

Bandpass Filter

50Ω 410 to 440 MHz

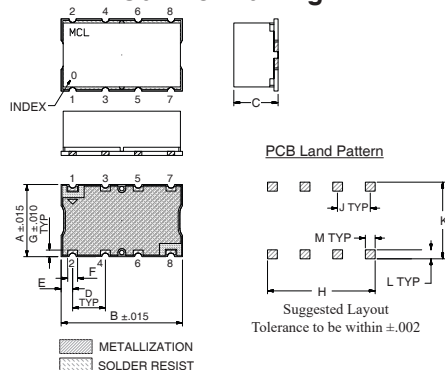
Maximum Ratings

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

Pin Connections

INPUT	1
OUTPUT	8
GROUND	2, 3, 4, 5, 6, 7

Outline Drawing



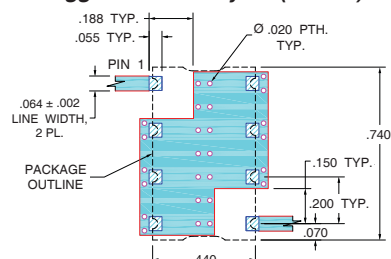
Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.440	.740	.270	.200	0.70	0.60	
11.18	18.80	6.86	5.08	1.78	1.52	
G	H	J	K	L	M	wt.
.040	.660	.200	.470	.055	.060	grams
1.02	16.76	5.08	11.94	1.40	1.52	3

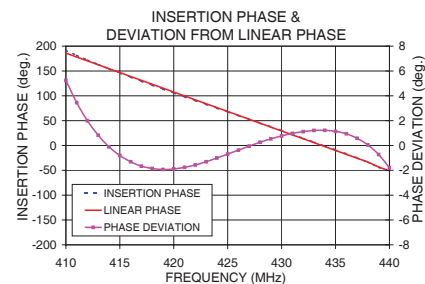
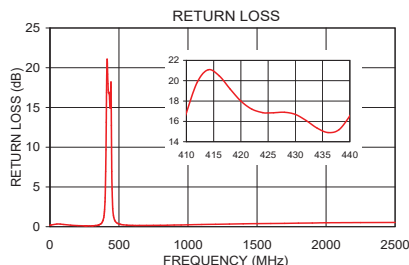
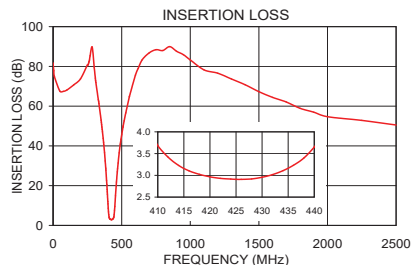
Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-368

Suggested PCB Layout (PL-230)



- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS. .025"± .002" COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
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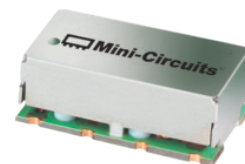


Features

- Linear Phase, up to ±6 deg typical @ $F_c \pm 15$ MHz
- Good VSWR, 1.3:1 typical in Passband
- High rejection
- Shielded case
- Aqueous washable

Applications

- Industrial Microwave and RF
- Receivers / Transmitters
- Harmonic rejection

SXBP-425+


Generic photo used for illustration purposes only

CASE STYLE: HF1139

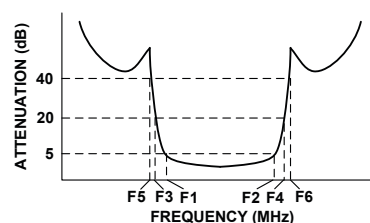
+RoHS Compliant

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

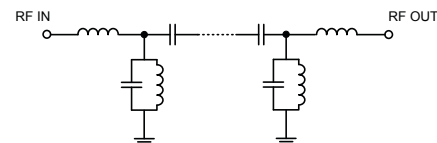
Bandpass Filter Electrical Specifications ($T_{AMB} = 25^\circ\text{C}$)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 5dB)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)		
		Loss > 20dB		Loss > 40dB			Passband		Stopband
		F3	F4	F5	F6		Typ.	Max.	Typ.
Fc	F1 - F2					Fc ± 15MHz			
425	410-440	385	470	360	510-2500	±11	1.3	1.85	20

Typical Frequency Response



Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Deviation from Linear Phase (deg.)
	$\bar{x}$	σ			
0.5	81.76	3.40	0.17	410	5.24
100.0	68.09	3.05	0.28	412	1.99
360.0	47.06	0.36	0.27	414	-0.11
385.0	27.82	0.65	0.82	416	-1.31
395.0	16.90	1.00	1.90	418	-1.85
402.0	8.63	1.16	4.96	420	-1.89
406.0	5.40	0.97	9.68	422	-1.57
410.0	3.68	0.11	16.84	424	-1.01
425.0	2.91	0.07	16.83	425	-0.69
440.0	3.65	0.13	16.55	427	-0.05
445.0	5.32	0.42	12.75	429	0.53
450.0	9.56	0.74	4.75	430	0.77
460.0	19.96	0.67	1.39	432	1.11
470.0	28.48	0.54	0.78	434	1.22
510.0	49.71	0.45	0.29	436	0.94
1000.0	83.27	5.77	0.24	438	0.04
2000.0	54.71	2.24	0.49	439	-0.73
2500.0	50.52	1.55	0.54	440	-1.79

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.
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