

BAND REJECT YIG FILTERS

OCTAVE BAND MULTI-OCTAVE FAST SWITCHING INTEGRAL DRIVERS DUAL TRACKING



FEATURES

- Low Insertion Loss, 2.0 dB in some Models.
- Frequency vs. Temperature Stability as Low as 200 KHz/°C.
- Repeatable RF Performance from Unit to Unit.
- Package Sizes Typically 1.4 inch³.
- Qualification to MIL-E-5400, Class II Specification Available.

APPLICATIONS

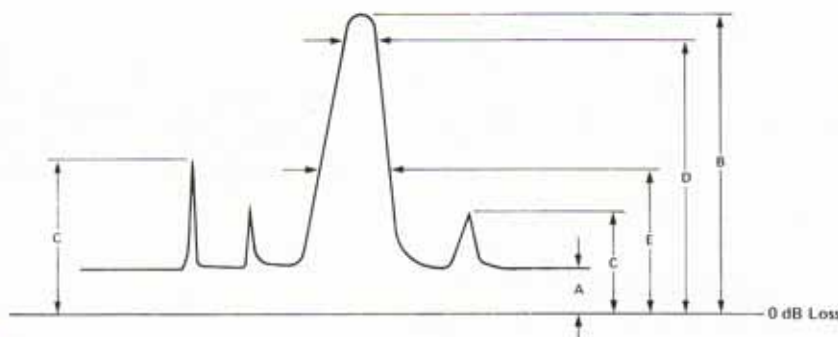
- Spectrum Analyzers
- Sweep Generators
- ECM Receivers
- Frequency Synthesizers
- Broadband Test Equipment

DESCRIPTION

OMNIYIG's newest standard line of Band Reject YIG Filters are electronically tunable in octave and/or multi-octave frequency range from 500 MHz to 18 GHz. Over 20 years of experience in YIG development has resulted in improved designs which exhibit excellent performance. Proprietary production techniques enable OMNIYIG to give each customer higher quality YIG Band Reject Filters at very attractive prices. These compact packaged solid-state

devices provide outstanding tuning linearity over one to five octave bands. Analog drivers and TTL drivers are available as integrated parts to the YIG Filter. Besides the standard line, OMNIYIG manufactures many special designs of Band Reject Filters, YIG Oscillators, Discriminators, YIG Band-pass Filters and other YIG designs. All devices can be qualified to MIL-E-5400, Class II specification.

PARAMETER DEFINITIONS



- A = Passband Insertion Loss
- B = Peak Rejection
- C = Spurious Response Rejection
- D = Bandwidth at 20 dB Rejection
- E = 5 dB Bandwidth

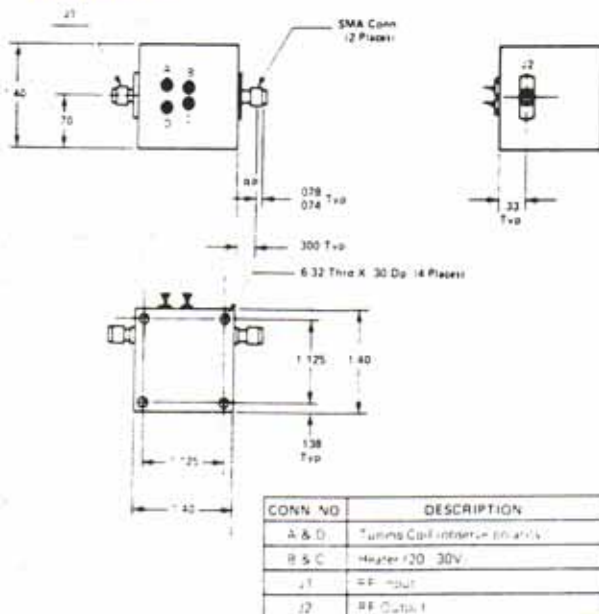
STANDARD OCTAVE BANDS⁶

TYPE ^{1,8}	OMNIYIG MODEL NO. ²	FREQUENCY RANGE (GHz)	PEAK REJECTION TYP. (dB)	BANDWIDTH REJECTION MINIMUM (MHz)	OFF RESONANCE SPURIOUS MINIMUM (dB) ⁸	FREQUENCY DRIFT 0° to 60°C (MHz)	DIMENSIONS CUBED (Inches)	WEIGHT (Oz.)	OUTLINE
2-STAGE	P102R	0.5-1.0	25	4 @ 20dB	5	5	1.4	9.8	A
	L102R	1.0-2.0	25	4 @ 20dB	5	5	1.4	9.8	A
	S102R	2.0-4.0	30	6 @ 20dB	8	5	1.4	9.8	A
	C102R	4.0-8.0	40	8 @ 20dB	8	9	1.4	9.8	A
	X102R	8.0-12.4	40	8 @ 20dB	9	10	1.69	17.5	B
	Ku102R	12.4-18.0	40	10 @ 20dB	9	12	1.69	17.5	B
3-STAGE	P105RX	0.5-1.0	45	5 @ 30dB	10	5	1.4	9.8	A
	L105RX	1.0-2.0	45	5 @ 30dB	10	5	1.4	9.8	A
	S105RX	2.0-4.0	45	7 @ 30dB	12	5	1.4	9.8	A
	C105RX	4.0-8.0	45	10 @ 30dB	12	9	1.4	9.8	A
	X105RX	8.0-12.4	45	10 @ 30dB	12	10	1.69	17.5	B
	Ku105RX	12.4-18.0	45	10 @ 30dB	12	12	1.69	17.5	B
4-STAGE	P103RX	0.5-1.0	45	5 @ 40dB	10	5	1.4	9.8	A
	L103RX	1.0-2.0	45	5 @ 40dB	10	5	1.4	9.8	A
	S103RX	2.0-4.0	45	7 @ 40dB	12	5	1.4	9.8	A
	C103RX	4.0-8.0	45	10 @ 40dB	12	9	1.4	9.8	A
	X103RX	8.0-12.4	45	10 @ 40dB	12	10	1.69	17.5	B
	Ku103RX	12.4-18.0	45	10 @ 40dB	12	12	1.69	17.5	B

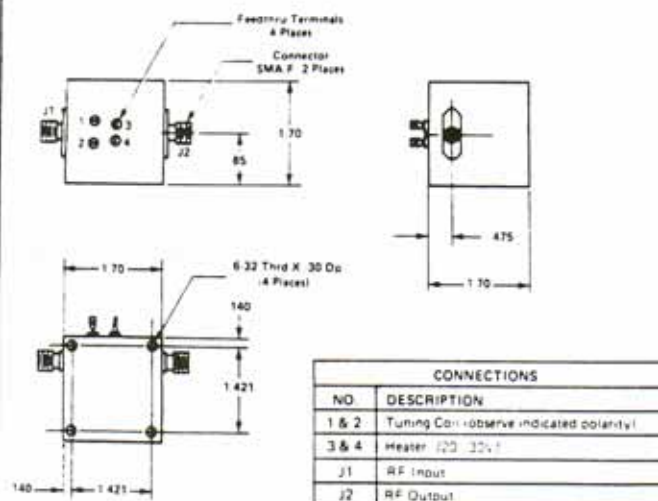
STANDARD MULTI-OCTAVE BANDS⁶

2-STAGE	M102R	4.0-12.4	35	6 @ 20dB	12	13	1.69	17.5	B
3-STAGE	M103R	4.0-12.4	40	8 @ 20dB	12	13	1.69	17.5	B
2-STAGE	M104R	4.0-18.0	35	6 @ 20dB	14	13	1.69	17.5	B
2-STAGE	M105R	2.0-8.0	30	5 @ 20dB	12	13	1.4	9.8	A
2-STAGE	M106R	1.0-4.0	25	4 @ 20dB	10	13	1.4	9.8	A

OUTLINE A



OUTLINE B



NOTES:

- All connectors are standard 3mm (SMA) female
- Limiting levels for A units is greater than -10dBm.
- Nominal bandwidths; other bandwidths are available
- Deviation from linear: ±0.1%
- Sweeping time required for bandpass to stabilize within 0.2% of full band stop
- All units can be qualified to MIL-E-5400, Class II Specification on special order
- 4-stage models M102RX, M103RX, M104RX, M105RX, CX117R rejection BW is 40dB; peak rejection is 45dB
- Off resonance spurious for RX series, typical 12dB