VF-4

Tunable Preselectors

- **Improves Measurement Accuracy Of Distortion Tests**
- **Compatible With All Spectrum Analyzers And Meters**
- **55–880 MHz Operation**
- **Field Portable**

Improves Measurement Accuracy

The TRILITHIC VF-4 Tunable Filter provides the preselection needed for the accurate measurement of composite triple beat, cross modulation and other spurious signals in a working CATV system. Measurements made without the use of a filter are prone to error because spectrum analyzers and signal level meters overload in the presence of many carriers. Input overload causes instruments to generate spurious signals which interfere with measurements and which may be misinterpreted as problems in the CATV system. A VF-4 filter placed between the test instrument and the system test point blocks all unnecessary signals, passing only the carrier to be analyzed to the instrument's input. By eliminating input overload, a VF-4 can improve an instrument's reliable measurement range by as much as 30 dB.

Fiber Applications

VF-4 filters can also be used to extend the range and accuracy of fiber-optic measurements. Composite second order and system noise tests require filters with the best possible selectivity and shape factors. VF-4 filters easily meet these stringent requirements.

Field Portable

A VF-4 filter bank includes four independent, mechanically tunable filters, each covering 2:1 frequency ranges between 55 and 880 MHz. Each filter is provided with its own input and output connectors, and its own tuning dial. The filters are mounted in a rugged, portable field case with a hinged dust cover to protect the front panel controls from weather and impact damage. The VF-4 is impervious to power over-load, being able to withstand inputs as great as 60 watts.

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Specifications

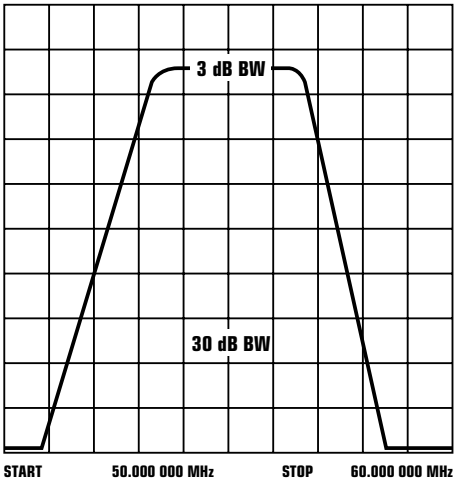
Freq Range:
55–880 MHz in four bands

Shape Factor:
$\frac{30\text{ dB BW}}{3\text{ dB BW}}$ *=2.2/1 maximum*

Insertion Loss:
1.5–3.5 dB, depending on band

In-channel VSWR:
1.5:1, maximum

Shape Factor:
VF-1 and VF-3: $\frac{30\text{ dB BW}}{3\text{ dB BW}} = 3.5:1$
VF-2 and VF-4: $\frac{30\text{ dB BW}}{3\text{ dB BW}} = 2.2:1$



AM-1000 Preamplifier:

Freq Range:
50–1000 MHz

Nominal Gain:
20 dB @ 600 MHz
17 dB @ 750 MHz
16 dB @ 1000 MHz

Impedance:
75 Ohms, nominal

Noise Figure:
5 dB

Power:
Internal NiCad battery, 4 hours operation per charge

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