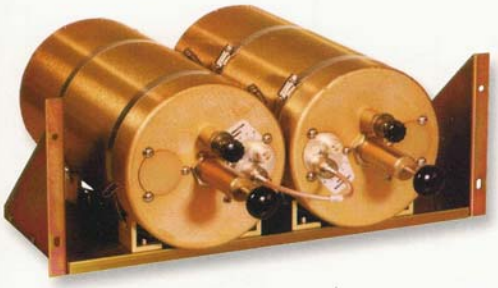
MAS Receive Filter

928/952 MHz



Multiple Address Systems (MAS) provide alarm, control, interrogation, and status reporting communications in the utilities, petroleum, securities, and paging industries. While these communications are often critical, in some cases the 928-929 MHz master receive frequencies have little or no guard band against transmit 929-932 MHz paging frequencies.

A Low Cost Solution To Paging Interference

TX RX offers a simple, low cost solution designed specifically to combat paging interference. Model 15-88-12-DM is a dual cavity filter using our patented Vari-Notch® circuit design. This design combines the low loss and close frequency spacing advantages of notch filters with the broad isolation and selective pass characteristics of bandpass filters. The result is a selective filter assembly capable of providing attenuation to frequencies as close as 400 KHz.

Superior Construction For Stable Performance

All TX RX cylindrical filters are constructed with1/10th inch thick seamless aluminum pipe wall. The heavier gauge material contributes to a more durable filter less likely to detune than typical thin-walled copper resonators. To ensure optimal continuous surface contact at high current points, a 1/4" thick end-cap is heliarc welded to the cavity shell, helping eliminate noise generation and the need for periodic retuning. The stationary and moveable tuning probes are silver plated to minimize erratic tuning behavior, noise, high loss, and degraded selectivity. Rotatable loop assemblies allow for field changing selectivity/insertion loss characteristics.

Converts Easily To Other Filter Types

An important feature standard on most TX RX cavity filters is their convertibility. By simply "dropping in" a new loop assembly, a Vari-Notch filter can be converted to a bandpass, T-Pass®, or Series Notch® filter type.

Maximum Selectivity, Broad Operational Range

To illustrate MAS applications, specifically the 928-929 MHz master receive band, the curves on the reverse side are organized with figures 1 through 4 tuned to pass a specific frequency and reject 929.000 MHz, while figures 5 and 6 are "stagger tuned" on the reject side to produce a wider reject window.

Another important feature of model 15-88-12-DM is its broad operational range. The pass/reject characteristics of this filter are relatively flat over the entire 890-960 MHz spectrum.

High-Pass or Low-Pass, Transmit or Receive

Simple field tuning is all that is required to make this filter either high-pass or low-pass. For transmit applications with pass/reject separations greater than 500 KHz, the maximum continuous power rating is 400 Watts. For separations between 250 and 500 KHz, maximum continuous power is limited to 250 Watts.

Technical Specifications

Model 15-88-12-DM	
Frequency Range	890-960 MHz
I.L. / Rej. / Sep. I.L. = Insertion Loss Rej. = Notch Depth Sep. = Pass/Reject Separation	1.0 dB / >60 dB / 1 MHz 1.4 dB / >50 dB / 600 KHz 1.4 dB / >45 dB / 500 KHz 1.4 dB / >39 dB / 400 KHz
Selectivity Characteristics	refer to applicable curves on reverse side
Nominal Impedance	50 Ohms
Return Loss (VSWR)	-20 dB (1.22:1)
Temperature Range	-30° to +60° C
Connectors	N-female
Dimensions* Inches Centimeters	 7.25H x 19W x 20D 18.4H x 48.3W x 50.8D
Weight, lb (Kg)	17 (9.1)

*Depth dimension will vary based on pass frequency tuning. With a pass frequency of 890 MHz, depth is approximately 17.5" (44.5cm), and at 960 MHz depth is approximately 23" (58.4cm).

Versatile Mounting Options

The mounting option shown is a standard configuration. By reversing the cavity filters on the deck and flush mounting the filter bases with the deck front edges, this same model can be used in a cabinet configuration. Other options such as wall-mount brackets and rack-mount bars are available.

Filters: Vari Notch 890-960 MHz

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