

# VHF PROGRAMMABLE ACTIVE CRYSTAL FILTER\*

## 136 - 174 MHz

ACF1 Series

### Product Features

- Crystal filter based filtering system
- Software programmable tuning, 1.25 KHz steps
- Sharp filtering response
- Front end LNA included for low noise figure
- User adjustable gain
- High linearity
- Transmitter Bypass (TXBP) Module as optional
- N(f) to SMA(m) jumpers included, 1 ft, 2 pcs



Programmable Active Crystal Filter  
(US Patent Protected)

### Applications

- P25, DMR, NXDN, TETRA, Conventional and others
- Repeaters sites, mobile and base station
- Highly congested RF environments
- Mobile applications like trains, cars, trucks



### Specification

### Value

Specification	Value								
Type	Programmable Crystal Filter*								
Frequency bands and Bandwidths	<table border="0"> <tr> <td>ACF11-12.5</td> <td>136 – 150 MHz range &amp; 12.5 KHz BW</td> </tr> <tr> <td>ACF12-12.5</td> <td>150 – 174 MHz range &amp; 12.5 KHz BW</td> </tr> <tr> <td>ACF11-25</td> <td>136 – 150 MHz range &amp; 25 KHz BW</td> </tr> <tr> <td>ACF12-25</td> <td>150 – 174 MHz range &amp; 25 KHz BW</td> </tr> </table>	ACF11-12.5	136 – 150 MHz range & 12.5 KHz BW	ACF12-12.5	150 – 174 MHz range & 12.5 KHz BW	ACF11-25	136 – 150 MHz range & 25 KHz BW	ACF12-25	150 – 174 MHz range & 25 KHz BW
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ACF12-25	150 – 174 MHz range & 25 KHz BW								
Programmable steps	1.25 KHz								
Rejection	<table border="0"> <tr> <td>12.5KHz BW</td> <td>30 dBc min @ adjacent channel (+/-12.5 KHz)</td> <td>60 dBc min @ semi-adjacent channel (+/-25 KHz)</td> </tr> <tr> <td>25KHz BW</td> <td>30 dBc min @ adjacent channel (+/-25 KHz)</td> <td>60 dBc min @ semi-adjacent channel (+/-50 KHz)</td> </tr> </table>	12.5KHz BW	30 dBc min @ adjacent channel (+/-12.5 KHz)	60 dBc min @ semi-adjacent channel (+/-25 KHz)	25KHz BW	30 dBc min @ adjacent channel (+/-25 KHz)	60 dBc min @ semi-adjacent channel (+/-50 KHz)		
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Spurious	< -90 dBm								
Overall gain, max	25 dB								
Adjustable gain range	20 dB range								
Maximum output power	0 dBm								
Maximum input power, no damage	0 dBm								
Overload protection	Yes, self recovery								
VSWR, max	1.5:1 max								
Noise figure	<4 dB at max gain								
Alarms	Yes, LNA failure, Main Power Supply failure, Backup Power Supply failure, Overload, Excessive Input Power								
Alarms output	LEDs and Dry Contacts								
RF Connectors	SMA (f)								
Programming	Via USB								
I/O ports, communications	Via RS232 (optional)								
Power, DC	12 to 48 VDC 5W								
DC ports	Two DC input ports, main & backup								
Dimension	8 x 6 x 1 inches • 203 x 152 x 25 mm								
Weight	2.2 lbs • 1.0 kg								
Environmental	IP21, indoor applications								
Temperature range	14° to 122° F • -10° to +50° C								

DOC TW043.12 - 01 122014  
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