

Engineering Development Model

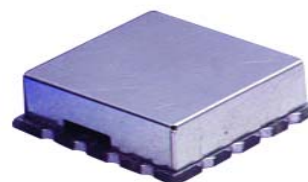
BandPass Filter

BPF-EDU0978

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.

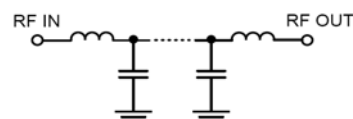
CASE STYLE : CK1113

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 2.5 dB)	320		610	MHz
Centre Frequency		465		MHz
Stopband (Loss > 30 dB)	@290			MHz
(Loss > 40 dB)	@720			MHz
Passband VSWR		1.4		(:1)
Stopband VSWR		20		(:1)

Functional Schematic

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W



PIN CONNECTIONS

Input	2
Output	10
Not Connected	14
Case Ground	1,3,4,5,6,7,8,9,11,12,13,15,16



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RF/IF MICROWAVE COMPONENTS

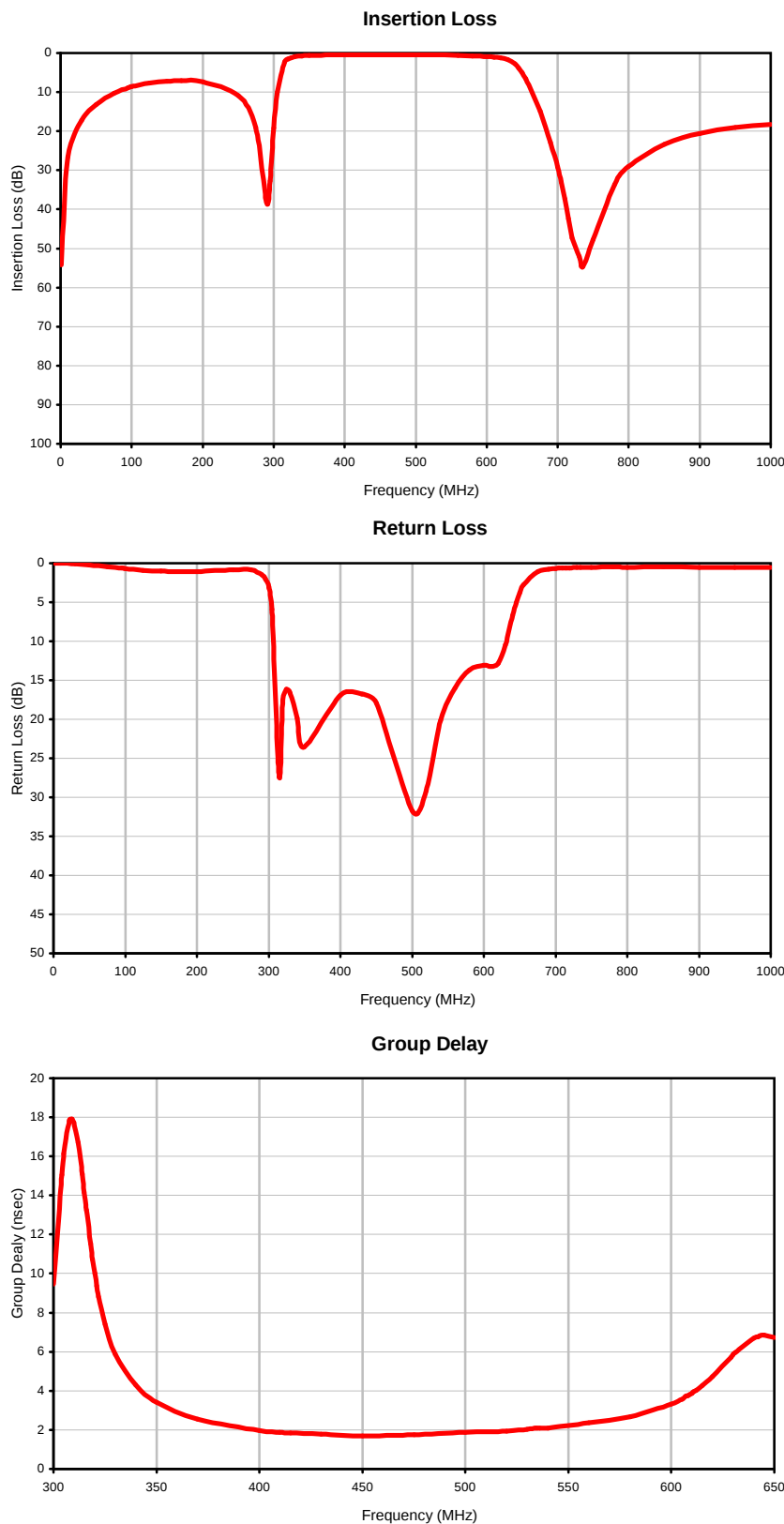


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Typical Performance Data

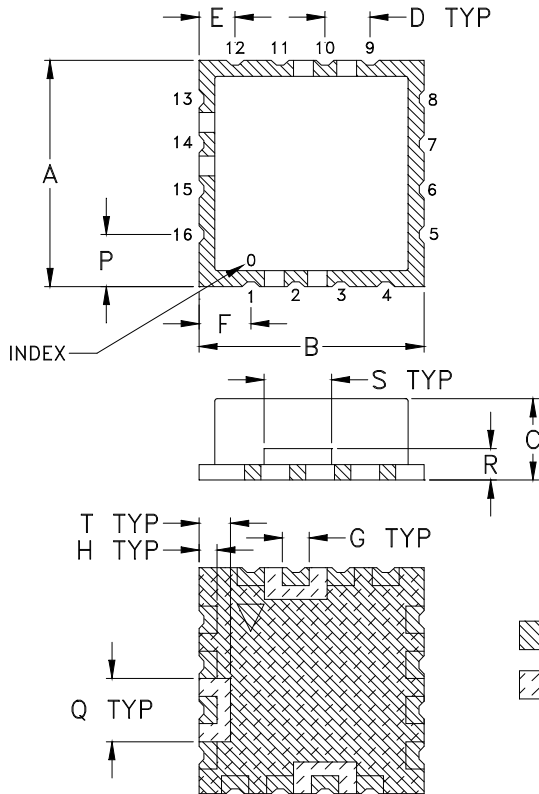
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
0.5	54.28	0.01	300.0	9.46
10.0	26.57	0.01	304.0	15.07
30.0	17.21	0.09	305.0	16.12
50.0	13.17	0.22	306.0	16.97
75.0	10.33	0.46	308.0	17.88
95.0	8.93	0.64	309.0	17.92
100.0	8.67	0.68	310.0	17.74
125.0	7.70	0.89	312.0	16.70
150.0	7.20	1.04	314.0	15.09
170.0	7.07	1.10	315.0	14.15
200.0	7.38	1.09	316.0	13.23
250.0	10.95	0.82	318.0	11.52
275.0	19.07	0.88	319.0	10.73
290.0	38.18	1.48	320.0	10.02
295.0	32.71	1.99	321.0	9.37
300.0	19.21	3.07	322.0	8.81
305.0	10.03	5.93	325.0	7.39
315.0	2.30	27.32	330.0	5.88
320.0	1.54	17.53	340.0	4.31
325.0	1.20	16.15	350.0	3.42
330.0	0.99	16.64	370.0	2.56
340.0	0.74	19.82	400.0	1.97
350.0	0.59	23.57	410.0	1.86
400.0	0.47	16.92	415.0	1.84
430.0	0.46	16.77	430.0	1.78
450.0	0.44	17.90	450.0	1.70
500.0	0.41	31.79	465.0	1.73
520.0	0.43	29.16	475.0	1.75
540.0	0.51	20.12	500.0	1.86
560.0	0.63	15.97	520.0	1.93
580.0	0.80	13.72	530.0	2.03
600.0	0.97	13.04	534.0	2.09
610.0	1.08	13.20	535.0	2.10
620.0	1.27	12.86	536.0	2.09
630.0	1.74	10.44	540.0	2.10
640.0	2.84	6.73	560.0	2.37
645.0	3.77	5.05	580.0	2.68
650.0	5.03	3.74	600.0	3.32
655.0	6.57	2.76	605.0	3.57
675.0	14.92	1.04	607.0	3.72
690.0	22.87	0.73	608.0	3.76
700.0	29.21	0.66	609.0	3.81
705.0	32.96	0.63	610.0	3.86
710.0	37.29	0.61	611.0	3.95
715.0	42.33	0.59	612.0	4.02
720.0	47.28	0.58	615.0	4.27
730.0	52.05	0.56	620.0	4.72
735.0	54.68	0.55	629.0	5.70
750.0	47.75	0.52	630.0	5.84
780.0	33.59	0.49	631.0	5.95
800.0	29.01	0.51	640.0	6.71
850.0	23.28	0.50	642.0	6.76
900.0	20.56	0.52	643.0	6.83
950.0	19.11	0.54	645.0	6.85
1000.0	18.27	0.56	650.0	6.72

Typical Performance Curves

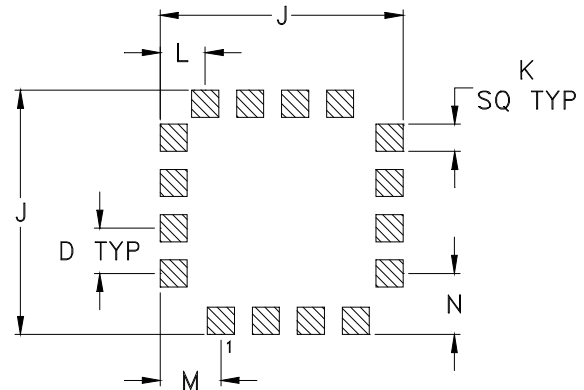


CK1113

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm.002$

 METALLIZATION
 SOLDER RESIST

CASE #	A	B	C	D	E	F	G	H	J	K
CK1113	.500 (12.70)	.500 (12.70)	.220 (5.59)	.100 (2.54)	.080 (2.03)	.115 (2.92)	.060 (1.52)	.040 (1.02)	.540 (13.72)	.060 (1.52)

CASE #	L	M	N	P	Q	R	S	T	WT. GRAM
CK1113	.100 (2.54)	.135 (3.43)	.135 (3.43)	.115 (2.92)	.140 (3.56)	.070 (1.78)	.150 (3.81)	.070 (1.78)	1.2

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3Pl. $\pm .015$

Notes:

1. Case material: Nickel-Silver alloy.
2. Base: Printed wiring laminate.
3. Termination finish:

For RoHS Case Styles: 3-5 μ inch (.08-.13 microns) Gold over 120-240 μ inch (3.05-6.10 microns) Nickel plate.
All models, (+) suffix.

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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F37



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
24	16	7	Small quantity standards (see note)	10
				20
				50
				100
		13	Standard	200
				500

Note: Please consult individual model data sheet to determine device per reel availability.

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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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	-65° to 150° C Ambient Environment	Individual Model Data Sheet
Autoclave	15 psig, 100% RH, 121°C, 96 hours	JESD22-A102-C, Condition C
Temperature Cycling	-65° to 150°C, 100 cycles	JESD22-A104
Temperature Humidity	85°C/ 85% RH, 168 hours	JESD22-113
Solder Reflow Heat	Sn-Pb Eutetic Process: 240°C peak Pb-Free Process: 260°C peak	J-STD-020, Table 4-1, 4-2 and 5-2; Figure 5-1
Moisture Sensitivity: Level 1	Bake at 125°C for 24 hours Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 240°C peak (Non-RoHS) or 260°C (RoHS)	J-STD-020
Solderability	10X magnification, 95% coverage	JESD22-B102, Method 1: Dip and Look Test
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
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