

# Coaxial Bandpass Filter

## ZABP-45-S+

50Ω 30 to 70 MHz

### The Big Deal

- High rejection
- Good VSWR
- Connectorized package



Generic photo used for illustration purposes only  
CASE STYLE: UU1842

### Product Overview

ZABP-45-S+ is a 50Ω bandpass filter with a rugged connectorized package covering the passband of 30 to 70 MHz. The bandpass filter offers good matching within the passband and provides high rejection. This filter has miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across lots and consistent performance across temperature.

### Key Features

Feature	Advantages
High rejection	ZABP-45-S+ has sharper transition and rejects spurious signals in the stopband.
Good VSWR	This filter maintains typical VSWR over passband frequency range making this filter easier to integrate into receiver and transmitter RF chains with less concerns for in band frequency ripple.
Connectorized package	Connectorized package is easy to interface with other devices and well suited for test setups.

#### Notes

- A. 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.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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## ZABP-45-S+

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Connectors	Model
SMA-MF	ZABP-45-S+

### Features

- High rejection
- Good VSWR, 1.3:1 typical@ passband
- Connectorized package

### Applications

- Military communications
- Receivers / Transmitters
- Harmonic rejection
- Test equipment

### Electrical Specifications at 25°C

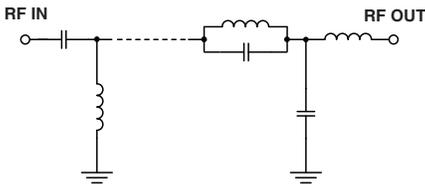
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Pass Band</b>	Center Frequency	-	-	45	-	MHz
	Insertion Loss	F1-F2	30 - 70	0.8	1.5	dB
	VSWR	F1-F2	30 - 70	1.3	1.5	:1
<b>Stop Band, Lower</b>	Insertion Loss	DC-F3	DC - 21	40	49	dB
		F3-F4	21 - 23	20	31	dB
	VSWR	DC-F4	DC - 23	-	20	:1
<b>Stop Band, Upper</b>	Insertion Loss	F5-F6	95 - 120	20	42	dB
		F6-F7	120 - 1000	40	48	dB
		F7-F8	1000 - 2500	45	55	dB
		F8-F9	2500 - 4000	-	35	dB
	VSWR	F5-F9	95 - 4000	-	20	:1

### Maximum Ratings

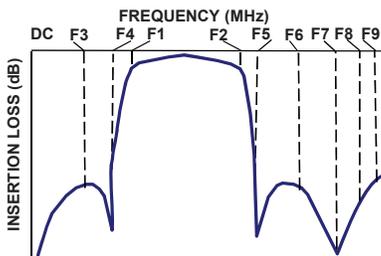
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

### Functional Schematic



### Typical Frequency Response

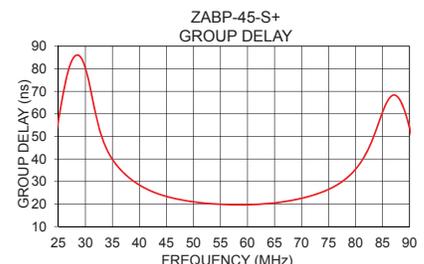
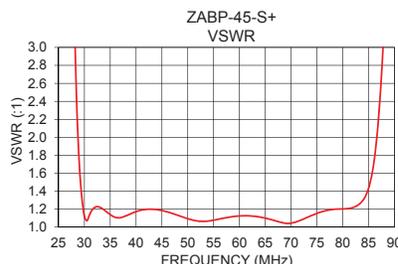
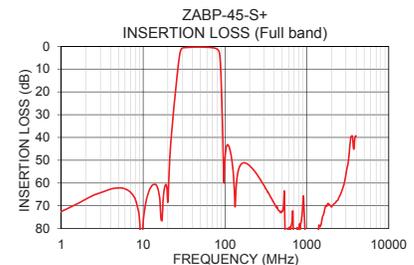
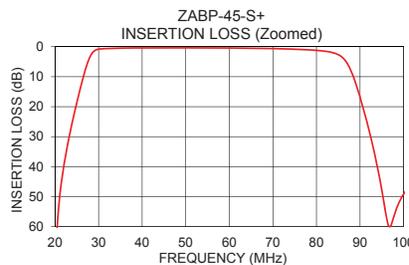


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (ns)
1	72.45	24654.81	30	80.35
10	77.07	626.40	32	58.84
21	50.93	81.67	34	44.03
23	31.81	54.92	36	36.59
24	24.91	42.71	38	31.83
26	12.77	17.95	40	28.41
28	3.42	3.56	42	25.92
30	0.81	1.12	44	24.09
45	0.38	1.19	45	23.36
70	0.62	1.04	48	21.73
80	1.20	1.20	50	20.99
86	3.62	1.72	52	20.42
90	16.78	6.19	54	20.02
91	21.90	7.82	56	19.76
93	33.47	11.05	58	19.65
95	47.83	14.15	60	19.68
120	48.94	31.66	62	19.88
1000	87.39	16.80	64	20.24
2500	65.86	5.61	66	20.80
4000	39.51	1.32	70	22.53

### +RoHS Compliant

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



### Notes

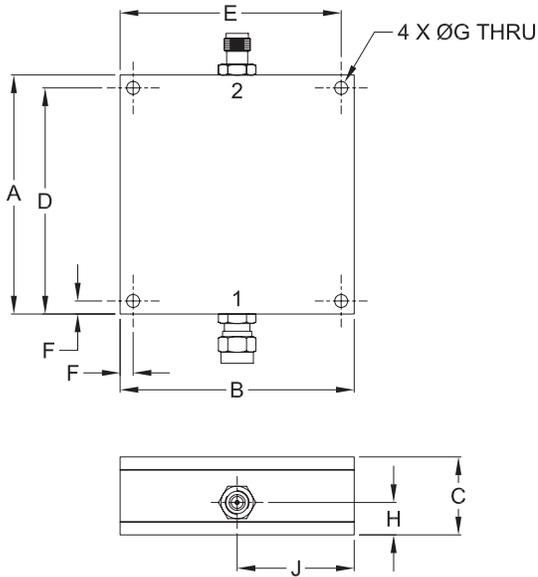
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## Coaxial Connections

PORT - 1	SMA-MALE
PORT - 2	SMA-FEMALE

## Outline Drawing



## Outline Dimensions ( $\frac{\text{inch}}{\text{mm}}$ )

A	B	C	D	E
2.300	2.250	.750	2.175	2.125
58.42	57.15	19.05	55.25	53.98
F	G	H	J	wt.
.125	.125	.312	1.125	grams
3.18	3.18	7.93	28.58	124

Note: Please refer to case style drawing for details

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