

Bandpass Filter

RBP-275+

50Ω 268 to 282 MHz



CASE STYLE: GP731
PRICE: \$13.70 ea. QTY (10)

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

| Reel Size | Available Tape and Reel at no extra cost | Devices/Reel |
|-----------|------------------------------------------|----------------------|
| 7" | | 10, 20, 50, 100, 200 |
| 13" | | 500, 1000 |

Maximum Ratings

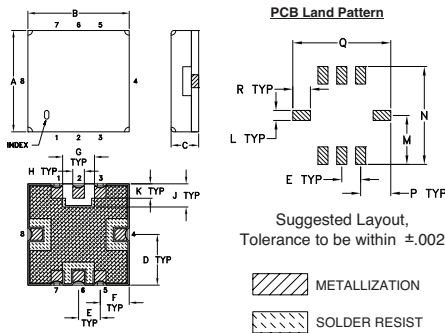
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5W at 25°C |

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

Pin Connections

| | |
|--------|-------------|
| RF IN | 2 |
| RF OUT | 6 |
| GROUND | 1,3,4,5,7,8 |

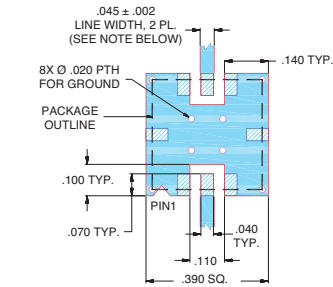
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J |
|------|------|------|------|------|------|------|-------|------|
| .350 | .350 | .100 | .175 | .075 | .100 | .110 | .040 | .080 |
| 8.89 | 8.89 | 2.54 | 4.45 | 1.93 | 2.54 | 2.79 | 1.02 | 2.03 |
| K | L | M | N | P | Q | R | wt | |
| .050 | .040 | .195 | .390 | .120 | .390 | .070 | grams | |
| 1.27 | 1.02 | 4.95 | 9.91 | 3.05 | 9.91 | 1.78 | 0.25 | |

Demo Board MCL P/N: TB-332 Suggested PCB Layout (PL-176)



NOTES:
1. 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.
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

Features

- linear phase, up to ±8deg typ. @ Fc ±30MHz
- good VSWR, 1.2:1 typ. @ passband
- small size 0.35" x 0.35"
- shielded case
- aqueous washable

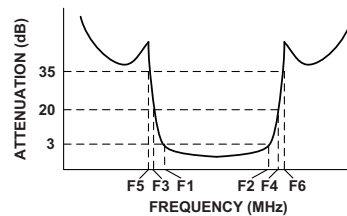
Applications

- harmonic rejection
- transmitters / receivers

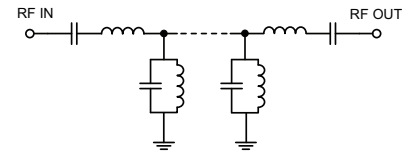
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz) (Loss < 3dB) | STOPBANDS (MHz) | | | | | MAXIMUM DEVIATION FROM LINEAR PHASE (deg.) | VSWR (:1) | |
|--------------------|--------------------------------|-----------------|-----|-------------|----------|------------|--------------------------------------------|-----------|----------|
| | | Loss > 20dB | | Loss > 35dB | | | | Passband | Stopband |
| Fc | F1 - F2 | F3 | F4 | F5 | F6 | Fc ± 30MHz | Max. | Typ. | |
| 275 | 268 - 282 | 209 | 350 | 120 | 370-1000 | ±15 | 1.7 | 18 | |

Typical Frequency Response

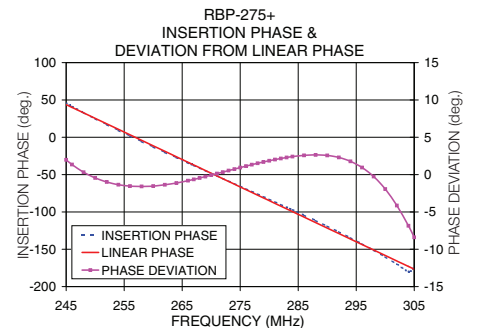
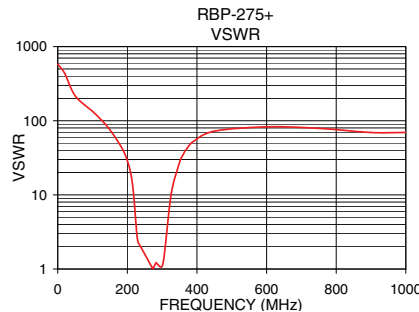
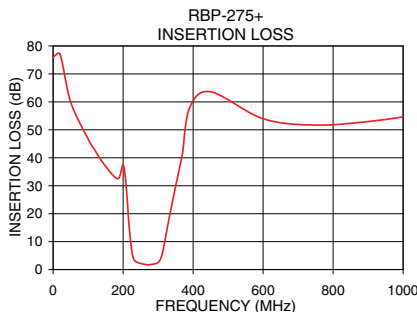


Functional Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Deviation from Linear Phase (deg.) |
|-----------------|---------------------|-----------|-----------------|------------------------------------|
| 0.3 | 76.04 | 579.06 | 245.0 | 1.98 |
| 120.0 | 42.54 | 108.58 | 248.0 | 0.32 |
| 209.0 | 29.34 | 20.22 | 250.0 | -0.44 |
| 220.0 | 11.85 | 7.94 | 254.0 | -1.35 |
| 225.0 | 6.57 | 3.95 | 258.0 | -1.58 |
| 245.0 | 2.29 | 1.77 | 260.0 | -1.54 |
| 268.0 | 1.73 | 1.11 | 262.0 | -1.36 |
| 270.0 | 1.73 | 1.07 | 268.0 | -0.45 |
| 275.0 | 1.75 | 1.04 | 270.0 | -0.07 |
| 280.0 | 1.82 | 1.16 | 275.0 | 0.94 |
| 282.0 | 1.85 | 1.21 | 280.0 | 1.86 |
| 305.0 | 3.31 | 1.38 | 282.0 | 2.16 |
| 320.0 | 10.72 | 6.32 | 286.0 | 2.58 |
| 330.0 | 17.48 | 12.99 | 290.0 | 2.57 |
| 350.0 | 29.80 | 27.59 | 294.0 | 1.78 |
| 370.0 | 41.72 | 41.37 | 296.0 | 0.95 |
| 450.0 | 63.62 | 72.39 | 300.0 | -1.94 |
| 1000.0 | 54.60 | 69.49 | 305.0 | -8.40 |



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