

Coaxial Bandpass Filter

ZX75-12-S+

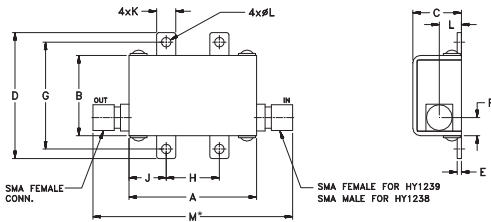
50Ω 9 to 15 MHz

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.25 W at 25°C

Permanent damage may occur if any of these limits are exceeded.

Outline Drawing (HY1239)



Outline Dimensions (inch/mm)

A	B	C	D	E	F	
1.20	.75	.46	1.18	.04	.17	
30.48	19.05	11.68	29.97	1.02	4.32	
G	H	J	K	L	M	wt.
1.00	.50	.35	.18	.106	1.88	grams
25.40	12.70	8.89	4.57	2.69	47.75	35.0

Note:
* M dimension is 2.05 inch (52.07 mm) for HY1238 Case Style.

Features

- High Rejection
- Sharp Insertion Loss roll off
- Shielded case

Applications

- High rejection applications
- Image rejection
- IF signal processing
- Receivers / Transmitters
- Test Lab



MALE FEMALE SMA shown

SMA Connectors	Model	Case	
INPUT FEMALE	OUTPUT FEMALE	ZX75-12-S+	HY1239
MALE	FEMALE	ZX75-12M-S+	HY1238

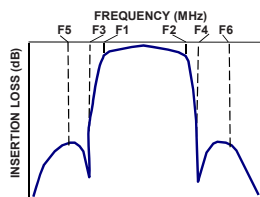
+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

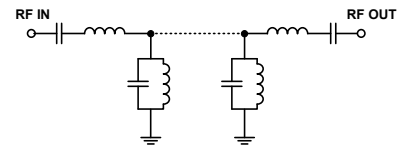
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 3.5dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
F _c	F ₁ - F ₂	F ₃	F ₄	F ₅	F ₆	Typ.	Max.	Typ.
12	9 - 15	7.5	18	7	20 - 3000	1.5	2.2	30

Typical Frequency Response

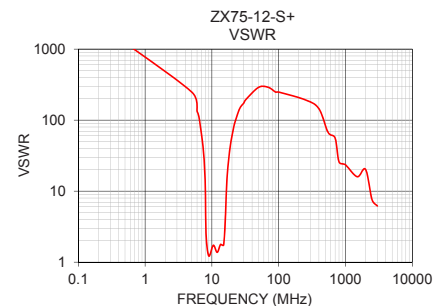
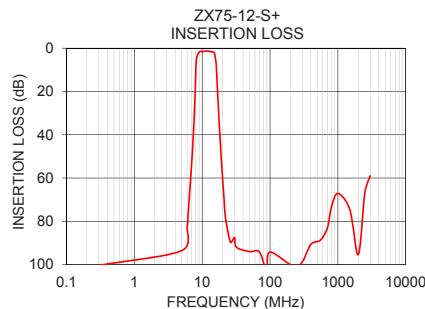


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.3	100.39	1737.18
7.0	53.30	62.05
7.5	36.73	35.46
8.0	14.55	9.74
8.2	5.51	2.37
8.5	3.45	2.36
9.0	1.85	1.22
11.0	1.31	1.40
12.0	1.26	1.37
13.0	1.59	1.77
15.0	2.09	1.75
15.7	4.10	2.81
16.0	6.58	4.66
16.6	15.51	11.77
18.0	37.07	30.49
20.0	60.12	59.91
100.0	94.22	248.17
1000.0	67.12	23.49
3000.0	59.03	6.19



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



Coaxial Band Pass Filter

ZX75-12+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.3	100.39	0.01
7.0	53.30	0.28
7.5	36.73	0.49
8.0	14.55	1.79
8.2	5.51	7.81
8.5	3.45	7.87
9.0	1.85	20.08
11.0	1.31	15.62
12.0	1.26	16.04
13.0	1.59	11.12
15.0	2.09	11.31
15.7	4.10	6.46
16.0	6.58	3.79
16.6	15.51	1.48
18.0	37.07	0.57
20.0	60.12	0.29
100.0	94.22	0.07
1000.0	67.12	0.74
3000.0	59.03	2.83

REV. X1
ZX75-12+
080928
Page 1 of 1



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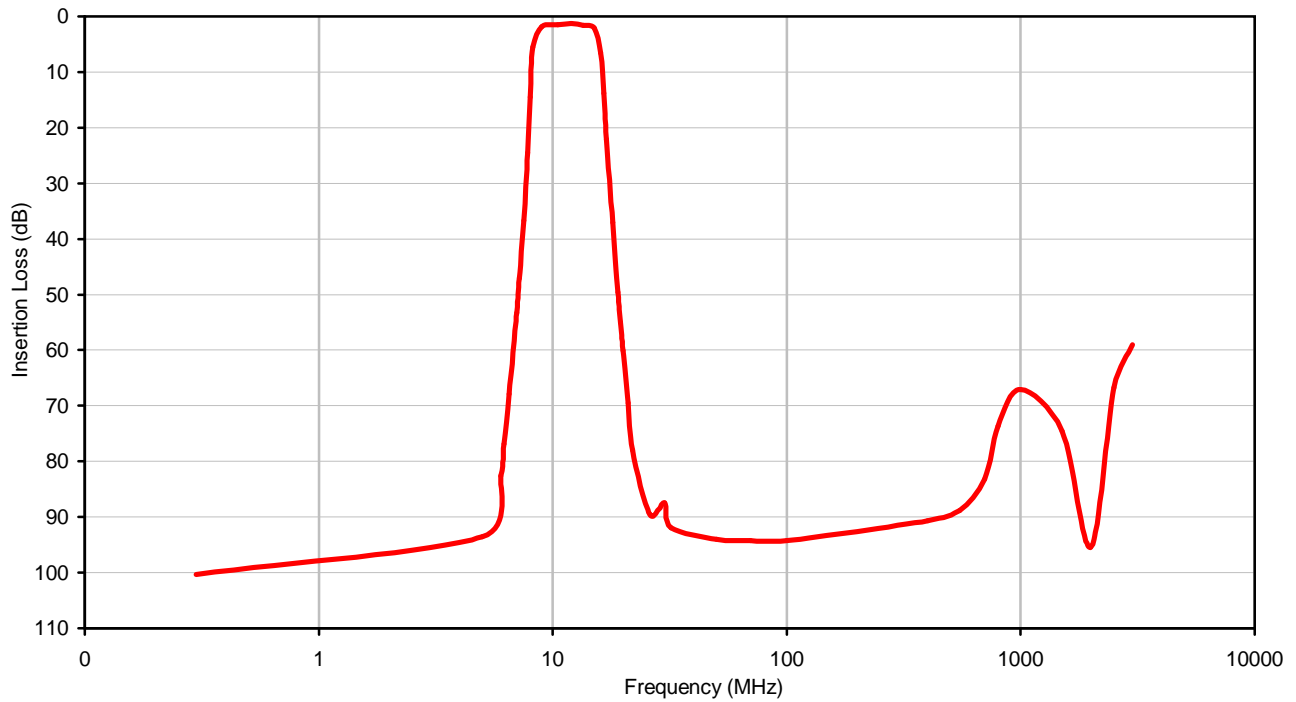


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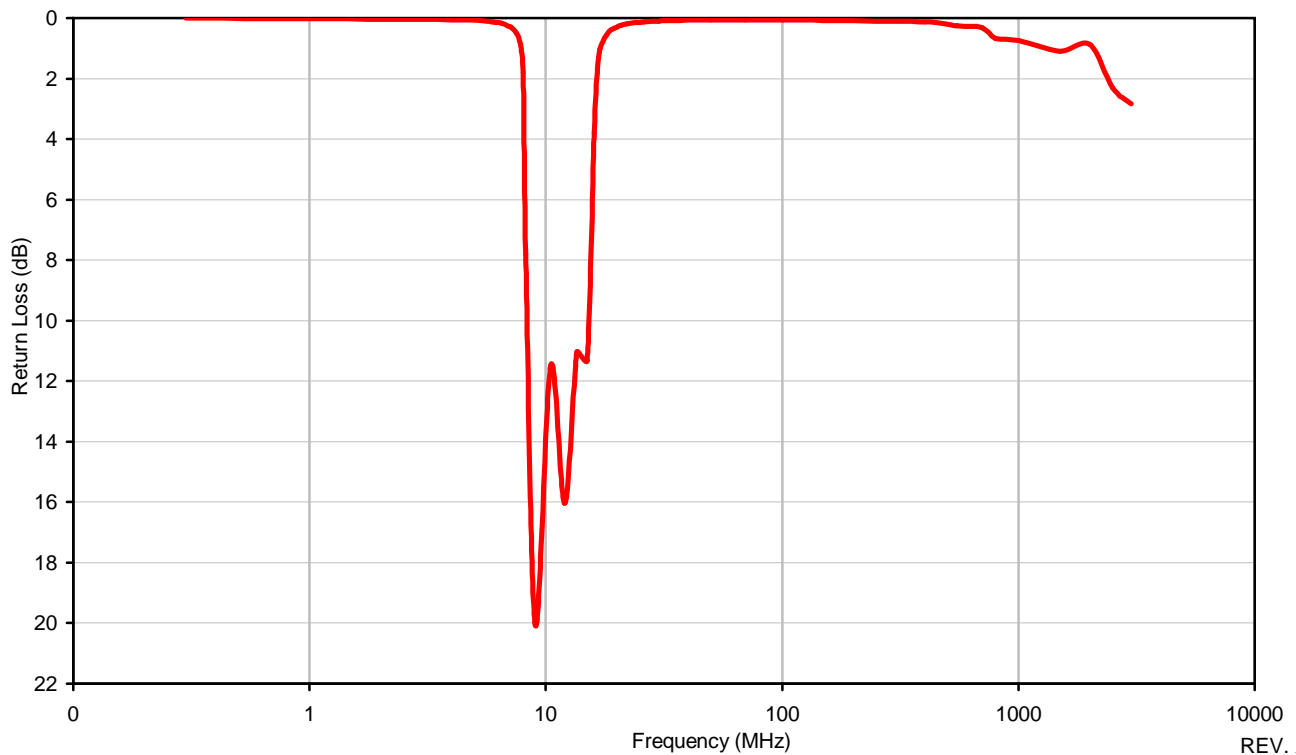


Typical Performance Curves

Insertion Loss



Return Loss



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Page 1 of 1



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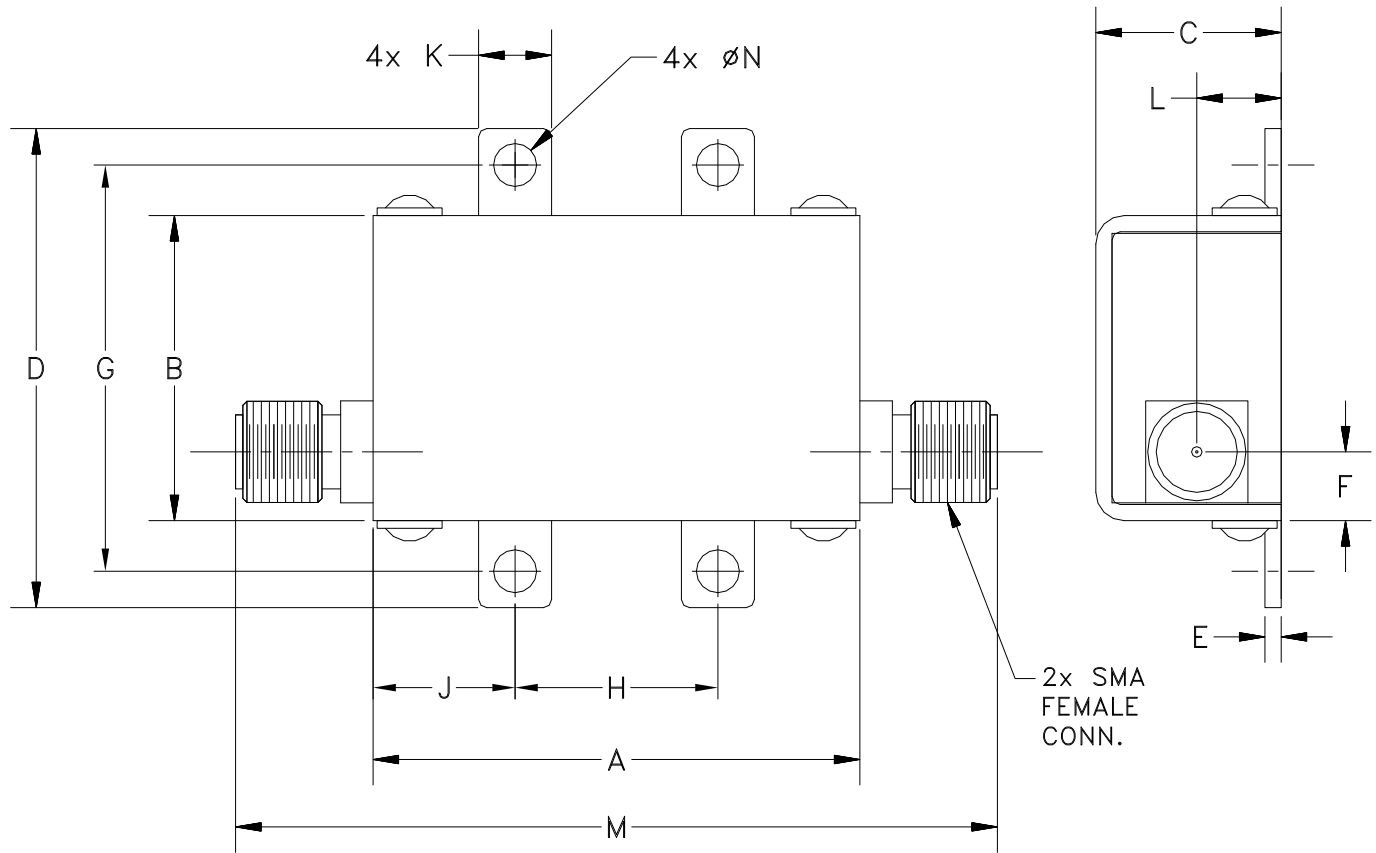


Case Style

HY

Outline Dimensions

HY1239



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N	WT GRAMS
HY1239	1.20 (30.48)	.75 (19.05)	.46 (11.68)	1.18 (29.97)	.04 (1.02)	.17 (4.32)	1.00 (25.40)	.50 (12.70)	.35 (8.89)	.18 (4.57)	.21 (5.28)	1.88 (47.75)	.106 (2.69)	35.0

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$
Tolerance on hole size and interaxes dimensions to be $\pm .005$.

Note:

1. Case material: Brass
2. Case finish: Nickel plate

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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I