1346710		W1346710	W1346710
² H	W1346697	W1346697	W1346697	W1346697		W1346697
¹⁵ N	W1346656	W1346656	W1346656	W1346656	W1346716	

Table 2.9. AVANCE 900MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346388	W1346299	W1346299	W1346299	W1346299
¹⁹ F	W1346287		W1346303	W1346303	W1346303	W1346303
³¹ P	W1346307	W1346307		W1346307	W1346307	W1346307
¹³ C	W1346315	W1346315	W1346315		W1346465	W1346319
² H	W1346458	W1346458	W1346458	W1346327		W1346327
¹⁵ N	W1346662	W1346662	W1346662	W1346662	W1346331	

Table 2.10. AVANCE 1000MHz cross reference table

Pass \ Stop	¹ H	¹⁹ F	³¹ P	¹³ C	² H	¹⁵ N
¹ H		W1346664	W1346665	W1346665	W1346665	W1346665
¹⁹ F	W1346663		W1346666	W1346666	W1346666	W1346666
³¹ P	W1346667	W1346667		W1346667	W1346667	W1346667
¹³ C	W1346669	W1346669	W1346669		W1346669	W1346669
² H	W1346671	W1346671	W1346671	W1346671		W1346671
¹⁵ N	W1346672	W1346672	W1346672	W1346672	W1346717	

Typical NMR solids experiments **2.2**

Most common Nuclei combinations **2.2.1**

Figure 2.1. 300MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346272 ²⁹ Si	⁵⁹ Co	W1346271 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346239 ¹ H
2	¹⁵ N	¹⁷ O	W1346273 ² H	²⁹ Si	⁵⁹ Co	W1346459 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346239 ¹ H
3	W1346278 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346275 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346239 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346272 ²⁹ Si	⁵⁹ Co	¹³ C	W1346271 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346239 ¹ H
5	¹⁵ N	W1346452 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346270 ¹¹ B	³¹ P	W1346239 ¹ H
6	W1346278 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346270 ¹¹ B	³¹ P	W1346239 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346271 ²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346271 ²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346271 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	W1346271 ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346272 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
12	¹⁵ N	¹⁷ O	W1346452 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H
13	¹⁵ N	W1346452 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346372 ³¹ P	W1346239 ¹ H

Figure 2.2. 400MHz typical experiments

1	^{15}N	^{17}O	^2H	W1346259 ^{29}Si	^{59}Co	W1346488 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346240 ^1H
2	^{15}N	^{17}O	W1346260 ^2H	^{29}Si	^{59}Co	W1346440 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346240 ^1H
3	W1346628 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346226 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346240 ^1H
4	^{15}N	^{17}O	^2H	W1346259 ^{29}Si	^{59}Co	^{13}C	W1346488 ^{27}Al	^{23}Na	^{11}B	^{31}P	W1346240 ^1H
5	^{15}N	W1346442 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346257 ^{11}B	^{31}P	W1346240 ^1H
6	W1346628 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346257 ^{11}B	^{31}P	W1346240 ^1H
7	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	W1346488 ^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
8	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	W1346488 ^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
9	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346488 ^{13}C	^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
10	^{15}N	^{17}O	^2H	^{29}Si	W1346258 ^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
11	^{15}N	^{17}O	^2H	W1346259 ^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
12	^{15}N	^{17}O	W1346442 ^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H
13	^{15}N	W1346442 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346349 ^{31}P	W1346240 ^1H

1	¹⁵ N	¹⁷ O	² H	W1346265 ²⁹ Si	⁵⁹ Co	W1346489 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346223 ¹ H
2	¹⁵ N	¹⁷ O	W1346266 ² H	²⁹ Si	⁵⁹ Co	W1346460 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346223 ¹ H
3	W1346629 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346224 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346223 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346265 ²⁹ Si	⁵⁹ Co	¹³ C	W1346489 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346223 ¹ H
5	¹⁵ N	W1346453 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346263 ¹¹ B	³¹ P	W1346223 ¹ H
6	W1346629 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346263 ¹¹ B	³¹ P	W1346223 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346489 ²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346489 ²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346489 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	W1346264 ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346265 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
12	¹⁵ N	¹⁷ O	W1346453 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H
13	¹⁵ N	W1346453 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346351 ³¹ P	W1346223 ¹ H

Figure 2.3. 500MHz typical experiments

Figure 2.4. 600MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346281 ²⁹ Si	⁵⁹ Co	W1346490 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346239 ¹ H
2	¹⁵ N	¹⁷ O	W1346282 ² H	²⁹ Si	⁵⁹ Co	W1346490 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346241 ¹ H
3	W1346630 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346230 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346241 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346281 ²⁹ Si	⁵⁹ Co	¹³ C	W1346490 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346241 ¹ H
5	¹⁵ N	W1346454 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346280 ¹¹ B	³¹ P	W1346241 ¹ H
6	W1346630 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346280 ¹¹ B	³¹ P	W1346241 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346490 ²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346490 ²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346490 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	W1346276 ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346281 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
12	¹⁵ N	¹⁷ O	W1346454 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H
13	¹⁵ N	W1346454 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346367 ³¹ P	W1346241 ¹ H

Figure 2.5. 700MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346320 ²⁹ Si	⁵⁹ Co	W1346491 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346296 ¹ H
2	¹⁵ N	¹⁷ O	W1346492 ² H	²⁹ Si	⁵⁹ Co	W1346491 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346296 ¹ H
3	W1346332 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346316 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346296 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346320 ²⁹ Si	⁵⁹ Co	¹³ C	W1346491 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346296 ¹ H
5	¹⁵ N	W1346492 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346308 ¹¹ B	³¹ P	W1346296 ¹ H
6	W1346659 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346308 ¹¹ B	³¹ P	W1346239 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346491 ²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346491 ²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346491 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	W1346312 ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346320 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
12	¹⁵ N	¹⁷ O	W1346492 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H
13	¹⁵ N	W1346492 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346304 ³¹ P	W1346296 ¹ H

Figure 2.6. 750MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346321 ²⁹ Si	⁵⁹ Co	W1346313 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346297 ¹ H
2	¹⁵ N	¹⁷ O	W1346493 ² H	²⁹ Si	⁵⁹ Co	W1346313 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346297 ¹ H
3	W1346333 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346313 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346297 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346321 ²⁹ Si	⁵⁹ Co	¹³ C	W1346313 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346297 ¹ H
5	¹⁵ N	W1346493 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346309 ¹¹ B	³¹ P	W1346297 ¹ H
6	W1346660 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346309 ¹¹ B	³¹ P	W1346297 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346493 ²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346493 ²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346493 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	* ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346321 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
12	¹⁵ N	¹⁷ O	W1346493 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H
13	¹⁵ N	W1346493 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346305 ³¹ P	W1346297 ¹ H

Figure 2.7. 800MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346322 ²⁹ Si	⁵⁹ Co	W1346314 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346298 ¹ H
2	¹⁵ N	¹⁷ O	W1346326 ² H	²⁹ Si	⁵⁹ Co	W1346314 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346298 ¹ H
3	W1346334 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346314 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346298 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346322 ²⁹ Si	⁵⁹ Co	¹³ C	W1346314 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346298 ¹ H
5	¹⁵ N	W1346326 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346310 ¹¹ B	³¹ P	W1346298 ¹ H
6	W1346661 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346310 ¹¹ B	³¹ P	W1346298 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346314 ²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346314 ²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346314 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	* ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346322 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
12	¹⁵ N	¹⁷ O	W1346326 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H
13	¹⁵ N	W1346326 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346306 ³¹ P	W1346298 ¹ H

1	^{15}N	^{17}O	^2H	W1346718 ^{29}Si	^{59}Co	W1346710 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346655 ^1H
2	^{15}N	^{17}O	W1346697 ^2H	^{29}Si	^{59}Co	W1346710 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346655 ^1H
3	W1346656 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346710 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346655 ^1H
4	^{15}N	^{17}O	^2H	W1346718 ^{29}Si	^{59}Co	^{13}C	W1346710 ^{27}Al	^{23}Na	^{11}B	^{31}P	W1346655 ^1H
5	^{15}N	W1346697 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346714 ^{11}B	^{31}P	W1346655 ^1H
6	W1346656 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346714 ^{11}B	^{31}P	W1346655 ^1H
7	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	W1346710 ^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
8	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	W1346710 ^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
9	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346710 ^{13}C	^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
10	^{15}N	^{17}O	^2H	^{29}Si	* ^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
11	^{15}N	^{17}O	^2H	W1346718 ^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
12	^{15}N	^{17}O	W1346697 ^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H
13	^{15}N	W1346697 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346715 ^{31}P	W1346655 ^1H

Figure 2.8. 850MHz typical experiments

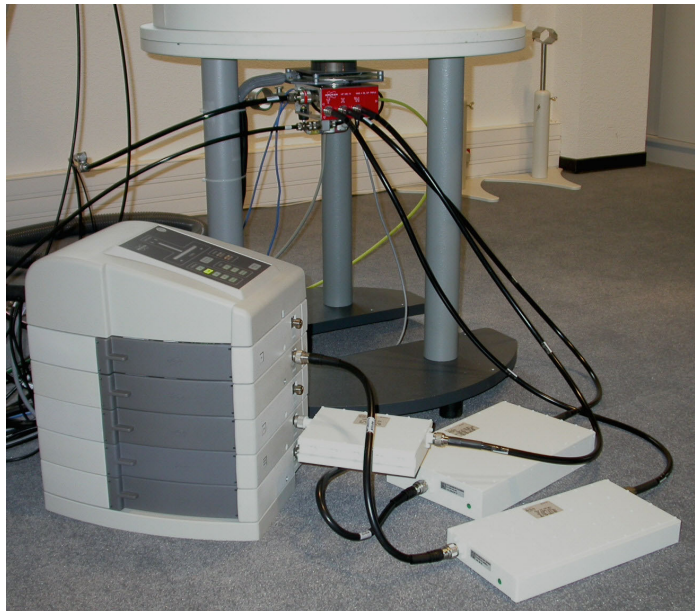
Figure 2.9. 900MHz typical experiments

1	¹⁵ N	¹⁷ O	² H	W1346323 ²⁹ Si	⁵⁹ Co	W1346315 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346299 ¹ H
2	¹⁵ N	¹⁷ O	W1346327 ² H	²⁹ Si	⁵⁹ Co	W1346315 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346299 ¹ H
3	W1346335 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346315 ¹³ C	²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346299 ¹ H
4	¹⁵ N	¹⁷ O	² H	W1346323 ²⁹ Si	⁵⁹ Co	¹³ C	W1346315 ²⁷ Al	²³ Na	¹¹ B	³¹ P	W1346299 ¹ H
5	¹⁵ N	W1346327 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346311 ¹¹ B	³¹ P	W1346299 ¹ H
6	W1346662 ¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	W1346311 ¹¹ B	³¹ P	W1346299 ¹ H
7	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	W1346315 ²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
8	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	W1346315 ²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
9	¹⁵ N	¹⁷ O	² H	²⁹ Si	⁵⁹ Co	W1346315 ¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
10	¹⁵ N	¹⁷ O	² H	²⁹ Si	* ⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
11	¹⁵ N	¹⁷ O	² H	W1346323 ²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
12	¹⁵ N	¹⁷ O	W1346327 ² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H
13	¹⁵ N	W1346327 ¹⁷ O	² H	²⁹ Si	⁵⁹ Co	¹³ C	²⁷ Al	²³ Na	¹¹ B	W1346307 ³¹ P	W1346299 ¹ H

1	^{15}N	^{17}O	^2H	W1346670 ^{29}Si	^{59}Co	W1346669 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346665 ^1H
2	^{15}N	^{17}O	W1346671 ^2H	^{29}Si	^{59}Co	W1346669 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346665 ^1H
3	W1346672 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346669 ^{13}C	^{27}Al	^{23}Na	^{11}B	^{31}P	W1346665 ^1H
4	^{15}N	^{17}O	^2H	W1346670 ^{29}Si	^{59}Co	^{13}C	W1346669 ^{27}Al	^{23}Na	^{11}B	^{31}P	W1346665 ^1H
5	^{15}N	W1346671 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346668 ^{11}B	^{31}P	W1346665 ^1H
6	W1346672 ^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	W1346668 ^{11}B	^{31}P	W1346665 ^1H
7	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	W1346669 ^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
8	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	W1346669 ^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
9	^{15}N	^{17}O	^2H	^{29}Si	^{59}Co	W1346669 ^{13}C	^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
10	^{15}N	^{17}O	^2H	^{29}Si	* ^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
11	^{15}N	^{17}O	^2H	W1346670 ^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
12	^{15}N	^{17}O	W1346671 ^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H
13	^{15}N	W1346671 ^{17}O	^2H	^{29}Si	^{59}Co	^{13}C	^{27}Al	^{23}Na	^{11}B	W1346667 ^{31}P	W1346665 ^1H

Figure 2.10. 1000MHz typical experiments

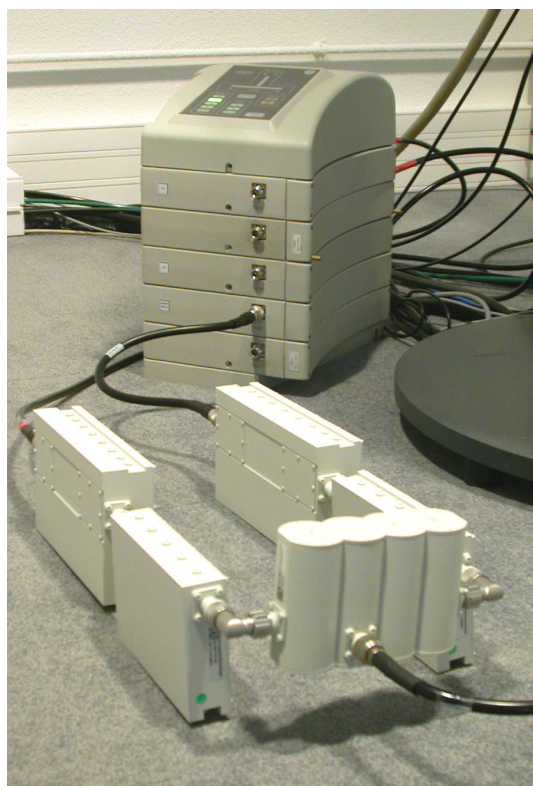
Figure 2.11. $^1\text{H}/\text{X}/\text{Y}$ typical configuration



This picture shows typical configuration of high power filters required for triple resonance solid-state NMR experiments ($^1\text{H}/\text{X}/\text{Y}$).

The two heavy band-pass filters, corresponding to X and Y nuclei studied, are not directly connected to the pre-amplifier (additional cables are provided). The ^1H pass filter is only connected to the pre-amplifier.

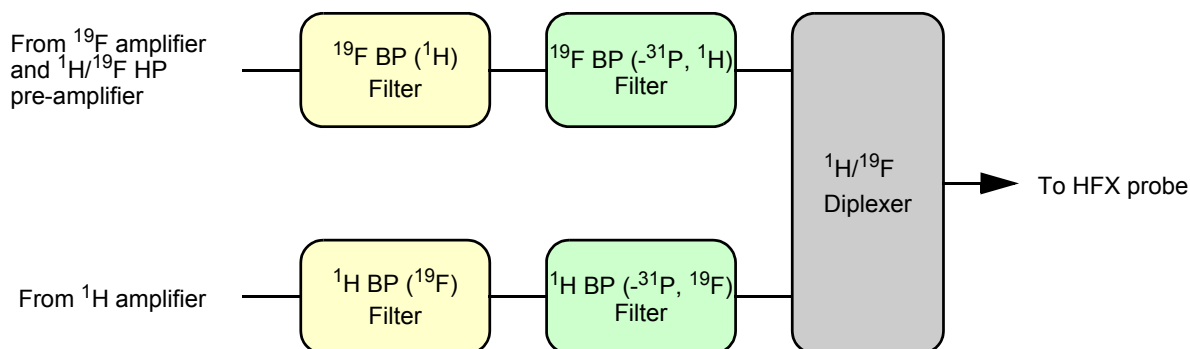
$^1\text{H}/^{19}\text{F}/\text{X}$ NMR experiments configuration



This picture shows typical configuration of high power filters required for $^1\text{H}/^{19}\text{F}$ NMR experiments. The X channel is not showed.

A schematic representation is attached here for the description of the different high power filters involved in the $^1\text{H}/^{19}\text{F}$ experiment

Figure 2.12. Different high power filters for the $^1\text{H}/^{19}\text{F}$ experiment



This diagram corresponds to ^{19}F observation with high power ^1H decoupling NMR experiment (^1H pre-amplifier is not required). The order of the different Pass/Stop high power filters is important.

In the case of ^1H observation with ^{19}F decoupling NMR experiment, the $^1\text{H}/^{19}\text{F}$ HP pre-amplifier is dedicated to ^1H channel (not required for ^{19}F decoupling).

AVANCE 300MHz

2.3

Lowpass Filter

2.3.1

Figure 2.13. Lowpass Filter HQ 300MHz Diagram

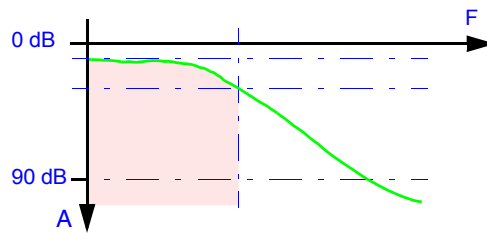


Table 2.11. W1346642 - Filter HQ 300 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 121.5	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	282.4...300.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Figure 2.14. Bandstop Filter HQ 300MHz Diagram

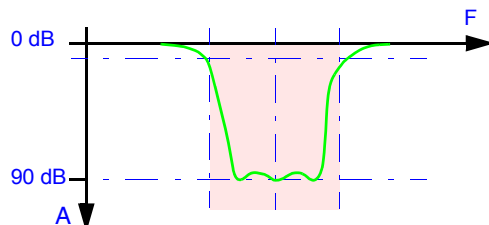


Table 2.12. W1346253 - Filter HQ 300 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 121.5	282.4
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	300.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.13. W1346369 - Filter HQ 300 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 121.5	300.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	282.4	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.15. Bandpass Filter HQ 300MHz Diagram

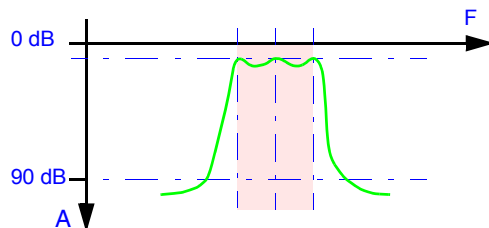


Table 2.14. W1346239 - Filter HQ 300 ¹H BP (⁻³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	300.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 121.5	282.4
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.15. W1346235 - Filter HQ 300 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	300.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 121.5	282.4
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Table 2.16. W1346249 - Filter HQ 300 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	282.4	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 121.5	300.1
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.17. W1346236 - Filter HQ 300 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	282.4	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 121.5	300.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Table 2.18. W1346368 - Filter HQ 300 ¹⁹F - ¹H BP (-³¹P)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F, ¹ H	282.4	300.1
Maximum Insertion Loss (dB)	0.8	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ... ³¹ P	< 121.5	
Minimum Rejection (dB)	110	
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.19. W1346269 - Filter HQ 300 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	116.6...121.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 98.2	> 282.4
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.20. W1346372 - Filter HQ 300 ⁷Li - ³¹P BP (-¹³C, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	116.6...121.5	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹³ C, ¹⁹ F...	< 75.5	> 282.4
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.21. W1346270 - Filter HQ 300 ^{71}Ga - ^{87}Rb BP (^{-13}C , ^{31}P -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{71}Ga ... ^{87}Rb	91.5...98.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{13}C , ^{31}P ...	< 75.5	> 121.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.22. W1346271 - Filter HQ 300 ^{59}Co - ^{23}Na BP (^{-29}Si , ^{87}Rb -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{59}Co ... ^{23}Na	71.2...79.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{29}Si , ^{87}Rb ...	< 59.6	> 98.2
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.23. W1346459 - Filter HQ 300 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	71.2...79.4	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 46.0	> 282.4
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.24. W1346275 - Filter HQ 300 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	71.2...79.4	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 30.4	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.25. W1346272 - Filter HQ 300 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	59.6	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 46.0	> 75.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.26. W1346452 - Filter HQ 300 ¹⁷O - ²H BP (¹¹B-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	40.7...46.0	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹¹ B, ³¹ P...	96.3	> 121.5
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Table 2.27. W1346273 - Filter HQ 300 $^{133}\text{Cs} - ^2\text{H}$ BP ($^{-15}\text{N}, ^{29}\text{Si}$ -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : $^{133}\text{Cs}...^2\text{H}$	39.4...46.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... $^{15}\text{N}, ^{29}\text{Si}$...	< 30.4	> 59.6
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Table 2.28. W1346274 - Filter HQ 300 ^{15}N BP ($^{-14}\text{N}, ^2\text{H}$ -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{15}N	30.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... $^{14}\text{N}, ^2\text{H}$...	< 21.7	> 46.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Table 2.29. W1346278 - Filter HQ 300 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	30.4	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	71.2	> 75.5
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Figure 2.16. Diplexer Filter HQ 300MHz Diagram

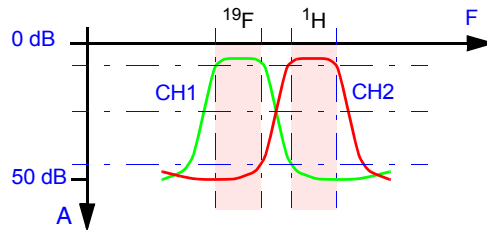


Table 2.30. W1346237 - Diplexer HQ 300 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	300.1	282.4
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	282.4	300.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

Figure 2.17. Lowpass Filter HQ 360MHz Diagram

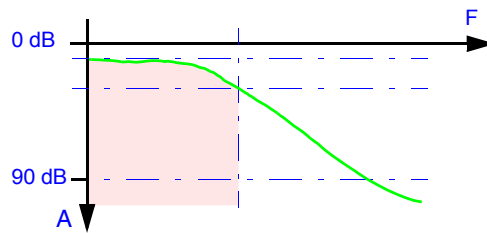


Table 2.31. W1346643 - Filter HQ 360 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 145.8	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	338.8...360.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Figure 2.18. Bandpass Filter HQ 360MHz Diagram

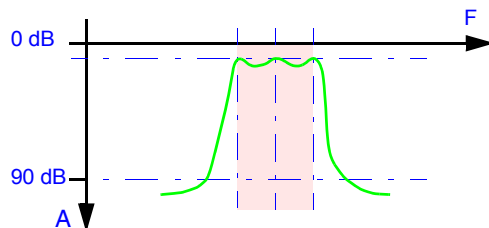


Table 2.32. W1346407 - Filter HQ 360 ¹H BP (⁻³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	360.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 145.8	338.8
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.33. W1346408 - Filter HQ 360 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	360.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 145.8	338.8
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Table 2.34. W1346403 - Filter HQ 360 ¹⁹F BP (⁻³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	338.8	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 145.8	360.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.35. W1346404 - Filter HQ 360 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	338.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 145.8	360.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Figure 2.19. Diplexer Filter HQ 360MHz Diagram

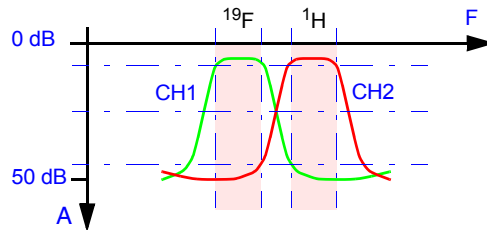


Table 2.36. W1346416 - Diplexer HQ 360 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	360.1	338.8
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	338.8	360.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

Figure 2.20. Lowpass Filter HQ 400MHz Diagram

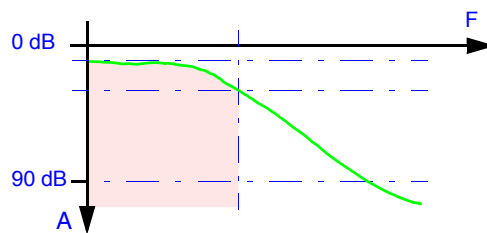


Table 2.37. W1346636 - Filter HQ 400 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 162.0	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	376.5...400.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.38. W1346628 - Filter HQ 400 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 40.6	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	100.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.21. Bandstop Filter HQ 400MHz Diagram

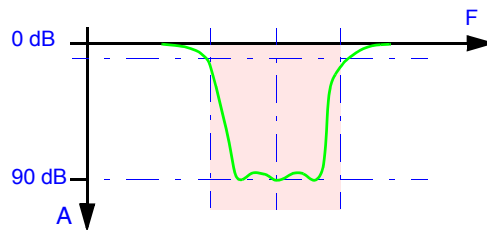


Table 2.39. W1346254 - Filter HQ 400 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 162.0	376.5
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	400.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.40. W1346370 - Filter HQ 400 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 162.0	400.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	376.5	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.41. W1346437 - Filter HQ 400 ²H P ⁷⁷Se S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ² H	61.4	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁷⁷ Se	76.3	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.22. Bandpass Filter HQ 400MHz Diagram

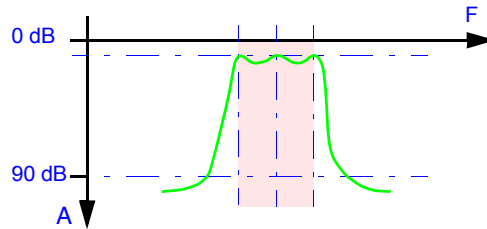


Table 2.42. W1346240 - Filter HQ 400 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	400.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 162.0	376.5
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.43. W1346204 - Filter HQ 400 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	400.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 162.0	376.5
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Table 2.44. W1346250 - Filter HQ 400 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	376.5	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 162.0	400.1
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.45. W1346205 - Filter HQ 400 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	376.5	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 162.0	400.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R105P (mm)	277 x 133 x 54	
Weight (kg)	2.6	

Table 2.46. W1346373 - Filter HQ 400 ¹⁹F - ¹H BP (-³¹P)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F, ¹ H	376.5	400.1
Maximum Insertion Loss (dB)	0.8	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ... ³¹ P	< 162.0	
Minimum Rejection (dB)	110	
Mechanical Dimensions and Weight		
Case 5R100 (mm)	227 x 123 x 39	
Weight (kg)	1.2	

Table 2.47. W1346256 - Filter HQ 400 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	155.5...162.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 130.9	> 376.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.48. W1346349 - Filter HQ 400 ⁷Li - ³¹P BP (-¹³C, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	155.5...162.0	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹³ C, ¹⁹ F...	< 100.6	> 376.5
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.49. W1346257 - Filter HQ 400 ⁷¹Ga - ⁸⁷Rb BP (-¹³C, ³¹P-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷¹ Ga... ⁸⁷ Rb	122.0...130.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹³ C, ³¹ P...	< 100.6	> 162.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.50. W1346488 - Filter HQ 400 ¹³C - ²³Na BP (-²⁹Si, ⁷¹Ga-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹³ C... ²³ Na	100.6...105.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁷¹ Ga...	< 79.5	> 122.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.51. W1346258 - Filter HQ 400 ⁵⁹Co - ²³Na BP (-²⁹Si, ⁸⁷Rb-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	94.9...105.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁸⁷ Rb...	< 79.5	> 130.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.52. W1346440 - Filter HQ 400 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	94.9...105.8	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 61.4	> 376.5
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.53. W1346226 - Filter HQ 400 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	94.9...105.8	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 40.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.54. W1346259 - Filter HQ 400 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	79.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 61.4	> 100.6
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.55. W1346442 - Filter HQ 400 ^{17}O - ^2H BP (^{11}B -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	54.2...61.4	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ^{11}B , ^{31}P ...	128.3	> 162.0
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Table 2.56. W1346260 - Filter HQ 400 ^{133}Cs - ^2H BP (^{15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{133}Cs ... ^2H	52.5...61.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 40.6	> 79.5
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.57. W1346261 - Filter HQ 400 ¹⁵N BP (-¹⁴N, ²H-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	40.6	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁴ N, ² H...	< 28.9	> 61.4
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.58. W1346227 - Filter HQ 400 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	40.6	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	94.9	> 100.6
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H133 (mm)	241 x 157 x 38	
Weight (kg)	1.9	

Table 2.59. W1346429 - Filter HQ 400 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	28.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 40.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Figure 2.23. Diplexer Filter HQ 400MHz Diagram

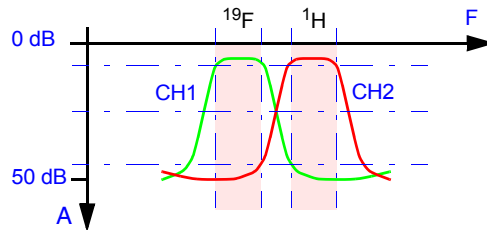


Table 2.60. W1346345 - Diplexer HQ 400 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	400.1	376.5
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	376.5	400.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

Figure 2.24. Lowpass Filter HQ 500MHz Diagram

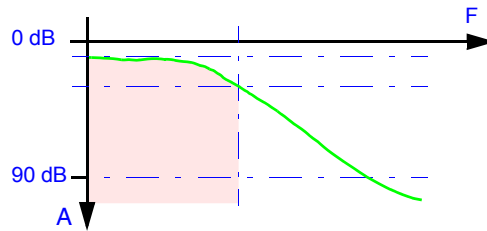


Table 2.61. W1346637 - Filter HQ 500 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 202.5	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	470.6...500.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.62. W1346629 - Filter HQ 500 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 50.7	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	125.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.25. Bandstop Filter HQ 500MHz Diagram

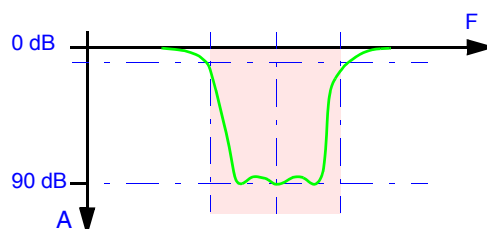


Table 2.63. W1346232 - Filter HQ 500 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 202.5	470.6
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	500.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.64. W1346358 - Filter HQ 500 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 202.5	500.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	470.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.65. W1346430 - Filter HQ 500 ⁷Li P ³¹P S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li	194.4	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ³¹ P	202.5	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.66. W1346431 - Filter HQ 500 ³¹P P ⁷Li S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ³¹ P	202.5	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁷ Li	194.4	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.67. W1346434 - Filter HQ 500 ⁶Li P ²H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁶ Li	73.6	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ² H	76.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.68. W1346435 - Filter HQ 500 ²H P ⁶Li S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ² H	76.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁶ Li	73.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.26. Band Pass Filter HQ 500MHz Diagram

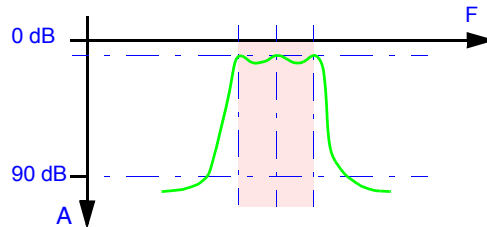


Table 2.69. W1346223 - Filter HQ 500 ¹H BP(-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	500.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 202.5	470.6
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.70. W1346247 - Filter HQ 500 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	500.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 202.5	470.6
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.71. W1346251 - Filter HQ 500 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	470.6	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 202.5	500.1
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.72. W1346248 - Filter HQ 500 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	470.6	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 202.5	500.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.73. W1346374 - Filter HQ 500 ¹⁹F - ¹H BP (-³¹P)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F, ¹ H	470.6	500.1
Maximum Insertion Loss (dB)	0.8	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ... ³¹ P	< 202.5	
Minimum Rejection (dB)	110	
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.74. W1346262 - Filter HQ 500 ^7Li - ^{31}P BP (^{-87}Rb , ^{19}F -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^7Li ... ^{31}P	194.4...202.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{87}Rb , ^{19}F ...	< 163.6	> 470.6
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.75. W1346351 - Filter HQ 500 ^7Li - ^{31}P BP (^{-13}C , ^{19}F -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^7Li ... ^{31}P	194.4...202.5	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ^{13}C , ^{19}F ...	< 125.8	> 470.6
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.76. W1346263 - Filter HQ 500 ⁷¹Ga - ⁸⁷Rb BP (-¹³C, ³¹P-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷¹ Ga... ⁸⁷ Rb	152.5...163.6	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹³ C, ³¹ P...	< 125.8	> 202.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.77. W1346489 - Filter HQ 500 ¹³C - ²³Na BP (-²⁹Si, ⁷¹Ga-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹³ C... ²³ Na	125.8...132.3	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁷¹ Ga...	< 99.4	> 152.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.78. W1346264 - Filter HQ 500 ⁵⁹Co - ²³Na BP (-²⁹Si, ⁸⁷Rb-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	118.7...132.3	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁸⁷ Rb...	< 99.4	> 163.6
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.79. W1346460 - Filter HQ 500 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	118.7...132.3	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 76.8	> 470.6
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.80. W1346224 - Filter HQ 500 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	118.7...132.3	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 50.7	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.81. W1346265 - Filter HQ 500 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	99.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 76.8	> 125.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Table 2.82. W1346453 - Filter HQ 500 ^{17}O - ^2H BP (^{11}B -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	67.8...76.7	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ^{11}B , ^{31}P ...	160.4	> 202.5
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.83. W1346266 - Filter HQ 500 ^{133}Cs - ^2H BP (^{15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{133}Cs ... ^2H	65.6...76.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 50.7	> 99.4
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.84. W1346267 - Filter HQ 500 ¹⁵N BP (-¹⁴N, ²H-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	50.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁴ N, ² H...	< 36.1	> 76.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.85. W1346225 - Filter HQ 500 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	50.7	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	118.7	> 125.8
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H133 (mm)	241 x 157 x 38	
Weight (kg)	1.9	

Table 2.86. W1346268 - Filter HQ 500 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	36.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 50.7	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.27. Diplexer Filter HQ 500MHz Diagram

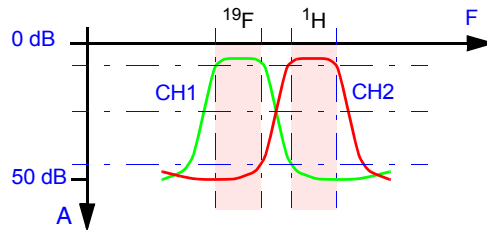


Table 2.87. W1346346 - Diplexer HQ 500 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	500.1	470.6
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	470.6	500.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

Figure 2.28. Lowpass Filter HQ 600MHz Diagram

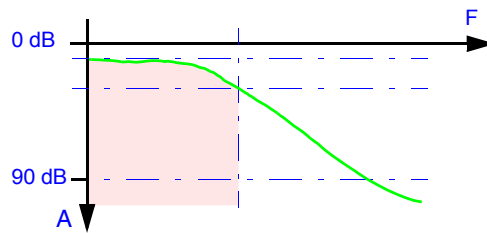


Table 2.88. W1346638 - Filter HQ 600 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 242.9	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	564.7...600.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.89. W1346630 - Filter HQ 600 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 60.8	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	150.9	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.29. Bandstop Filter HQ 600MHz Diagram

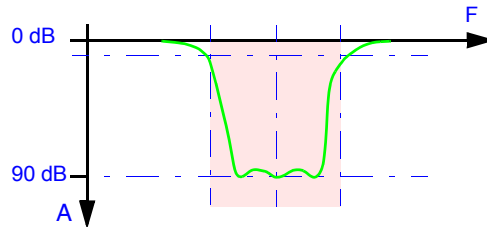


Table 2.90. W1346255 - Filter HQ 600 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 242.9	564.7
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	600.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.91. W1346371 - Filter HQ 600 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 242.9	600.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	564.7	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.30. Bandpass Filter HQ 600MHz Diagram

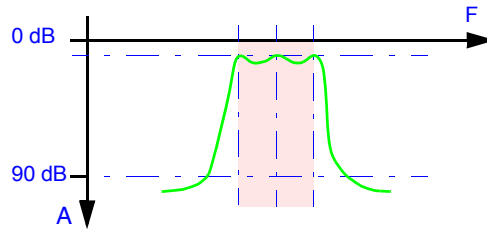


Table 2.92. W1346241 - Filter HQ 600 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	600.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 242.9	564.7
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.93. W1346228 - Filter HQ 600 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	600.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 242.9	564.7
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.94. W1346252 - Filter HQ 600 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	564.7	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 242.9	600.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.95. W1346229 - Filter HQ 600 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	564.7	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 242.9	600.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.96. W1346375 - Filter HQ 600 ¹⁹F - ¹H BP (³¹P)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F, ¹ H	564.7	600.1
Maximum Insertion Loss (dB)	0.8	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ... ³¹ P	< 242.9	
Minimum Rejection (dB)	110	
Mechanical Dimensions and Weight		
Case 5R069 (mm)	227 x 92 x 39	
Weight (kg)	0.9	

Table 2.97. W1346279 - Filter HQ 600 ⁷Li - ³¹P (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	233.2...242.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 196.4	> 564.7
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.98. W1346367 - Filter HQ 600 ⁷Li - ³¹P (-¹³C, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	233.2...242.9	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹³ C, ¹⁹ F...	< 150.9	> 564.7
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.99. W1346280 - Filter HQ 600 ⁷¹Ga - ⁸⁷Rb BP (-¹³C, ³¹P-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷¹ Ga... ⁸⁷ Rb	183.0...196.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹³ C, ³¹ P...	< 150.9	> 242.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.100. W1346490 - Filter HQ 600 ¹³C - ²³Na BP (-²⁹Si, ⁷¹Ga-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹³ C... ²³ Na	150.9...158.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁷¹ Ga...	< 119.2	> 183.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.101. W1346276 - Filter HQ 600 ⁵⁹Co - ²³Na BP (-²⁹Si, ⁸⁷Rb-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	142.4...158.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁸⁷ Rb...	< 119.2	> 196.4
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.102. W1346461 - Filter HQ 600 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	142.4...158.7	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 92.1	> 564.7
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.103. W1346230 - Filter HQ 600 ⁵⁹Co - ²³Na BP (-15N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	142.4...158.7	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 60.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.104. W1346281 - Filter HQ 600 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	119.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 92.1	> 150.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.105. W1346454 - Filter HQ 600 ^{17}O - ^2H BP (^{11}B -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	81.3...92.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ^{11}B , ^{31}P ...	192.5	> 242.9
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.106. W1346282 - Filter HQ 600 ^{133}Cs - ^2H BP (^{15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{133}Cs ... ^2H	78.7...92.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 60.8	> 119.2
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.107. W1346277 - Filter HQ 600 ¹⁵N BP (-¹⁴N, ²H-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	60.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁴ N, ² H...	< 43.4	> 92.1
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.108. W1346231 - Filter HQ 600 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	60.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	142.4	> 150.9
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H133 (mm)	241 x 157 x 38	
Weight (kg)	1.9	

Table 2.109. W1346283 - Filter HQ 600 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	43.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 60.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.31. Diplexer Filter HQ 600MHz Diagram

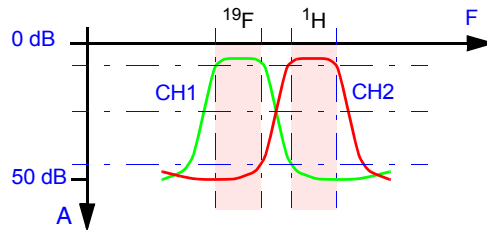


Table 2.110. W1346347 - Diplexer HQ 600 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	600.1	564.7
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	564.7	600.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

AVANCE 700MHz

2.8

Lowpass Filter

2.8.1

Figure 2.32. Lowpass Filter HQ 700MHz Diagram

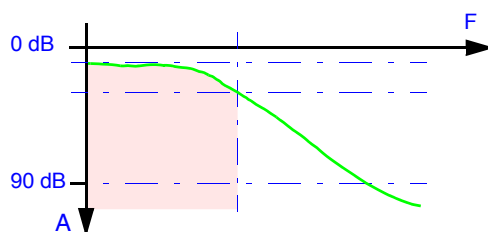


Table 2.111. W1346639 - Filter HQ 700 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 283.4	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	658.8...700.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.112. W1346659 - Filter HQ 700 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 71.0	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	176.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.33. Bandstop Filter HQ 700MHz Diagram

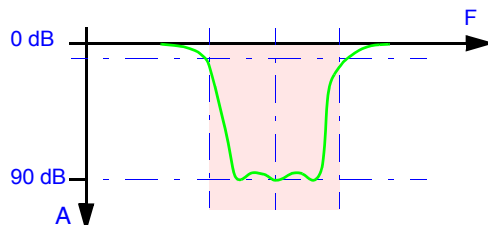


Table 2.113. W1346284 - Filter HQ 700 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 283.4	658.8
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	700.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.114. W1346387 - Filter HQ 700 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 283.4	700.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	658.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.115. W1346394 - Filter HQ 700 ²H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) :		
Maximum Insertion Loss (dB)		
Minimum Return Loss (dB)		
Frequency Stop (MHz) : ² H	107.5	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.34. Bandpass Filter HQ 700MHz Diagram

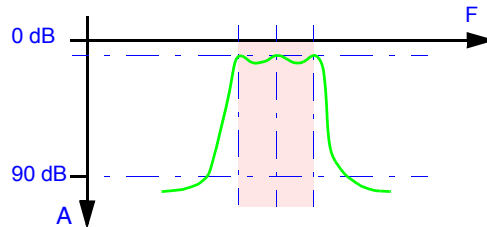


Table 2.116. W1346296 - Filter HQ 700 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	700.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 283.4	658.8
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.117. W1346288 - Filter HQ 700 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	700.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 283.4	658.8
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.118. W1346300 - Filter HQ 700 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	658.8	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 283.4	700.1
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.119. W1346292 - Filter HQ 700 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	658.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 283.4	700.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.120. W1346304 - Filter HQ 700 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	272.1...283.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 229.1	> 658.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.121. W1346308 - Filter HQ 700 ^{71}Ga - ^{87}Rb BP (^{-13}C , ^7Li -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{71}Ga ... ^{87}Rb	213.5...229.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{13}C , ^7Li ...	< 176.0	> 272.1
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.122. W1346491 - Filter HQ 700 ^{13}C - ^{23}Na BP (^{-29}Si , ^{71}Ga -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{13}C ... ^{23}Na	176.0...185.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{-29}Si , ^{71}Ga ...	< 139.1	> 213.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.123. W1346312 - Filter HQ 700 ⁵⁹Co - ²³Na BP (-²⁹Si, ⁸⁷Rb-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	166.1...185.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁸⁷ Rb...	< 139.1	> 229.1
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.124. W1346462 - Filter HQ 700 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	166.1...185.2	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 107.5	> 658.8
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.125. W1346316 - Filter HQ 700 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	166.1...185.2	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 71.0	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.126. W1346320 - Filter HQ 700 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	139.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 107.5	> 176.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.127. W1346455 - Filter HQ 700 ¹⁷O - ²H BP (¹¹B-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	94.9...107.5	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹¹ B, ³¹ P...	224.5	> 283.4
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.128. W1346492 - Filter HQ 700 ¹⁷O - ²H BP (-¹⁵N, ²⁹Si-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	94.9...107.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁵ N, ²⁹ Si...	< 71.0	> 139.1
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.129. W1346324 - Filter HQ 700 ^{133}Cs - ^2H BP (^{-15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{133}Cs ... ^2H	91.8...107.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 71.0	> 139.1
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H097 (mm)	336 x 125 x 38	
Weight (kg)	2.5	

Table 2.130. W1346328 - Filter HQ 700 ^{15}N BP (^{-14}N , ^2H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{15}N	71.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{14}N , ^2H ...	< 50.6	> 107.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H139 (mm)	336 x 167 x 38	
Weight (kg)	3.4	

Table 2.131. W1346332 - Filter HQ 700 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	71.0	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	166.1	> 176.0
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 6H073 (mm)	277 x 100 x 38	
Weight (kg)	1.6	

Table 2.132. W1346336 - Filter HQ 700 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	50.6	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 71.0	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.35. Lowpass Filter HQ 750MHz Diagram

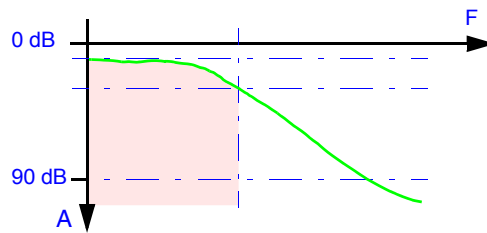


Table 2.133. W1346644 - Filter HQ 750 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 303.7	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	705.8...750.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.134. W1346660 - Filter HQ 750 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 76.0	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	188.6	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.36. Bandstop Filter HQ 750MHz Diagram

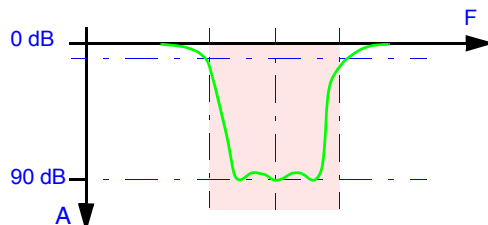


Table 2.135. W1346285 - Filter HQ 750 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 303.7	705.8
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	750.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.136. W1346385 - Filter HQ 750 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 303.7	750.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	705.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.37. Bandpass Filter HQ 750MHz Diagram

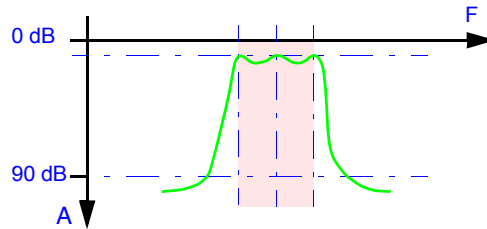


Table 2.137. W1346297 - Filter HQ 750 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	750.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 303.7	705.8
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.138. W1346289 - Filter HQ 750 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	750.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 303.7	705.8
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.139. W1346301 - Filter HQ 750 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	705.8	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 303.7	750.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.140. W1346293 - Filter HQ 750 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	705.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 303.7	750.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R055P (mm)	282 x 83 x 54	
Weight (kg)	1.6	

Table 2.141. W1346305 - Filter HQ 750 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	291.5...303.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 245.4	> 705.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.142. W1346309 - Filter HQ 750 ⁷¹Ga - ⁸⁷Rb BP (-¹³C, ⁷Li-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷¹ Ga... ⁸⁷ Rb	228.8...245.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹³ C, ⁷ Li...	< 188.6	> 291.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.143. W1346313 - Filter HQ 750 ¹³C - ²³Na BP (-²⁹Si, ⁷¹Ga-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹³ C... ²³ Na	188.6...198.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁷¹ Ga...	< 149.0	> 228.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.144. W1346463 - Filter HQ 750 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	178.0...198.4	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 115.2	> 705.8
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.145. W1346317 - Filter HQ 750 ⁵⁹Co - ²³Na (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	178.0...198.4	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 76.0	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.146. W1346321 - Filter HQ 750 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	149.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 115.2	> 188.6
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.147. W1346456 - Filter HQ 750 ¹⁷O - ²H BP (¹¹B-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	101.7...115.2	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹¹ B, ³¹ P...	240.6	> 303.7
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.148. W1346493 - Filter HQ 750 ^{17}O - ^2H BP (^{-15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	101.7...115.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 76.0	> 149.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.149. W1346325 - Filter HQ 750 ^{133}Cs - ^2H BP (^{-15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{133}Cs ... ^2H	98.4...115.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 76.0	> 149.0
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case 8H073 (mm)	336 x 100 x 38	
Weight (kg)	2.0	

Table 2.150. W1346329 - Filter HQ 750 ¹⁵N BP (-¹⁴N, ²H-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	76.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁴ N, ² H...	< 54.2	> 115.2
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.151. W1346333 - Filter HQ 750 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	76.0	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	178.0	> 188.6
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Table 2.152. W1346337 - Filter HQ 750 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	54.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 76.0	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.38. Diplexer Filter HQ 750MHz Diagram

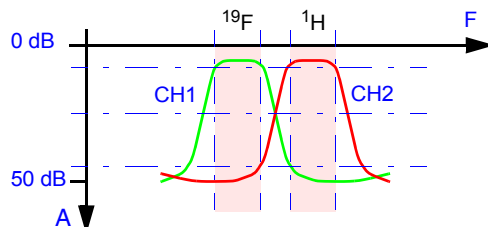


Table 2.153. W1346378 - Diplexer HQ 750 ¹H / ¹⁹F

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H, ¹⁹ F	750.1	705.8
Maximum Insertion Loss (dB)	0.6	0.6
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F, ¹ H	705.8	750.1
Minimum Rejection (dB)	50	50
Mechanical Dimensions and Weight		
Case 4S063D (mm)	188 x 106 x 69	
Weight (kg)	1.5	

Figure 2.39. Lowpass Filter HQ 800MHz Diagram

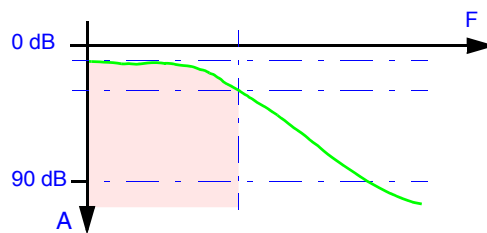


Table 2.154. W1346640 - Filter HQ 800 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 323.9	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	752.9...800.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.155. W1346661 - Filter HQ 800 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 81.1	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	201.2	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.40. Bandstop Filter HQ 800MHz Diagram

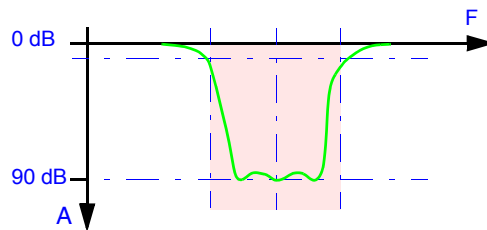


Table 2.156. W1346286 - Filter HQ 800 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 323.9	752.9
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	800.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.157. W1346386 - Filter HQ 800 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 323.9	800.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	752.9	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Figure 2.41. Bandpass Filter HQ 800MHz Diagram

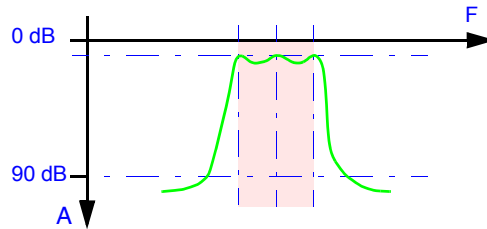


Table 2.158. W1346298 - Filter HQ 800 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	800.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 323.9	752.9
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.159. W1346290 - Filter HQ 800 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	800.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 323.9	752.9
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R041P (mm)	282 x 69 x 54	
Weight (kg)	0.0	

Table 2.160. W1346302 - Filter HQ 800 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	752.9	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 323.9	800.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.161. W1346294 - Filter HQ 800 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	752.9	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 323.9	800.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R041P (mm)	282 x 69 x 54	
Weight (kg)	0.0	

Table 2.162. W1346306 - Filter HQ 800 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	311.0...323.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 261.8	> 752.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.163. W1346310 - Filter HQ 800 ^{71}Ga - ^{87}Rb BP (^{-13}C , ^7Li -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{71}Ga ... ^{87}Rb	244.0...261.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{13}C , ^7Li ...	< 201.2	> 311.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.164. W1346314 - Filter HQ 800 ^{13}C - ^{23}Na BP (^{-29}Si , ^{71}Ga -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{13}C ... ^{23}Na	201.2...211.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{-29}Si , ^{71}Ga ...	< 159.0	> 244.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.165. W1346464 - Filter HQ 800 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	189.8...211.7	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 122.8	> 752.9
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.166. W1346318 - Filter HQ 800 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	189.8...211.7	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 81.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.167. W1346322 - Filter HQ 800 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	159.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 122.8	> 201.2
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.168. W1346457 - Filter HQ 800 ¹⁷O - ²H BP (¹¹B-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	108.5...122.8	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹¹ B, ³¹ P...	256.6	> 323.9
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.169. W1346326 - Filter HQ 800 ^{17}O - ^2H BP (^{-15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	108.5...122.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 81.1	> 159.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.170. W1346330 - Filter HQ 800 ^{15}N BP (^{-14}N , ^2H -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{15}N	81.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{14}N , ^2H ...	< 57.8	> 122.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Table 2.171. W1346334 - Filter HQ 800 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	81.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	189.8	> 201.2
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Table 2.172. W1346338 - Filter HQ 800 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	57.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 81.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.42. Lowpass Filter HQ 850MHz Diagram

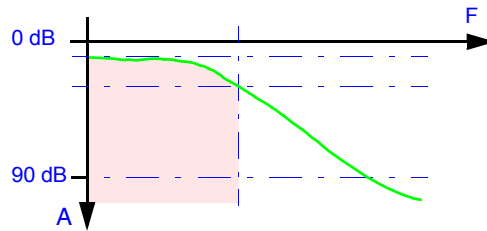


Table 2.173. W1346677 - Filter HQ 850 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 344.1	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	799.9...850.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.174. W1346656 - Filter HQ 850 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 86.2	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	213.8	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.43. Bandstop Filter HQ 850MHz Diagram

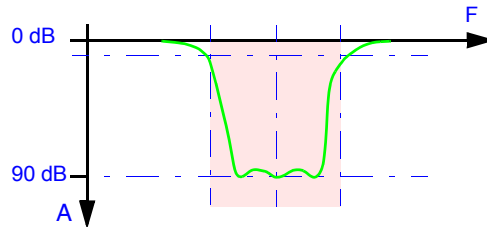


Table 2.175. W1346712 - Filter HQ 850¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 344.1	799.9
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	850.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.176. W1346711 - Filter HQ 850 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 344.1	850.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	799.9	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.44. Bandpass Filter HQ 850MHz Diagram

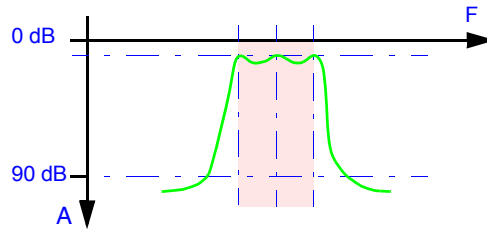


Table 2.177. W1346655 - Filter HQ 850 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	850.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 344.1	799.9
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.178. W1346674 - Filter HQ 850 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	850.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 344.1	799.9
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.179. W1346675 - Filter HQ 850 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	799.9	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 344.1	850.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.180. W1346676 - Filter HQ 850 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	799.9	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 344.1	850.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.181. W1346715 - Filter HQ 850 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	330.4...344.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 278.2	> 799.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.182. W1346714 - Filter HQ 850 ^{71}Ga - ^{87}Rb BP (^{-13}C , ^7Li -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{71}Ga ... ^{87}Rb	259.3...278.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{13}C , ^7Li ...	< 213.8	> 330.4
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.183. W1346710 - Filter HQ 850 ^{13}C - ^{23}Na BP (^{-29}Si , ^{71}Ga -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{13}C ... ^{23}Na	213.8...224.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{-29}Si , ^{71}Ga ...	< 168.9	> 259.3
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.184. W1346657 - Filter HQ 850 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	201.7...224.8	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 86.2	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.185. W1346718 - Filter HQ 850 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	168.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 130.5	> 213.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.186. W1346697 - Filter HQ 850 $^{17}\text{O} - ^2\text{H}$ BP ($^{-15}\text{N}, ^{29}\text{Si}$ -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : $^{17}\text{O}...^2\text{H}$	115.2...130.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... $^{15}\text{N}, ^{29}\text{Si}$...	< 86.2	> 168.9
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.187. W1346716 - Filter HQ 850 ^{15}N BP ($^{-14}\text{N}, ^2\text{H}$ -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{15}N	82.6	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... $^{14}\text{N}, ^2\text{H}$...	< 61.4	> 130.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

AVANCE 900MHz

2.12

Lowpass Filter

2.12.1

Figure 2.45. Lowpass Filter HQ 900MHz Diagram

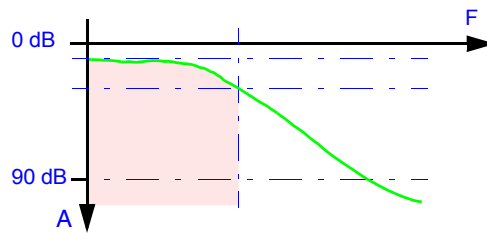


Table 2.188. W1346641 - Filter HQ 900 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 364.4	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	847.0...900.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D050 (mm)	144 x 58 x 34	
Weight (kg)	0.4	

Table 2.189. W1346662 - Filter HQ 900 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 91.2	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	226.3	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 2D095 (mm)	192 x 108 x 40	
Weight (kg)	0.0	

Figure 2.46. Bandstop Filter HQ 900MHz Diagram

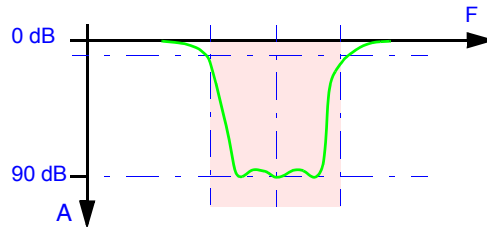


Table 2.190. W1346287 - Filter HQ 900 ¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 364.4	847.0
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	900.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 3S063 (mm)	161 x 106 x 50	
Weight (kg)	1.1	

Table 2.191. W1346388 - Filter HQ 900 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 364.4	900.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	847.0	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.47. Bandpass Filter HQ 900MHz Diagram

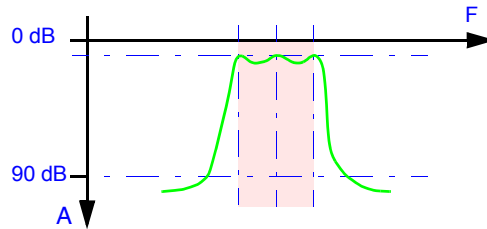


Table 2.192. W1346299 - Filter HQ 900 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	900.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 364.4	847.0
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.193. W1346291 - Filter HQ 900 ¹H BP (¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	900.1	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 364.4	847.0
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R041P (mm)	282 x 69 x 54	
Weight (kg)	0.0	

Table 2.194. W1346303 - Filter HQ 900 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	847.0	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 364.4	900.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case 5R045 (mm)	227 x 68 x 39	
Weight (kg)	0.7	

Table 2.195. W1346295 - Filter HQ 900 ¹⁹F BP (¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	847.0	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 364.4	900.1
Minimum Rejection (dB)	80	90
Mechanical Dimensions and Weight		
Case 8R041P (mm)	282 x 69 x 54	
Weight (kg)	0.0	

Table 2.196. W1346307 - Filter HQ 900 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	349.8...364.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 294.5	> 847.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.197. W1346311 - Filter HQ 900 ^{71}Ga - ^{87}Rb BP (^{-13}C , ^7Li -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{71}Ga ... ^{87}Rb	274.5...294.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{13}C , ^7Li ...	< 226.3	> 349.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.198. W1346315 - Filter HQ 900 ^{13}C - ^{23}Na BP (^{-29}Si , ^{71}Ga -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{13}C ... ^{23}Na	226.3...238.1	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{-29}Si , ^{71}Ga ...	< 178.8	> 274.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.199. W1346465 - Filter HQ 900 ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	213.6...238.1	
Maximum Insertion Loss (dB)	0.6	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ² H, ¹⁹ F...	< 138.2	> 847.0
Minimum Rejection (dB)	90	80
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.200. W1346319 - Filter HQ 900 ⁵⁹Co - ²³Na BP (-¹⁵N)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁵⁹ Co... ²³ Na	213.6...238.1	
Maximum Insertion Loss (dB)	0.5	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ¹⁵ N	< 91.2	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case 4H073 (mm)	205 x 100 x 38	
Weight (kg)	1.1	

Table 2.201. W1346323 - Filter HQ 900 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	178.8	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 138.2	> 226.3
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 6R125 (mm)	250 x 153 x 39	
Weight (kg)	1.5	

Table 2.202. W1346458 - Filter HQ 900 ¹⁷O - ²H BP (¹¹B-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	122.0...138.2	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹¹ B, ³¹ P...	288.7	> 364.4
Minimum Rejection (dB)	75	85
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.203. W1346327 - Filter HQ 900 ^{17}O - ^2H BP (^{-15}N , ^{29}Si -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{17}O ... ^2H	122.0...138.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{15}N , ^{29}Si ...	< 91.2	> 178.8
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 7R155 (mm)	336 x 194 x 52	
Weight (kg)	3.4	

Table 2.204. W1346331 - Filter HQ 900 ^{15}N BP (^{-14}N , ^2H -)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ^{15}N	91.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ^{14}N , ^2H ...	< 65.0	> 118.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case 8H169 (mm)	336 x 197 x 38	
Weight (kg)	3.9	

Table 2.205. W1346335 - Filter HQ 900 ¹⁵N BP (¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	91.2	
Maximum Insertion Loss (dB)	0.8	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ⁵⁹ Co, ¹³ C...	213.6	> 226.3
Minimum Rejection (dB)	85	90
Mechanical Dimensions and Weight		
Case 5H169 (mm)	241 x 197 x 38	
Weight (kg)	2.5	

Table 2.206. W1346339 - Filter HQ 900 ¹⁴N BP (¹⁵N-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁴ N	65.0	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ¹⁵ N...	> 91.2	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

AVANCE 1000MHz

2.13

Lowpass Filter

2.13.1

Figure 2.48. Lowpass Filter HQ 1000MHz Diagram

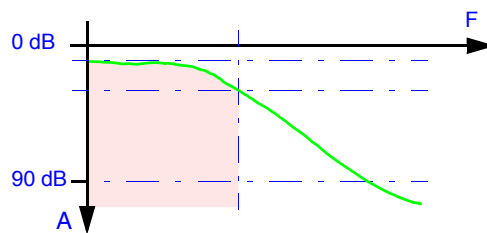


Table 2.207. W1346678 - Filter HQ 1000 0-³¹P LP (¹⁹F-¹H)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P	< 404.9	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹⁹ F... ¹ H	941.1...1000.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.208. W1346672 - Filter HQ 900 0-¹⁵N NR LP (¹³C)

RF Power Specification		
Maximum Power Operating	1,5kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ¹⁵ N	< 101.4	
Maximum Insertion Loss (dB)	0.2	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ¹³ C	251.5	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.49. Bandstop Filter HQ 1000MHz Diagram

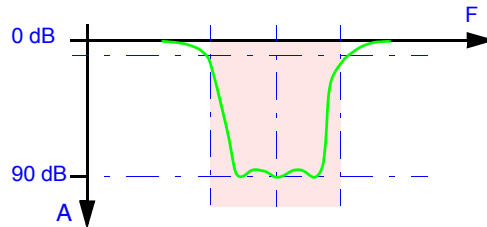


Table 2.209. W1346663 - Filter HQ 1000¹H S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹⁹ F	< 404.9	941.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹ H	1000.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.210. W1346664 - Filter HQ 1000 ¹⁹F S

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ... ³¹ P, ¹ H	< 404.9	1000.1
Maximum Insertion Loss (dB)	0.4	0.8
Minimum Return Loss (dB)	20	20
Frequency Stop (MHz) : ¹⁹ F	941.1	
Minimum Rejection (dB)	90	
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Figure 2.50. Bandpass Filter HQ 1000MHz Diagram

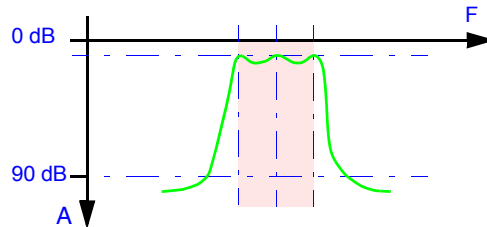


Table 2.211. W1346665 - Filter HQ 1000 ¹H BP (-³¹P, ¹⁹F)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹ H	1000.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹⁹ F	< 404.9	941.1
Minimum Rejection (dB)	120	45
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.212. W1346666 - Filter HQ 1000 ¹⁹F BP (-³¹P, ¹H)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 2% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁹ F	941.1	
Maximum Insertion Loss (dB)	0.7	
Minimum Return Loss (dB)	20	
Frequency Stop (MHz) : ... ³¹ P, ¹ H	< 404.9	1000.1
Minimum Rejection (dB)	110	45
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.213. W1346667 - Filter HQ 1000 ⁷Li - ³¹P BP (-⁸⁷Rb, ¹⁹F-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷ Li... ³¹ P	388.7...404.9	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ⁸⁷ Rb, ¹⁹ F...	< 327.2	> 941.1
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.214. W1346668 - Filter HQ 1000 ⁷¹Ga - ⁸⁷Rb BP (-¹³C, ⁷Li-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ⁷¹ Ga... ⁸⁷ Rb	305.0...327.2	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹³ C, ⁷ Li...	< 251.5	> 388.7
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.215. W1346669 - Filter HQ 1000 ¹³C - ²³Na BP (-²⁹Si, ⁷¹Ga-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹³ C... ²³ Na	251.5...264.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ²⁹ Si, ⁷¹ Ga...	< 198.7	> 305.0
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.216. W1346670 - Filter HQ 1000 ²⁹Si BP (-²H, ¹³C-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ²⁹ Si	198.7	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ² H, ¹³ C...	< 153.5	> 251.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.217. W1346671 - Filter HQ 1000 ¹⁷O - ²H BP (-¹⁵N, ²⁹Si-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁷ O... ² H	135.6...153.5	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁵ N, ²⁹ Si...	< 101.4	> 198.7
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

Table 2.218. W1346717 - Filter HQ 1000 ¹⁵N BP (-¹⁴N, ²H-)

RF Power Specification		
Maximum Power Operating	1kW @ 100ms 5% duty cycle	
Operating Temperature Range (°C)	15...50	
RF Low Level Specification		
Frequency Pass (MHz) : ¹⁵ N	101.4	
Maximum Insertion Loss (dB)	1	
Minimum Return Loss (dB)	15	
Frequency Stop (MHz) : ... ¹⁴ N, ² H...	< 72.3	> 153.5
Minimum Rejection (dB)	90	90
Mechanical Dimensions and Weight		
Case * (mm)	L x W x H	
Weight (kg)	0.0	

NMR Filters

Table 2.219. Filters category

Lowpass Filter

2.13.4

Table 2.220. Filters HQ 0-³¹P LP (¹⁹F-¹H)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346642	2	300	<121.5	282.4...300.1	0.2	20	90	2D050
W1346643	2	360	<145.8	338.8...360.1	0.2	20	90	2D050
W1346636	2	400	<162.0	376.5...400.1	0.2	20	90	2D050
W1346637	2	500	<202.5	470.6...500.1	0.2	20	90	2D050
W1346638	2	600	<242.9	564.7...600.1	0.2	20	90	2D050
W1346639	2	700	<283.4	658.8...700.1	0.2	20	90	2D050
W1346644	2	750	<303.7	705.8...750.1	0.2	20	90	2D050
W1346640	2	800	<323.9	752.9...800.1	0.2	20	90	2D050
W1346677	2	850	<344.1	799.9...850.1	0.2	20	90	*
W1346641	2	900	<364.4	847.0...900.1	0.2	20	90	2D050
W1346678	2	1000	<404.9	941.1...1000.1	0.2	20	90	*

Table 2.221. Filters HQ 0-¹⁵N NR LP (¹³C)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346628	2	400	<40.6	100.6	0.2	20	90	2D095
W1346629	2	500	<50.7	125.8	0.2	20	90	2D095
W1346630	2	600	<60.8	150.9	0.2	20	90	2D095
W1346659	2	700	<71.0	176.0	0.2	20	90	2D095
W1346660	2	750	<76.0	188.6	0.2	20	90	*
W1346661	2	800	<81.1	201.2	0.2	20	90	2D095
W1346656	2	850	<86.2	213.8	0.2	20	90	2D095
W1346662	2	900	<91.2	226.3	0.2	20	90	2D095
W1346672	2	1000	<101.4	251.5	0.2	20	90	*

Bandstop Filter

2.13.5

Table 2.222. Filters HQ¹H S

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346253	3	300	<121.5 / 282.4	300.1	0.4 / 0.8	20 / 20	90	3S063
W1346254	3	400	<162.0 / 376.5	400.1	0.4 / 0.8	20 / 20	90	3S063
W1346232	3	500	<202.5 / 470.6	500.1	0.4 / 0.8	20 / 20	90	3S063
W1346255	3	600	<242.9 / 564.7	600.1	0.4 / 0.8	20 / 20	90	3S063
W1346284	3	700	<283.4 / 658.8	700.1	0.4 / 0.8	20 / 20	90	3S063
W1346285	3	750	<303.7 / 705.8	750.1	0.4 / 0.8	20 / 20	90	3S063
W1346286	3	800	<323.9 / 752.9	800.1	0.4 / 0.8	20 / 20	90	3S063
W1346712	3	850	<344.1 / 799.9	850.1	0.4 / 0.8	20 / 20	90	*
W1346287	3	900	<364.4 / 847.0	900.1	0.4 / 0.8	20 / 20	90	3S063
W1346663	3	1000	<404.9 / 941.1	1000.1	0.4 / 0.8	20 / 20	90	*

Table 2.223. Filters HQ¹⁹F S

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346369	3	300	<121.5 / 300.1	282.4	0.4 / 0.8	20 / 20	90	3S063
W1346370	3	400	<162.0 / 400.1	376.5	0.4 / 0.8	20 / 20	90	3S063
W1346358	3	500	<202.5 / 500.1	470.6	0.4 / 0.8	20 / 20	90	3S063
W1346371	3	600	<242.9 / 600.1	564.7	0.4 / 0.8	20 / 20	90	3S063
W1346387	3	700	<283.4 / 700.1	658.8	0.4 / 0.8	20 / 20	90	3S063
W1346385	3	750	<303.7 / 750.1	705.8	0.4 / 0.8	20 / 20	90	3S063
W1346386	3	800	<323.9 / 800.1	752.9	0.4 / 0.8	20 / 20	90	3S063
W1346711	3	850	<344.1 / 850.1	799.9	0.4 / 0.8	20 / 20	90	*
W1346388	3	900	<364.4 / 900.1	847.0	0.4 / 0.8	20 / 20	90	*
W1346664	3	1000	<404.9 / 1000.1	941.1	0.4 / 0.8	20 / 20	90	*

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Table 2.224. Filters HQ $^7\text{Li P} - ^{31}\text{P S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346430	3	500	194.4	202.5	0.8	20	90	3S063

Table 2.225. Filters HQ $^{31}\text{P P} - ^7\text{Li S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346431	3	500	202.5	194.4	0.8	20	90	3S063

Table 2.226. Filters HQ $^2\text{H P} - ^{77}\text{Se S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346437	3	400	61.4	76.3	0.8	20	90	3S063

Table 2.227. Filters HQ $^2\text{H S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346394	3	700		107.5			90	3S063

Table 2.228. Filters HQ $^6\text{Li P} - ^2\text{H S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346434	3	500	73.6	76.8	0.8	20	90	3S063

Table 2.229. Filters HQ $^2\text{H P} - ^6\text{Li S}$

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346435	3	500	76.8	73.6	0.8	20	90	3S063

Bandpass Filters

2.13.6

Table 2.230. Filters HQ ¹H BP (-³¹P, ¹⁹F)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346239	5	300	300.1	<121.5 / 282.4	0.7	20	110 / 45	5R100
W1346407	5	360	360.1	<145.8 / 338.8	0.7	20	110 / 45	5R100
W1346240	5	400	400.1	<162.0 / 376.5	0.7	20	110 / 45	5R100
W1346223	5	500	500.1	<202.5 / 470.6	0.7	20	110 / 45	5R069
W1346241	5	600	600.1	<242.9 / 564.7	0.7	20	110 / 45	5R069
W1346296	5	700	700.1	<283.4 / 658.8	0.7	20	110 / 45	5R045
W1346297	5	750	750.1	<303.7 / 705.8	0.7	20	110 / 45	5R045
W1346298	5	800	800.1	<323.9 / 752.9	0.7	20	110 / 45	5R045
W1346655	5	850	850.1	<344.1 / 799.9	0.7	20	110 / 45	5R045
W1346299	5	900	900.1	<364.4 / 847.0	0.7	20	110 / 45	5R045
W1346665	5	1000	1000.0	<404.9 / 941.1	0.7	20	110 / 45	*

Table 2.231. Filters HQ ¹H BP (¹⁹F)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346235	8	300	300.1	<121.5 / 282.4	0.8	20	80 / 90	8R105P
W1346408	8	360	360.1	<145.8 / 338.8	0.8	20	80 / 90	8R105P
W1346204	8	400	400.1	<162.0 / 376.5	0.8	20	80 / 90	8R105P
W1346247	8	500	500.1	<202.5 / 470.6	0.8	20	80 / 90	8R055P
W1346228	8	600	600.1	<242.9 / 564.7	0.8	20	80 / 90	8R055P
W1346288	8	700	700.1	<283.4 / 658.8	0.8	20	80 / 90	8R055P
W1346289	8	750	750.1	<303.7 / 705.8	0.8	20	80 / 90	8R055P
W1346290	8	800	800.1	<323.9 / 752.9	0.8	20	80 / 90	8R041P
W1346674	8	850	850.1	<344.1 / 799.9	0.8	20	80 / 90	*
W1346291	8	900	900.1	<364.4 / 847.0	0.8	20	80 / 90	8R041P

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Table 2.232. Filters HQ ^{19}F BP (^{-31}P , ^1H)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346249	5	300	282.4	<121.5 / 300.1	0.7	20	110 / 45	5R100
W1346403	5	360	338.8	<145.8 / 360.1	0.7	20	110 / 45	5R100
W1346250	5	400	376.5	<162.0 / 400.1	0.7	20	110 / 45	5R100
W1346251	5	500	470.6	<202.5 / 500.1	0.7	20	110 / 45	5R069
W1346252	5	600	564.7	<242.9 / 600.1	0.7	20	110 / 45	5R069
W1346300	5	700	658.8	<283.4 / 700.1	0.7	20	110 / 45	5R045
W1346301	5	750	705.8	<303.7 / 750.1	0.7	20	110 / 45	5R045
W1346302	5	800	752.9	<323.9 / 800.1	0.7	20	110 / 45	5R045
W1346675	5	850	799.9	<344.1 / 850.1	0.7	20	110 / 45	*
W1346303	5	900	847.0	<364.4 / 900.1	0.7	20	110 / 45	5R045

Table 2.233. Filters HQ ^{19}F BP (^1H)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346236	8	300	282.4	<121.5 / 300.1	0.8	20	80 / 90	8R105P
W1346404	8	360	338.8	<145.8 / 360.1	0.8	20	80 / 90	8R105P
W1346205	8	400	376.5	<162.0 / 400.1	0.8	20	80 / 90	8R105P
W1346248	8	500	470.6	<202.5 / 500.1	0.8	20	80 / 90	8R055P
W1346229	8	600	564.7	<242.9 / 600.1	0.8	20	80 / 90	8R055P
W1346292	8	700	658.8	<283.4 / 700.1	0.8	20	80 / 90	8R055P
W1346293	8	750	705.8	<303.7 / 750.1	0.8	20	80 / 90	8R055P
W1346294	8	800	752.9	<323.9 / 800.1	0.8	20	80 / 90	8R041P
W1346676	8	850	752.9	<323.9 / 800.1	0.8	20	80 / 90	*
W1346295	5	900	847.0	<364.4 / 900.1	0.8	20	80 / 90	8R041P

Table 2.234. Filters HQ ^{19}F - ^1H BP (^{-31}P)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346368	5	300	282.4 / 300.1	<121.5	0.8 / 0.8	20	110	5R100
W1346373	5	400	376.5 / 400.1	<162.0	0.8 / 0.8	20	110	5R100
W1346374	5	500	470.6 / 500.1	<202.5	0.8 / 0.8	20	110	5R069
W1346375	5	600	564.7 / 600.1	<242.9	0.8 / 0.8	20	110	5R069

Table 2.235. Filters HQ ^7Li - ^{31}P BP (^{-87}Rb , ^{19}F -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346269	8	300	116.6...121.5	<98.2 / >282.4	1	15	90	8H073
W1346256	8	400	155.5...162.0	<130.9 / >376.5	1	15	90	8H073
W1346262	8	500	194.4...202.5	<163.6 / >470.6	1	15	90	8H073
W1346279	8	600	233.2...242.9	<196.4 / >564.7	1	15	90	8H073
W1346304	6	700	272.1...283.4	<229.1 / >658.8	1	15	90	6R125
W1346305	6	750	291.5...303.7	<245.4 / >705.8	1	15	90	6R125
W1346306	6	800	311.0...323.9	<261.8 / >752.9	1	15	90	6R125
W1346715	6	850	330.4...344.1	<278.2 / >799.9	1	15	90	*
W1346307	6	900	349.8...364.4	<294.5 / >847.0	1	15	90	6R125
W1346667	6	1000	388.7...404.9	<327.2 / >941.1	1	15	90	*

Table 2.236. Filters HQ ^7Li - ^{31}P BP (^{-13}C , ^{19}F -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346372	6	300	116.6...121.5	<98.2 / >282.4	0.5	20	90 / 80	6H073
W1346349	6	400	155.5...162.0	<100.6 / >376.5	0.5	20	90 / 80	6H073
W1346351	6	500	194.4...202.5	<125.8 / >470.6	0.5	20	90 / 80	6H073
W1346367	6	600	233.2...242.9	<150.9 / >564.7	0.5	20	90 / 80	6H073

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Table 2.237. Filters HQ ^{71}Ga - ^{87}Rb BP (^{-13}C , ^{31}P -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346270	8	300	91.5...98.2	<75.5 / >121.5	1	15	90 / 90	8H097
W1346257	8	400	122.0...130.9	<100.6 / >162.0	1	15	90 / 90	8H073
W1346263	8	500	152.5...163.6	<125.8 / >202.5	1	15	90 / 90	8H097
W1346280	8	600	183.0...196.4	<150.9 / >242.9	1	15	90 / 90	8H097

Table 2.238. Filters HQ ^{71}Ga - ^{87}Rb BP (^{-13}C , ^7Li -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346308	6	700	213.5...229.1	<176.0 / >272.1	1	15	90 / 90	6R125
W1346309	6	750	228.8...245.4	<188.6 / >291.5	1	15	90 / 90	6R125
W1346310	6	800	244.0...261.8	<201.2 / >311.0	1	15	90 / 90	6R125
W1346714	6	850	259.3...278.2	<213.8 / >330.4	1	15	90 / 90	*
W1346311	6	900	274.5...294.5	<226.3 / >349.8	1	15	90 / 90	6R125
W1346668	6	1000	305.0...327.2	<251.5 / >388.7	1	15	90 / 90	*

Table 2.239. Filters HQ ^{13}C - ^{23}Na BP (^{-29}Si , ^{71}Ga -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346488	7	400	100.6...105.8	<79.5 / >122.0	1	15	90 / 90	7R155
W1346489	7	500	125.8...132.3	<99.3 / >152.5	1	15	90 / 90	7R155
W1346490	6	600	150.9...158.7	<119.1 / >183.0	1	15	90 / 90	6R125
W1346491	6	700	176.0...185.2	<139.1 / >213.5	1	15	90 / 90	6R125
W1346313	6	750	188.6...198.4	<149.0 / >228.8	1	15	90 / 90	6R125
W1346314	6	800	201.2...211.7	<159.0 / >244.0	1	15	90 / 90	6R125
W1346710	6	850	213.8...224.8	<168.9 / >259.3	1	15	90 / 90	*
W1346315	6	900	226.3...238.1	<178.8 / >274.5	1	15	90 / 90	6R125
W1346669	6	1000	251.5...264.5	<198.7 / >305.0	1	15	90 / 90	*

Table 2.240. Filters HQ ⁵⁹Co - ²³Na BP (-²⁹Si, ⁸⁷Rb-)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346271	8	300	71.2...79.4	<59.6 / >98.2	1	15	90 / 90	8H139
W1346258	8	400	94.9...105.8	<79.5 / >130.9	1	15	90 / 90	8H139
W1346264	8	500	118.7...132.3	<99.4 / >163.6	1	15	90 / 90	8H097
W1346276	8	600	142.4...158.7	<119.2 / >196.4	1	15	90 / 90	8H097
W1346312	8	700	166.1...185.2	<139.1 / >229.1	1	15	90 / 90	8H073

Table 2.241. Filters HQ ⁵⁹Co - ²³Na BP (-²H, ¹⁹F-)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346459	6	300	71.2...79.4	<46.0 / >282.4	0.6	20	90 / 80	*
W1346440	6	400	94.9...105.8	<61.4 / >376.5	0.6	20	90 / 80	6H073
W1346460	6	500	118.7...132.3	<76.8 / >470.6	0.6	20	90 / 80	6H073
W1346461	6	600	142.4...158.7	<92.1 / >564.7	0.6	20	90 / 80	6H073
W1346462	6	700	166.1...185.2	<107.5 / >658.8	0.6	20	90 / 80	6H073
W1346463	6	750	178.0...198.4	<115.2 / >705.8	0.6	20	90 / 80	*
W1346464	6	800	189.8...211.7	<122.8 / >752.9	0.6	20	90 / 80	*
W1346465	6	900	213.6...238.1	<138.2 / >847.0	0.6	20	90 / 80	*

Table 2.242. Filters HQ ⁵⁹Co - ²³Na BP (-¹⁵N)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346275	4	300	71.2...79.4	<30.4	0.5	20	90	4H073
W1346226	4	400	94.9...105.8	<40.6	0.5	20	90	4H073
W1346224	4	500	118.7...132.3	<50.7	0.5	20	90	4H073
W1346230	4	600	142.4...158.7	<60.8	0.5	20	90	4H073
W1346316	4	700	166.1...185.2	<71.0	0.5	20	90	4H073
W1346317	4	750	178.0...198.4	<76.0	0.5	20	90	4H073
W1346318	4	800	189.8...211.7	<81.1	0.5	20	90	4H073
W1346657	4	850	201.7...224.8	<86.2	0.5	20	90	4H073
W1346319	4	900	213.6...238.1	<91.2	0.5	20	90	4H073

NMR Filters

Table 2.243. Filters HQ ^{29}Si BP (^{-2}H , ^{13}C -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346272	8	300	59.6	<46.0 / >75.5	1	15	90 / 90	8H139
W1346259	8	400	79.5	<61.4 / >100.6	1	15	90 / 90	8H139
W1346265	8	500	99.4	<76.8 / >125.8	1	15	90 / 90	8H169
W1346281	8	600	119.2	<92.1 / >150.9	1	15	90 / 90	7R155
W1346320	7	700	139.1	<107.5 / >176.0	1	15	90 / 90	7R155
W1346321	6	750	149.0	<115.2 / >188.6	1	15	90 / 90	6R125
W1346322	6	800	159.0	<122.8 / >201.2	1	15	90 / 90	6R125
W1346718	6	850	168.9	<130.5 / >213.8	1	15	90 / 90	*
W1346323	6	900	178.8	<138.2 / >226.3	1	15	90 / 90	6R125
W1346670	6	1000	198.7	<153.5 / >251.5	1	15	90 / 90	*

Table 2.244. Filters HQ ^{17}O - ^2H BP (^{11}B -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346452	5	300	40.7...46.0	96.3 / >121.5	0.8	20	75 / 85	5H169
W1346442	5	400	54.2...61.4	128.3 / >162.0	0.8	20	75 / 85	5H169
W1346453	6	500	67.8...76.7	160.4 / >202.5	0.8	20	75 / 85	*
W1346454	6	600	81.3...92.1	192.5 / >242.9	0.8	20	75 / 85	6H073
W1346455	6	700	94.9...107.5	224.5 / >283.4	0.8	20	75 / 85	*
W1346456	6	750	101.7...115.2	240.6 / >303.7	0.8	20	75 / 85	*
W1346457	6	800	108.5...122.8	256.6 / >323.9	0.8	20	75 / 85	*
W1346458	6	900	122.0...138.2	288.7 / >364.4	0.8	20	75 / 85	*

Table 2.245. Filters HQ ^{17}O - ^2H BP (^{-15}N , ^{29}Si -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346492	7	700	94.9...107.5	<71.0 / >139.1	1	15	90 / 90	7R155
W1346493	7	750	101.7...115.2	<76.1 / >149.0	1	15	90 / 90	7R155
W1346326	7	800	108.5...122.8	<81.1 / >159.0	1	15	90 / 90	7R155
W1346697	7	850	115.2...130.5	<86.2 / >168.9	1	15	90 / 90	7R155
W1346327	7	900	122.0...138.2	<91.2 / >178.8	1	15	90 / 90	7R155
W1346671	7	1000	135.6...153.5	<101.4 / >198.7	1	15	90 / 90	*

Table 2.246. Filters HQ ^{133}Cs - ^2H BP (^{-15}N , ^{29}Si -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346273	8	300	39.4...46.0	<30.4 / >59.6	1	15	90 / 80	8H169
W1346260	8	400	52.5...61.4	<40.6 / >79.5	1	15	90 / 80	8H139
W1346266	8	500	65.6...76.8	<50.7 / >99.4	1	15	90 / 80	8H139
W1346282	8	600	78.7...92.1	<60.8 / >119.2	1	15	90 / 80	8H139
W1346324	8	700	91.8...107.5	<71.0 / >139.1	1	15	90 / 80	8H097
W1346325	8	750	98.4...115.2	<76.0 / >149.0	1	15	90 / 80	8H073

Table 2.247. Filters HQ ^{15}N BP (^{-14}N , ^2H -)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346274	8	300	30.4	<21.7 / >46.0	1	15	90 / 90	8H169
W1346261	8	400	40.6	<28.9 / >61.4	1	15	90 / 90	8H139
W1346267	8	500	50.7	<36.1 / >65.6	1	15	90 / 90	8H139
W1346277	8	600	60.8	<43.4 / >78.7	1	15	90 / 90	8H139
W1346328	8	700	71.0	<50.6 / >91.8	1	15	90 / 90	8H139
W1346329	8	750	76.0	<54.2 / >98.4	1	15	90 / 90	*
W1346330	8	800	81.1	<57.8 / >104.9	1	15	90 / 90	8H169
W1346716	8	850	86.2	<61.4 / >130.5	1	15	90 / 90	*
W1346331	8	900	91.2	<65.0 / >118.0	1	15	90 / 90	8H169
W1346717	8	1000	101.4	<72.3 / >153.5	1	15	90 / 90	*

NMR Filters

Table 2.248. Filters HQ ¹⁵N BP (¹³C)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346278	5	300	30.4	71.2 / >75.5	0.8	20	85 / 90	5H169
W1346227	5	400	40.6	94.9 / >100.6	0.8	20	85 / 90	5H133
W1346225	5	500	50.7	118.7 / >125.8	0.8	20	85 / 90	5H133
W1346231	5	600	60.8	142.4 / >150.9	0.8	20	85 / 90	5H133
W1346332	6	700	71.0	166.1 / >176.0	0.8	20	85 / 90	6H073
W1346333	5	750	76.0	178.0 / >188.6	0.8	20	85 / 90	5H169
W1346334	5	800	81.1	189.8 / >201.2	0.8	20	85 / 90	5H169
W1346335	5	900	91.2	213.6 / >226.3	0.8	20	85 / 90	5H169

Table 2.249. Filters HQ ¹⁴N BP (¹⁵N-)

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346429	8	400	28.9	>40.6	1	15	90	8H169
W1346268	8	500	36.1	>50.7	1	15	90	*
W1346283	8	600	43.4	>60.8	1	15	90	*
W1346336	8	700	50.6	>71.0	1	15	90	*
W1346337	8	750	54.2	>76.0	1	15	90	*
W1346338	8	800	57.8	>81.1	1	15	90	*
W1346339	8	900	65.0	>91.2	1	15	90	*

Table 2.250. Diplexer HQ ¹H / ¹⁹F

Part Number	Number of Cells	Filter (MHz)	Frequency Pass (MHz)	Frequency Stop (MHz)	Maximum Insertion Loss (dB)	Minimum Return Loss (dB)	Minimum Rejection (dB)	Case
W1346237	4	300	300.1 / 282.4	282.4 / 300.1	0.6	20	50	4S063D
W1346416	4	360	360.1 / 338.8	338.8 / 360.1	0.6	20	50	4S063D
W1346345	4	400	400.1 / 376.5	376.5 / 400.1	0.6	20	50	4S063D
W1346346	4	500	500.1 / 470.6	470.6 / 500.1	0.6	20	50	4S063D
W1346347	4	600	600.1 / 564.7	564.7 / 600.1	0.6	20	50	4S063D
W1346378	4	750	750.1 / 705.8	705.8 / 750.1	0.6	20	50	4S063D

Cases and Accessories

3

Notch Filters

3.1

Case 3S063

3.1.1

Mechanical dimensions (mm) : 161 x 106 x 50
Weight (kg) : 1,1

Figure 3.1. 3S063 View



Mechanical dimensions (mm) : 242 x 107 x 68
Weight (kg) : 1,5

Figure 3.2. 4S063D View



Rod Filters

3.2

Case 2R126MRI

3.2.1

Mechanical dimensions (mm) : 177 x 162 x 50
 Weight (kg) : 1,6

Figure 3.3. 2R126MRI View



Case 5R045

3.2.2

Mechanical dimensions (mm) : 227 x 68 x 39
 Weight (kg) : 0,7

Figure 3.4. 5R045 View



Case 5R069

3.2.3

Mechanical dimensions (mm) : 227 x 92 x 39
Weight (kg) : 0,9

Figure 3.5. 5R069 View



Case 5R100

3.2.4

Mechanical dimensions (mm) : 227 x 123 x 39
Weight (kg) : 1,2

Figure 3.6. 5R100 View



Case 6R125

3.2.5

Mechanical dimensions (mm) : 250 x 153 x 39
Weight (kg) : 1,5

Figure 3.7. 6R125 View



Case 7R155

3.2.6

Mechanical dimensions (mm) : 336 x 194 x 52
Weight (kg) : 3,4

Figure 3.8. 7R155 View



Case 8R055P

3.2.7

Mechanical dimensions (mm) : 282 x 83 x 54
Weight (kg) : 1,6

Figure 3.9. 8R055P View



Case 8R105P

3.2.8

Mechanical dimensions (mm) : 277 x 133 x 54
Weight (kg) : 2,6

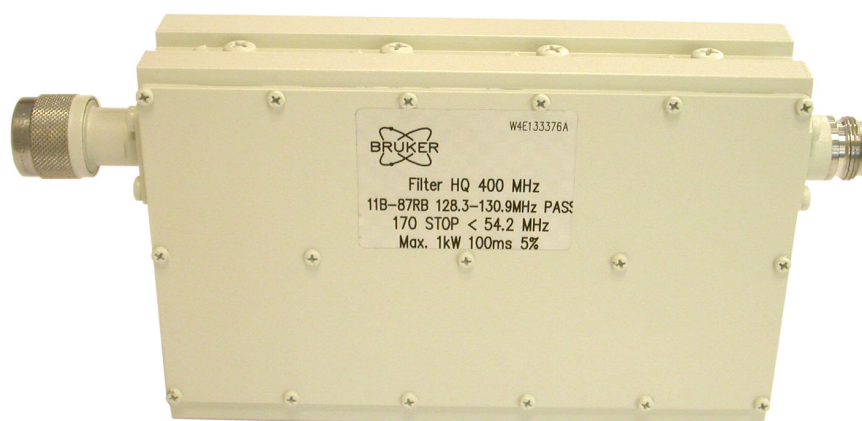
Figure 3.10. 8R105P View



Helical Filters**3.3****Case 4H073****3.3.1**

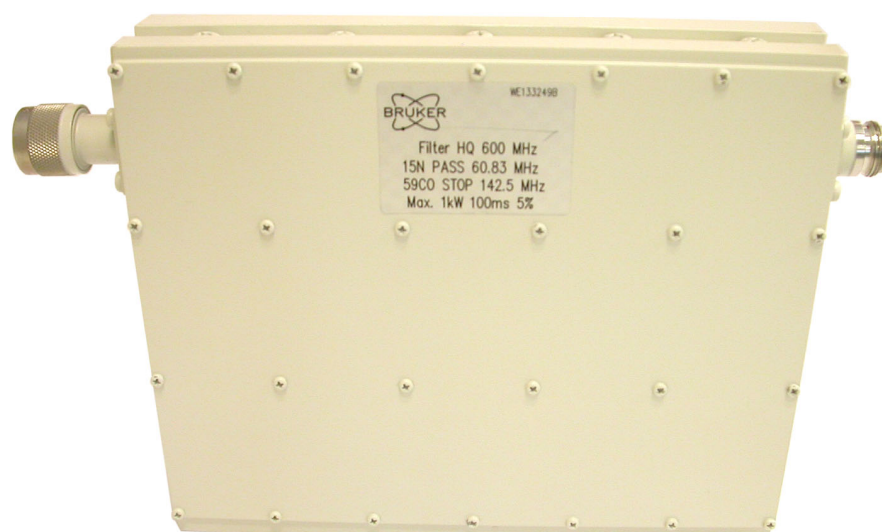
Mechanical dimensions (mm) : 205 x 100 x 38

Weight (kg) : 1,1

Figure 3.11. 4H073 View**Case 5H133****3.3.2**

Mechanical dimensions (mm) : 241 x 157 x 38

Weight (kg) : 1,9

Figure 3.12. 5H133 View

Case 5H169

3.3.3

Mechanical dimensions (mm) : 241 x 197 x 38
Weight (kg) : 2,5

Figure 3.13. 5H069 View



Case 6H073

3.3.4

Mechanical dimensions (mm) : 277 x 100 x 38
Weight (kg) : 1,6

Figure 3.14. 6H073 View



Case 8H073**3.3.5**

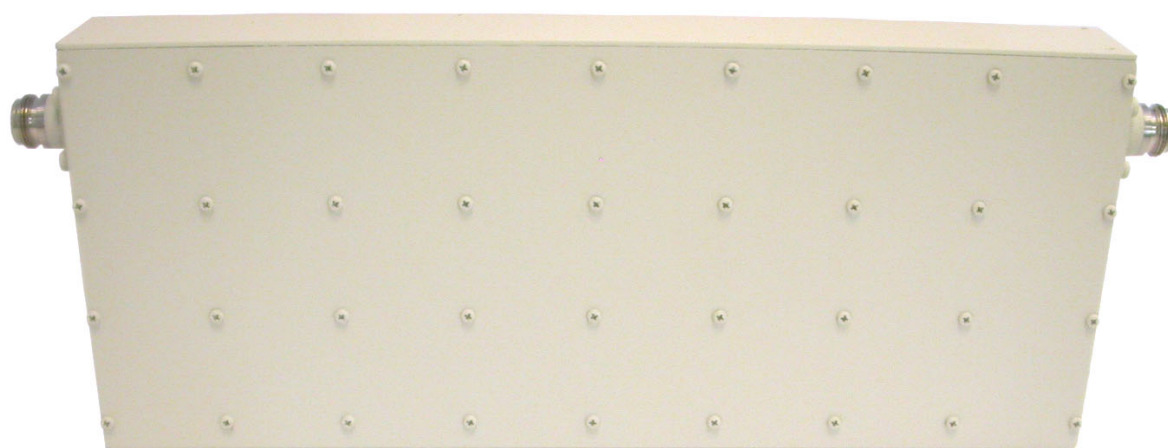
Mechanical dimensions (mm) : 336 x 100 x 38
Weight (kg) : 2.0

Figure 3.15. 8H073 View

**Case 8H097****3.3.6**

Mechanical dimensions (mm) : 336 x 125 x 38
Weight (kg) : 2.5

Figure 3.16. 8H097 View



Case 8H139

3.3.7

Mechanical dimensions (mm) : 336 x 167 x 38
Weight (kg) : 3,4

Figure 3.17. 8H139 View

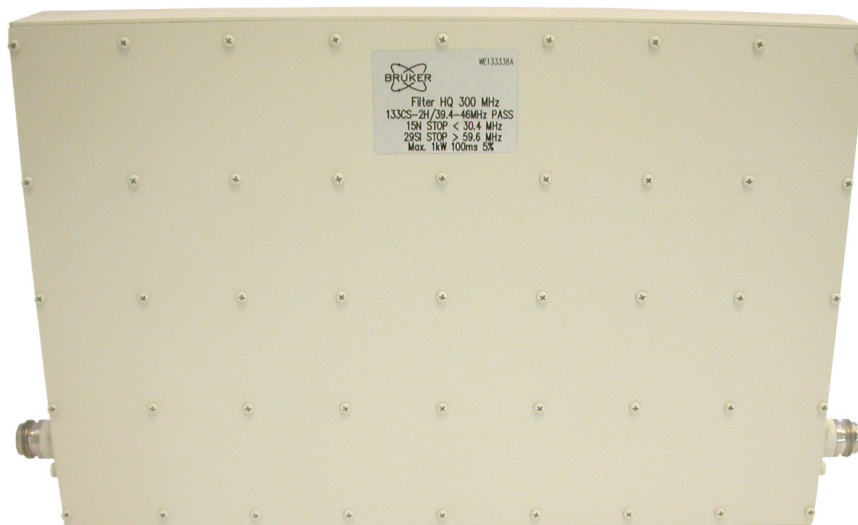


Case 8H169

3.3.8

Mechanical dimensions (mm) : 336 x 197 x 38
Weight (kg) : 3,9

Figure 3.18. 8H169 View



Discret Filters**3.4****Case 2D050****3.4.1**

Mechanical dimensions (mm) : 144 x 58 x 34
Weight (kg) : 0,4

Figure 3.19. 2DH050 View



Figure 3.20. W1303715 - N / Female-Female 0,5m Coaxial Cable



Figure 3.21. 30649 - N / Female-Female Adapter



Figure 3.22. 4241 - N / Male-Male Adapter



Figure 3.23. 30209 - N / Male-Female Right Angle Adapter



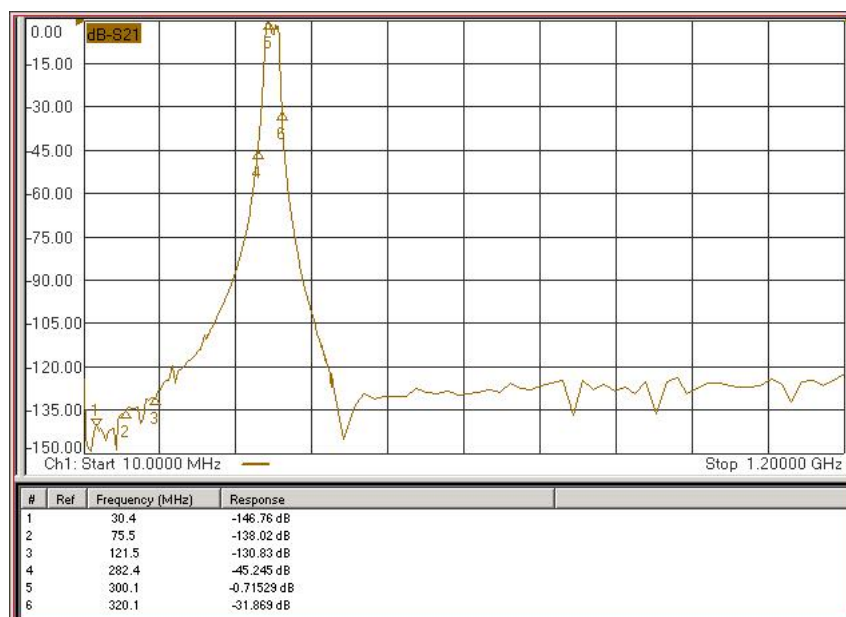
Typical Curves

4

Bandpass Filters Curves

4.1

Figure 4.1. W1346239 - Filter HQ 300 ¹H BP (-³¹P, ¹⁹F)



Typical Curves

Figure 4.2. W1346249 - Filter HQ 300 ¹⁹F BP (-³¹P, ¹H)

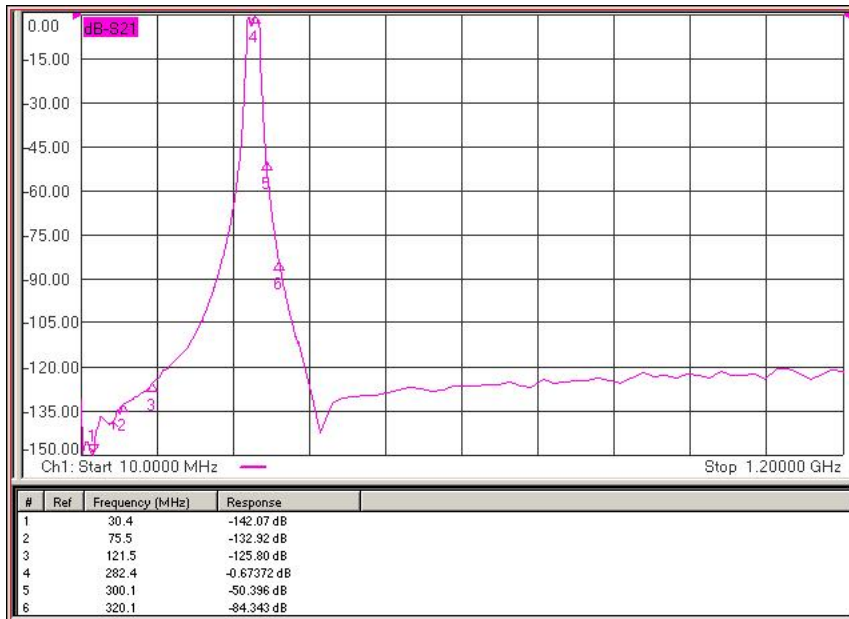


Figure 4.3. W1346240 - Filter HQ 400 ¹H BP (-³¹P, ¹⁹F)

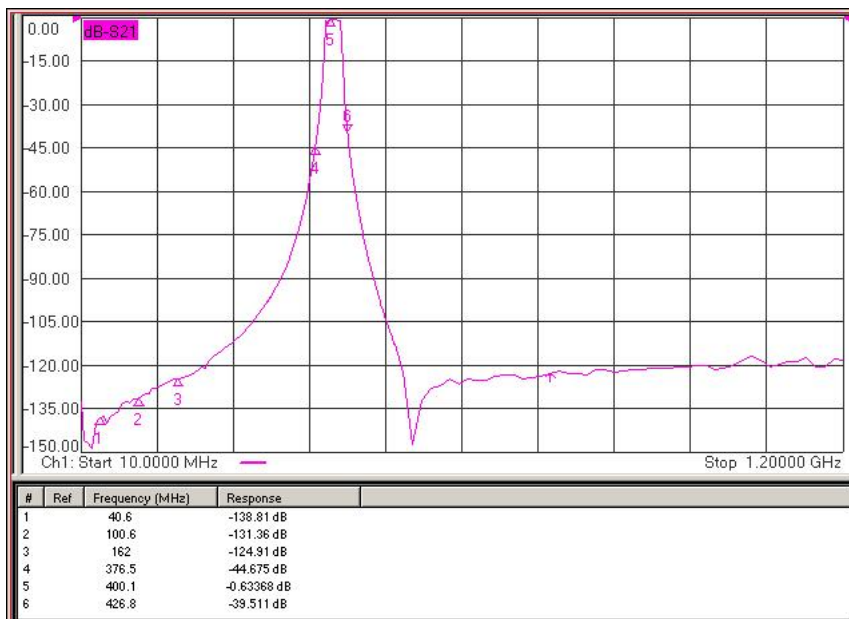


Figure 4.4. W1346250 - Filter HQ 400 ¹⁹F BP (-³¹P, ¹H)

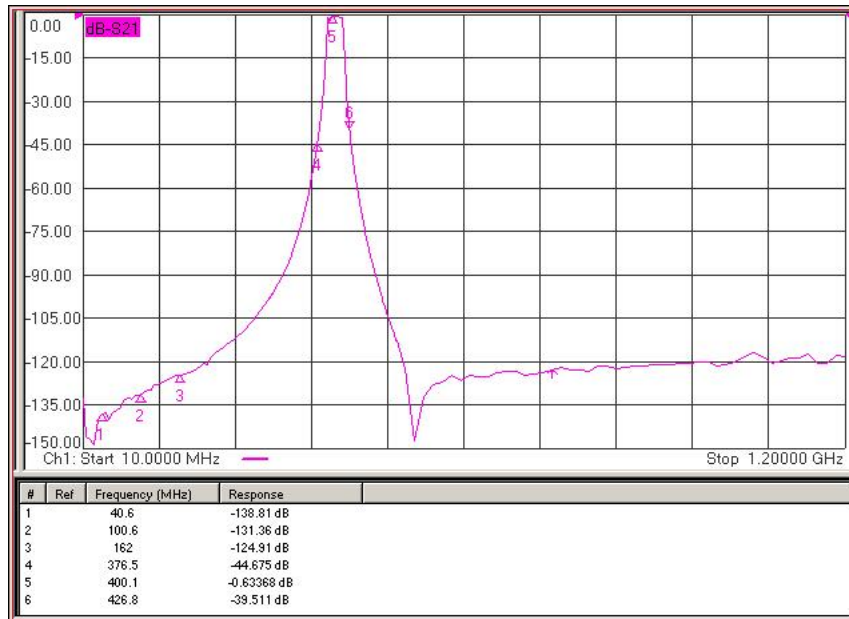
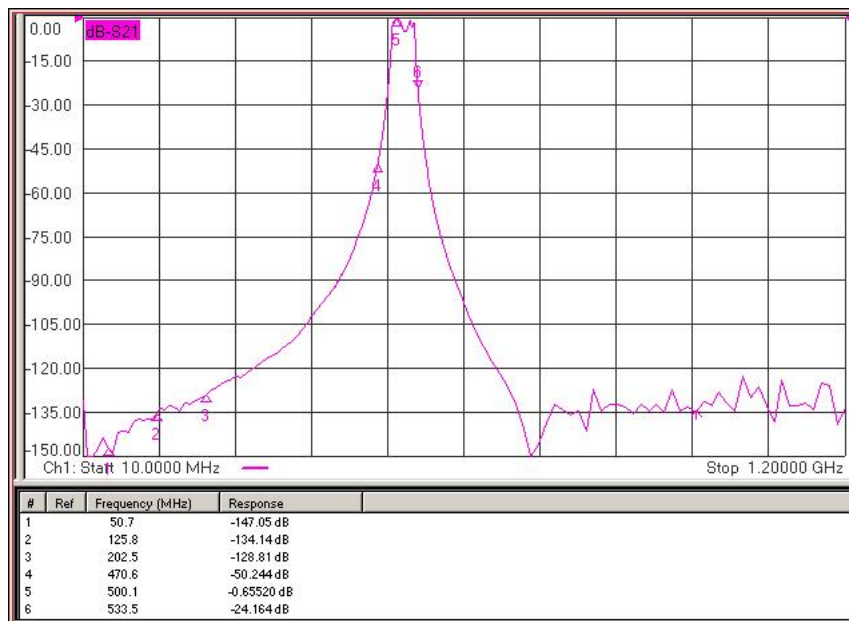


Figure 4.5. W1346223 - Filter HQ 500 ¹H BP(-³¹P, ¹⁹F)



Typical Curves

Figure 4.6. W1346251 - Filter HQ 500 ¹⁹F BP (-³¹P, ¹H)

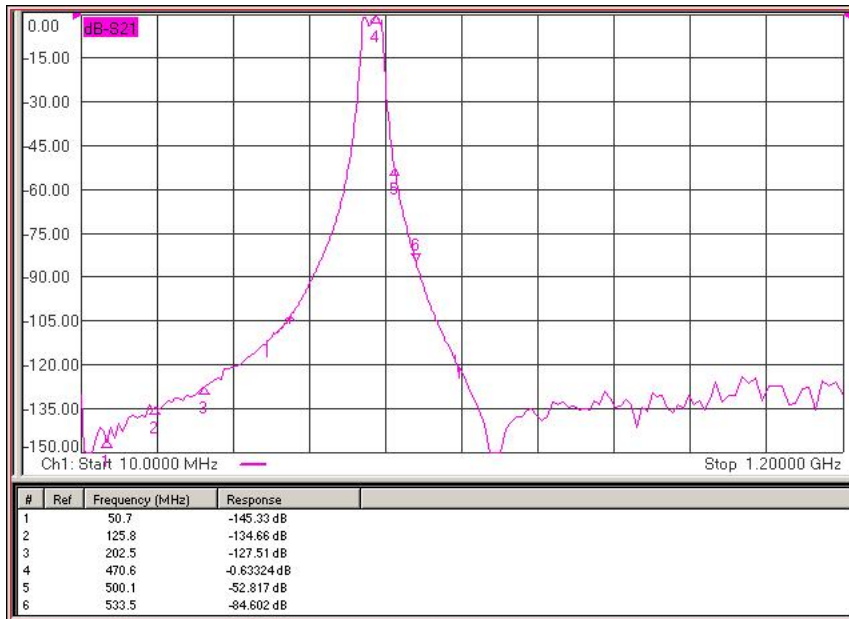


Figure 4.7. W1346241 - Filter HQ 600 ¹H BP (-³¹P, ¹⁹F)

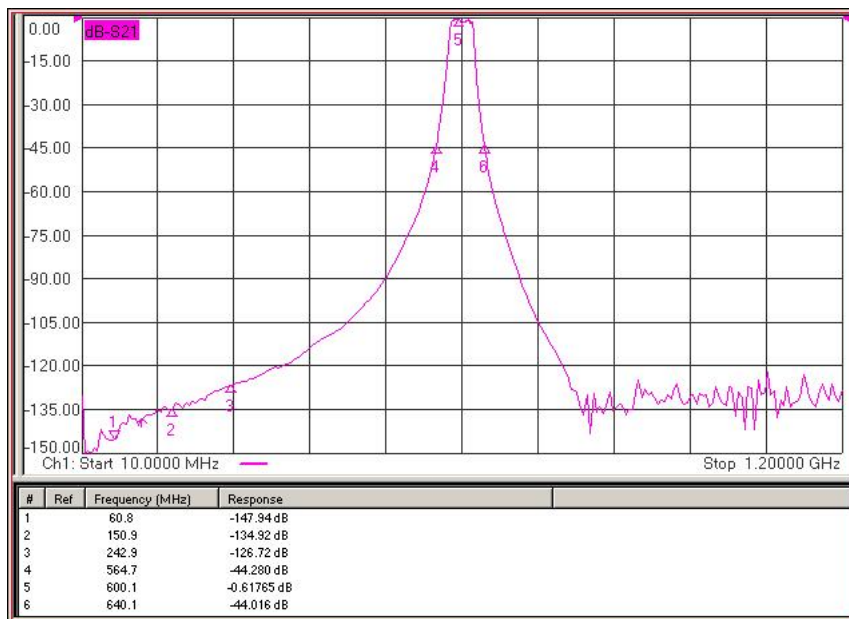


Figure 4.8. W1346296 - Filter HQ 700 ¹H BP (-³¹P, ¹⁹F)

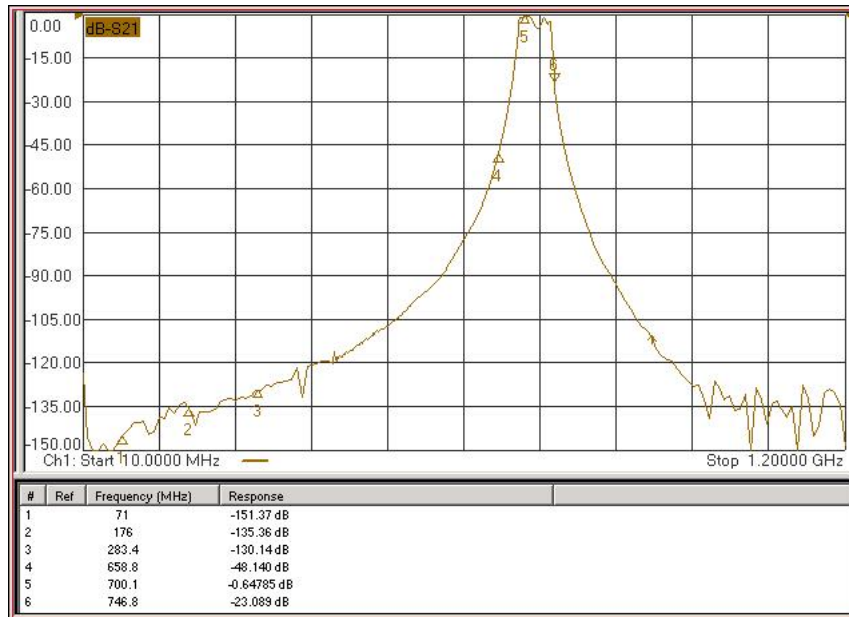
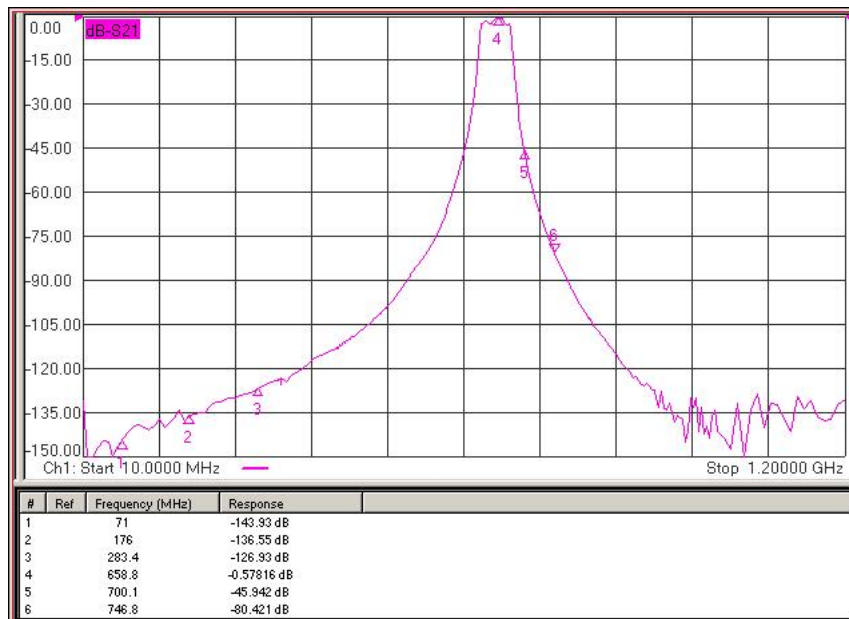


Figure 4.9. W1346300 - Filter HQ 700 ¹⁹F BP (-³¹P, ¹H)



Typical Curves

Figure 4.10. W1346297 - Filter HQ 750 ¹H BP (-³¹P, ¹⁹F)



Figure 4.11. W1346298 - Filter HQ 800 ¹H BP (-³¹P, ¹⁹F)

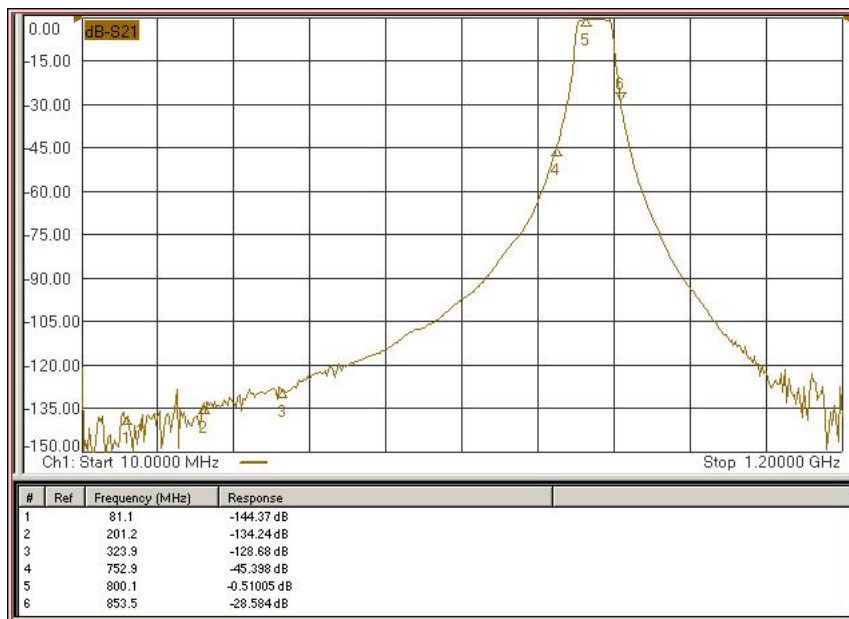
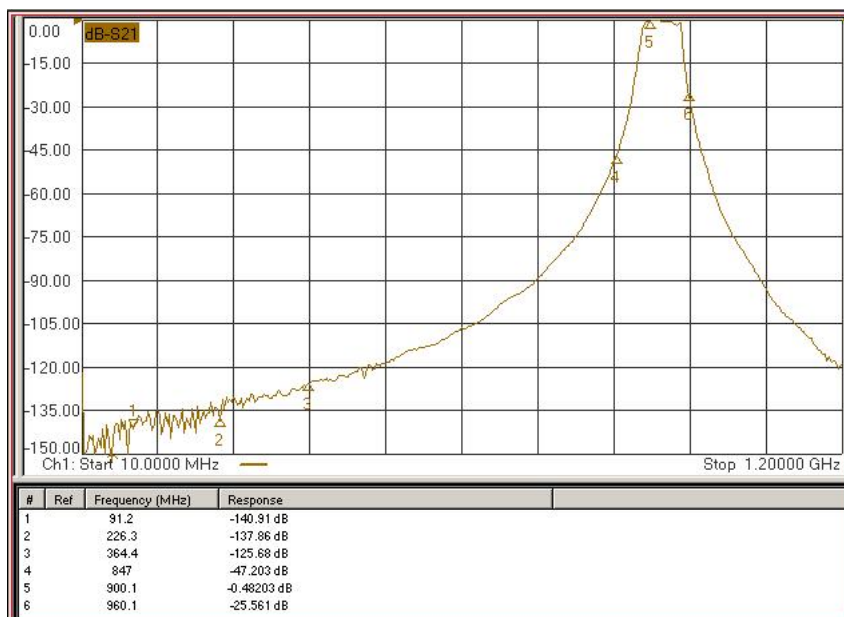


Figure 4.12. W1346299 - Filter HQ 900 ¹H BP (-³¹P, ¹⁹F)



Typical Curves

Table 5.1. Periodic Table of Elements

	1																	18	
	1a	2												13	14	15	16	17	VIII
1	H	1la												IIIa	IVa	Va	VIa	VIIa	He
2	Li	Be	3	4	5	6	7	8	9	10	11	12	B	C	N	O	F	Ne	
3	Na	Mg	IIIb	IVb	Vb	VIb	VIIb	---- VIIIb ----	lb	IIb			Al	Si	P	S	Cl	Ar	
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
6	cs	Ba	*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
7	Fr	Ra	**	Unq	Unp	Unh	Ns	Hs	Mt	Uun	Uuu								
			*	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	
			**	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	

Alkali metals
Alkali earth metals

Transition metals
Other metals

Halogens
Noble gases

Lanthanoids
Actinoids

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