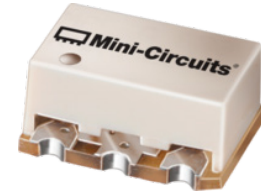


Surface Mount Bandpass Filter

SYBP-1275+

50Ω 1100 to 1450 MHz



Generic photo used for illustration purposes only
CASE STYLE: TT1423

The Big Deal

- Small size (0.25" X 0.31" X 0.15")
- High power handling, 8 W
- Low insertion loss, 1.6 dB typ.

Product Overview

SYBP-1275+ is a 50Ω bandpass filter fabricated using SMT technology. The bandpass filter covers from 1100 to 1450 MHz offering low insertion loss and good matching within the passband. It is fabricated in a tiny housing with very good power handling capabilities.

Key Features

Feature	Advantages
Small size (0.25" X 0.31" X 0.15")	Saves space in dense circuit board layouts.
High power handling, 8 W	Supports a wide range of system power requirements.
Low insertion loss, 1.6 dB typ.	Low insertion loss enables usage in satellite transmitters.

Notes

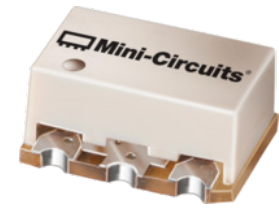
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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Surface Mount Bandpass Filter

50Ω 1100 to 1450 MHz

SYBP-1275+



Generic photo used for illustration purposes only
CASE STYLE: TT1423

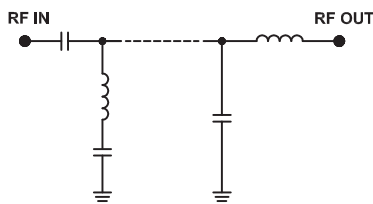
Features

- High power handling
- Small size
- Temperature stable

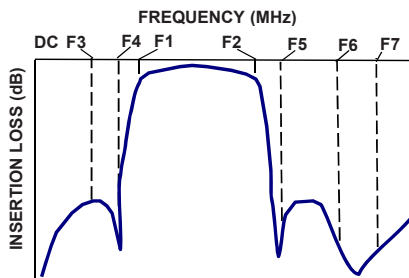
Applications

- Military radio
- Lab use
- Satellite communication

Functional Schematic

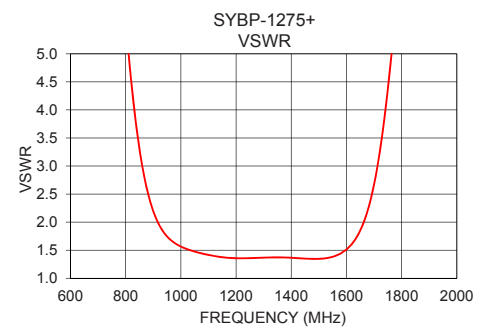
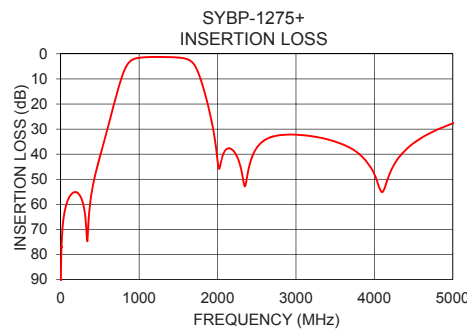
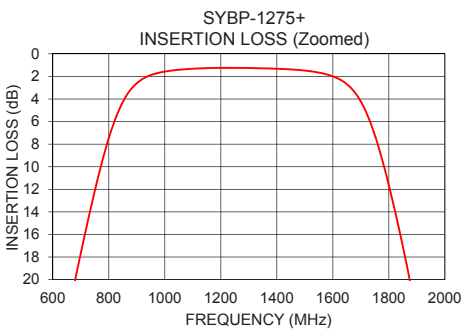


Typical Frequency Response



+RoHS Compliant

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



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	-	-	1275	-	MHz	
	Insertion Loss	F1-F2	1100 - 1450	-	1.6	2.5	dB
	VSWR	F1-F2	1100 - 1450	-	1.9	-	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 500	30	38	-	dB
		F3-F4	500 - 600	20	28	-	dB
	VSWR	DC-F4	DC - 600	-	28	-	:1
Stop Band, Upper	Insertion Loss	F5-F6	2050 - 3700	20	30	-	dB
		F6-F7	3700 - 5000	-	25	-	dB
	VSWR	F5-F7	2050 - 5000	-	19	-	:1

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8 W max. at 25°C

*Passband rating, derate linearly to 3 W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	77.26	390.02
100	57.65	568.03
200	55.17	321.04
250	56.75	220.58
500	40.97	50.77
600	29.46	32.29
675	20.58	21.26
880	3.11	2.44
1100	1.32	1.48
1275	1.25	1.46
1450	1.38	1.40
1665	3.02	1.92
1875	20.08	11.90
1950	31.10	15.29
2050	42.24	16.54
2500	37.44	10.56
3000	32.25	27.21
3700	37.64	49.27
4000	47.99	52.12
5000	27.74	46.57

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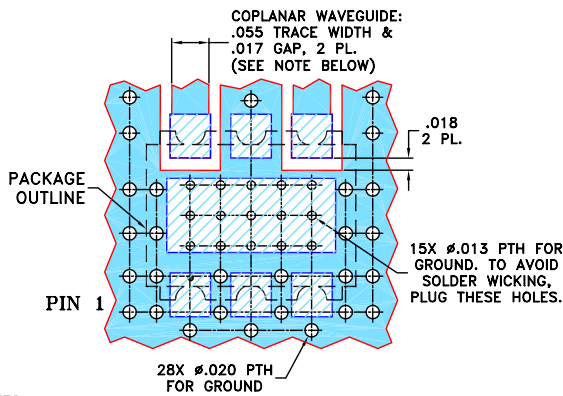
REV. OR
M175556
SYBP-1275+
EDU3835
URJ
191114
Page 2 of 3

Pad Connections

INPUT	4
OUTPUT	6
GROUND	1,2,3,5

Demo Board MCL P/N: TB-1122+
Suggested PCB Layout (PL-308)

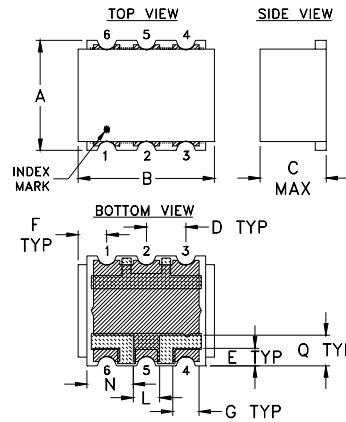
**SUGGESTED MOUNTING CONFIGURATION
FOR TT1423 CASE STYLE "06FL04" PIN CONNECTION**



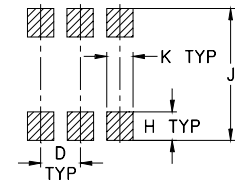
NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

- METALLIZATION
- SOLDER RESIST

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
.25	.31	.15	.090	.040	.065	.060	.065
6.35	7.87	3.81	2.29	1.02	1.65	1.52	1.65
J	K	L	N	Q	wt.		
.300	.060	.060	.105	.070	grams		
7.62	1.52	1.52	2.67	1.78	0.50		

Note: Please refer to case style drawing for details

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