

6-STAGE YIG FILTERS

**OCTAVE BAND
MULTI-OCTAVE
FAST SWITCHING
INTEGRAL DRIVERS
DUAL TRACKING**



FEATURES

- Low/Insertion Loss, 3.0 dB In some Models.
- Frequency vs. Temperature as Low as 5 MHz/60° C.
- Repeatable RF Performance from Unit to Unit.
- Package Sizes Typically 1.4 Inch³ and 1.7 Inch³.
- Qualification to MIL-E-5400, Class II Specification Available.

APPLICATIONS

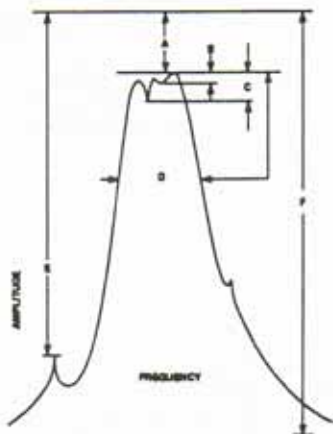
- Telecommunications
- Spectrum Analyzers
- Sweep Generators
- ECM Receivers
- Frequency Synthesizers
- Broadband Test Equipment
- Multi-octave Receivers

DESCRIPTION

OMNIYIG's latest standard line of 6-stage, bandpass YIG filters are electronically tunable from 500 MHz to 26 GHz. Twenty years of experience in YIG development has resulted in improved designs which exhibit excellent performance. Proprietary production techniques enable OMNIYIG to give each customer the highest quality YIG filters at very attractive

prices. These compact packaged solid-state devices provide outstanding tuning linearity over one to five octave bands. OMNIYIG manufactures integrated packages complete with YIG filter, oscillator, and analog or digital driver. All devices can be qualified to MIL-E-5400, Class II Specification.

PARAMETER DEFINITIONS



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|---|---|
| <p>A. INSERTION LOSS
Loss in excess of straight transmission.</p> <p>B. PASS BAND RIPPLE
Over coupling variations in peak response of pass band.</p> <p>C. PASS BAND SPURIOUS
Magnetostatic mode pass band interference.</p> <p>D. BANDWIDTH
Half power (3 dB) width of response when measured from peak.</p> | <p>E. OFF RESONANCE SPURIOUS
Spurious or magnetostatic modes down to a total of 5 dB affecting skirt response.</p> <p>F. OFF RESONANCE ISOLATION
Attenuation outside band of filter response.</p> |
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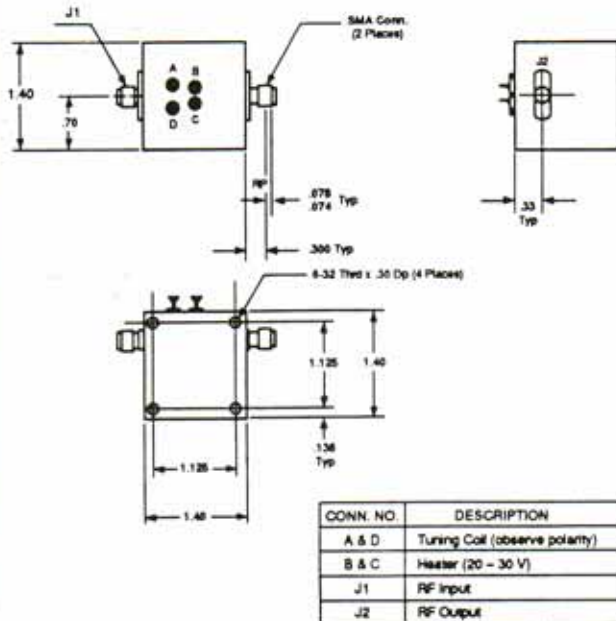
STANDARD OCTAVE BANDS⁽⁶⁾

TYPE ^{1,2}	OMNIYIG MODEL No. ^{3,4}	FREQUENCY RANGE (GHz)	INSERTION LOSS (dB)	BANDWIDTH at 3 dB ¹ (MHz)	COMBINED OFF RESONANCE SPURIOUS MINIMUM (dB)	PASSBAND RIPPLE & SPURIOUS MAXIMUM (dB)	FREQUENCY DRIFT 0° to 50° C (MHz)	OFF RESONANCE ISOLATION MINIMUM (dB)	DIMENSIONS CUBED (INCHES)	WEIGHT (oz)	FREQUENCY TRACKING BETWEEN CHANNELS (MHz)
TRIPLE 3-STAGE (Per Channel)	Ku10333	6.0 - 18.0	3.5	35 - 55	30	1.0	12	70	1.69	17.5	—
6-STAGE	P106	0.5 - 1.0	6.5	12 - 23	60	1.0	5	100	1.4	9.8	—
	L106	1.0 - 2.0	5.5	20 - 35	60	1.5	5	100	1.4	9.8	—
	S106	2.0 - 4.0	5.0	20 - 35	60	1.5	6	100	1.4	9.8	—
	C106	4.0 - 8.0	4.5	25 - 40	60	1.5	9	100	1.4	9.8	—
	X106	8.0 - 12.4	4.5	25 - 40	60	1.5	10	100	1.69	17.5	—
Ku106	12.4 - 18.0	4.5	28 - 45	60	1.0	12	100	1.69	17.5	—	
DUAL 3-STAGE (Per Channel)	P1033	0.5 - 1.0	3.5	17 - 35	35	1.0	5	70	1.4	9.8	5
	L1033	1.0 - 2.0	3.5	24 - 40	35	1.5	5	70	1.4	9.8	6
	S1033	2.0 - 4.0	3.0	30 - 45	30	1.5	5	70	1.4	9.8	6
	C1033	4.0 - 8.0	3.0	30 - 45	30	1.5	9	70	1.4	9.8	7
	X1033	8.0 - 12.4	3.0	35 - 50	30	1.5	10	70	1.69	17.5	8
Ku1033	12.4 - 18.0	3.5	35 - 50	30	1.5	10	70	1.69	17.5	7	

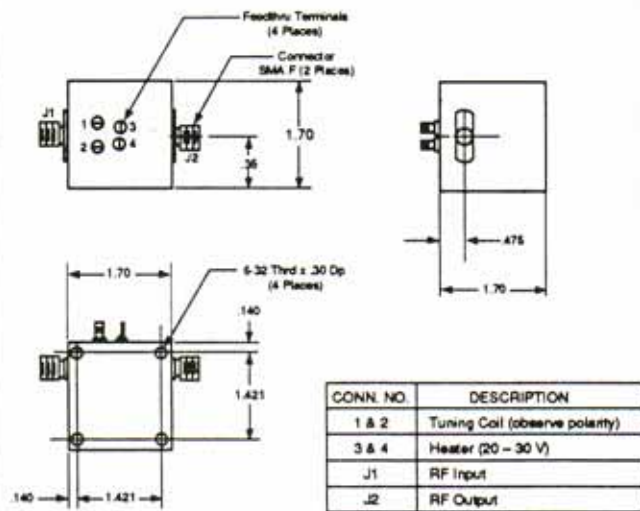
STANDARD MULTI-OCTAVE BANDS⁽⁶⁾

6-STAGE	M983	8.0 - 18.0	7.0	500 - 800	40	2.5	13	100	1.69	17.5	—
6-STAGE	M978	6.0 - 18.0	6.0	25 - 40	60	2.5	13	100	1.69	17.5	—
6-STAGE	M980	4.0 - 18.0	6.0	25 - 60	40	2.5	13	100	1.69	17.5	—
DUAL 3-ST.	M981 ⁽⁷⁾	6.0 - 18.0	3.5	30 - 50	35	2.0	13	70	1.69	17.5	10
6-STAGE	M979	2.0 - 18.0	6.5	25 - 60	60	2.5	13	100	1.69	17.5	—
6-STAGE	M982	2.0 - 26.5	7.0	25 - 60	60	2.5	13	100	1.69	17.5	—

OUTLINE A



OUTLINE B



NOTES:

- All connectors are standard 3mm (SMA) female.
- Limiting levels for all units are greater than +10 dBm.
- Nominal bandwidths, other bandwidths are available.
- Deviation from linear $\pm 0.1\%$.
- Sweeping time required for bandpass to stabilize within 0.2% of full band step. 30 ms. fast switching models available.
- All units can be qualified to MIL-E-5400, Class II Specification on special order.
- Data per channel.