Engineering Development Model

High Pass Filter SCHF-EDU0315

Surface Mount

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

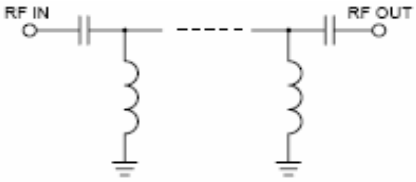
Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : YY161

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	**Min.**	**Typ.**	**Max.**	**Units**
Passband (Loss < 1 dB)	25		1400	MHz
fco Nom. (Loss 3 dB)		23		MHz
Stopband (Loss > 40 dB)	DC		17	MHz
(Loss > 20 dB)	17		19	MHz
Passband VSWR		1.25		(:1)
Stopband VSWR		18		(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W

Functional Schematic



High Pass Filter SCHF-EDU0315

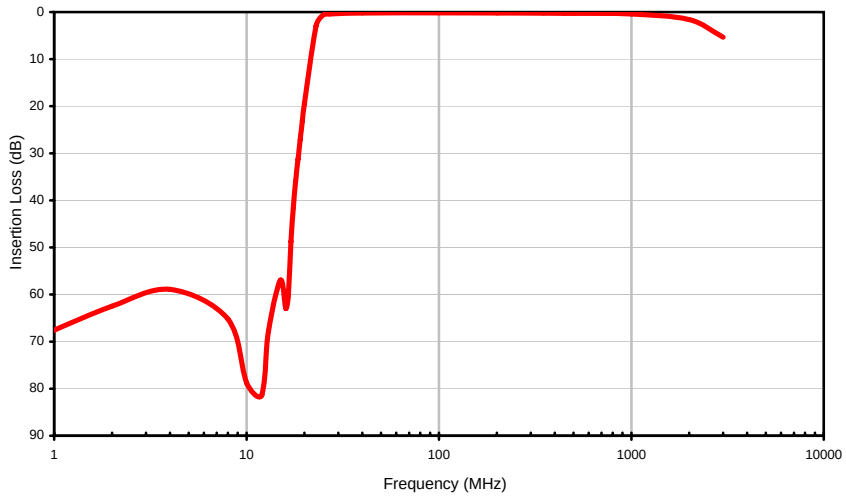
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.50	72.83	0.00
1.00	67.57	0.00
2.00	62.48	0.00
4.00	58.91	0.01
8.00	65.19	0.04
10.00	78.77	0.04
12.00	81.38	0.10
13.00	67.71	0.11
15.00	56.96	0.16
16.00	62.93	0.20
16.50	60.02	0.21
17.00	48.73	0.23
17.50	41.48	0.24
18.00	35.98	0.29
18.50	31.30	0.32
19.00	27.06	0.36
19.50	23.14	0.43
20.00	19.46	0.51
23.00	2.92	5.20
25.00	0.63	21.21
27.00	0.42	26.52
40.00	0.21	37.10
100.00	0.18	27.36
200.00	0.20	31.20
350.00	0.24	33.57
450.00	0.27	32.86
500.00	0.28	32.35
1000.00	0.42	25.37
2000.00	1.58	12.72
3000.00	5.33	7.33

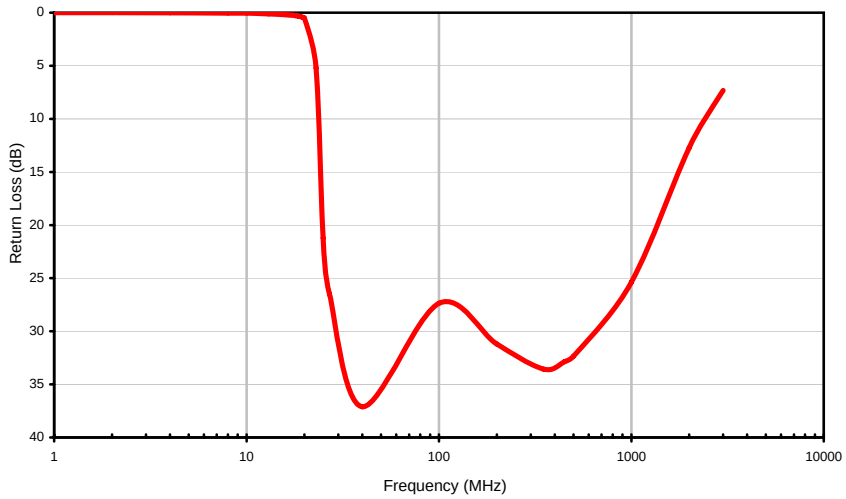
FREQUENCY (MHz)	GROUP DELAY (nsec)
20.00	55.13
21.00	74.48
22.00	98.00
23.00	108.81
24.00	88.78
25.00	68.65
26.00	53.82
27.00	44.45
30.00	14.72
35.00	17.85
40.00	15.51
50.00	10.55
60.00	6.25
70.00	4.28
80.00	3.22
90.00	2.55
100.00	2.11
120.00	1.56
140.00	1.26
160.00	1.07
200.00	0.84
250.00	0.71
300.00	0.65
400.00	0.55
500.00	0.52
1000.00	0.51
1500.00	0.52
2000.00	0.58
2500.00	0.61
3000.00	0.77

Typical Performance Curves

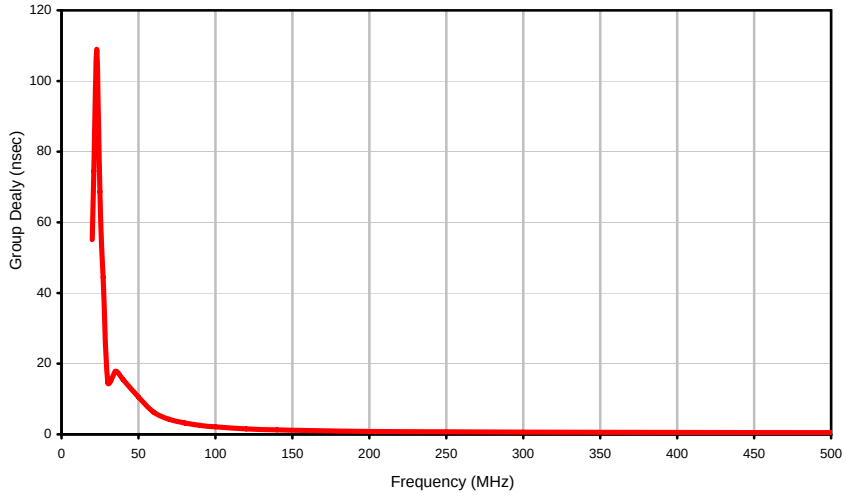
Insertion Loss



Return Loss



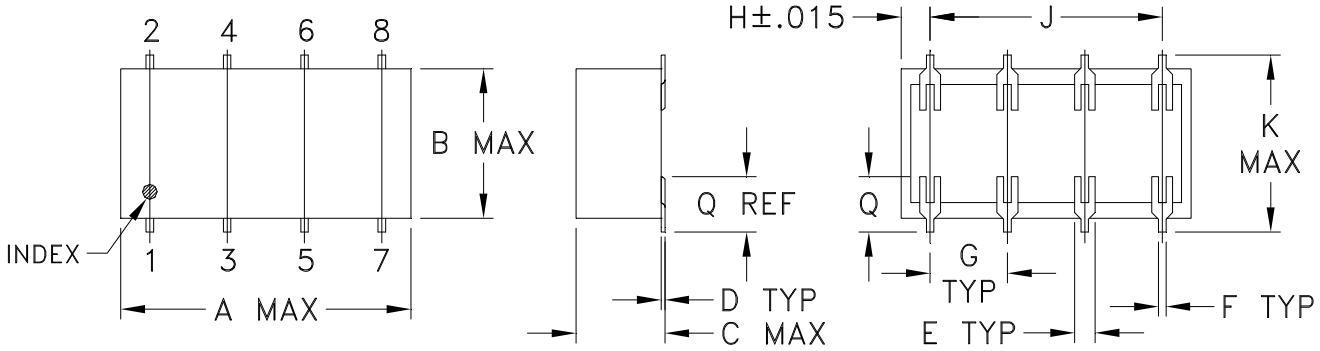
Group Delay



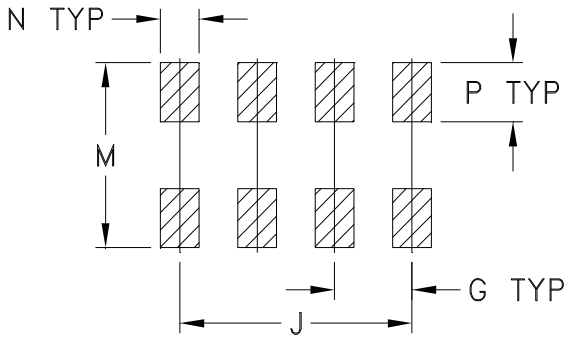
Case Style YY

Outline Dimensions

YY101
YY109
YY161



PCB Land Pattern



Suggested Layout
Tolerance to be within ±.002

CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	WT. GRAMS
YY101*	.75 (19.05)	.38 (9.65)	.20 (5.08)	.010 (0.25)	.050 (1.27)	.020 (0.51)	.200 (5.08)	.075 (1.91)	.600 (15.24)	.450 (11.43)	-- --	.470 (11.94)	.100 (2.54)	.150 (3.81)	.148 (3.76)	1.6
YY109*			.20 (5.08)							.720 (18.29)	-- --	.740 (18.80)				1.6
YY161			.28 (7.11)							.450 (11.43)	-- --	.470 (11.94)				1.6

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .01; 3 Pl. ± .005

Notes:

1. Case material: Plastic.
2. Termination finish:
   For RoHS Case Styles: Tin plate over Nickel plate.
   For RoHS-5 Case Styles: Tin-Lead plate.
3. Special Tolerances: Termination thickness ± .003 inch.
4. * Denotes: For SCM mixers, long termination version (case YY109) is available upon request, consult factory. To order short termination version (case YY101) add -NL suffix.

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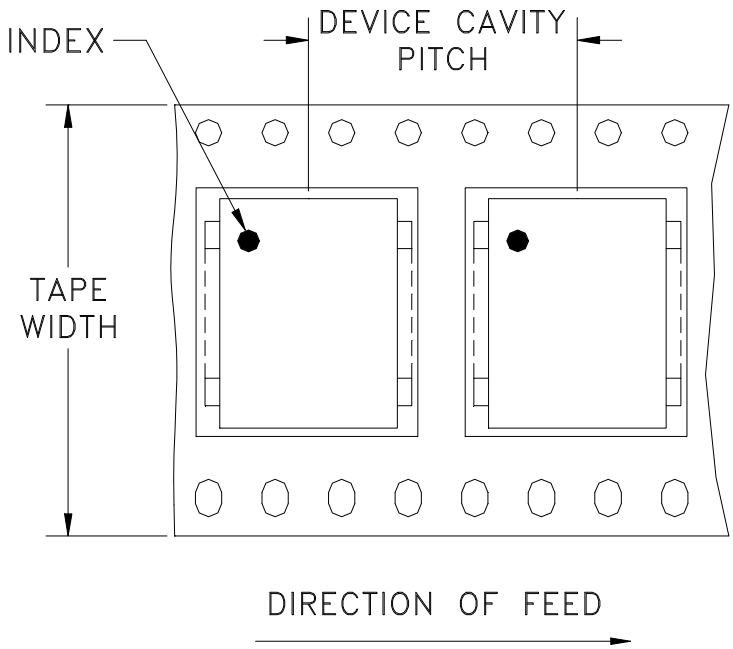
Tape & Reel Packaging TR-F5

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
32	16	13	500

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

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Environmental Specifications ENV02T1

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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
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	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215

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