

Specification for a 118-174MHz ROHS Compliant Bandpass Filter MtronPTI P/N: LF9769R

I. General & Electrical Requirements

Insertion loss across Passband

115 to 118MHz: <2.6 dB

118 to 146MHz :< 1.3dB; 1.4dB @85C

146 to 174MHz :< 1dB

Rejection @99 to 108MHz: >25dBc

Rejection @88MHz to 99MHz: >58dBc

Rejection@ DC-88MHz: > 62dBc

Rejection@ 236MHz to 348MHz: >70dBc

Rejection@ 354MHz to 1GHz: >75dBc

Passband Return Loss : > 17dB

RF Power Handling @output (In Passband, 115 to 118MHz): 5W avg. /14W peak with a 3:1 VSWR load @ output

RF Power Handling @output (In Passband, 118 to 174MHz): 10W avg. /28W peak with a 3:1 VSWR load @ output

RF Power Handling @Input (Out of band, 1MHz to 1GHz): 0.5W avg. /1W peak

Out of band VSWR @Input (1MHz to 2 GHz) : <10: 1

Z_{IN}/Z_{OUT}: 50Ω nominal

II. Environmental & Physical Requirements:

Temperature Range:

Operating: -40°C to +85°C

Package (LXWXH): 3.0"x1.00"x0.56" (see outline)

Flatness: 0.006"

Altitude:

Non-Operating: 50kFeet

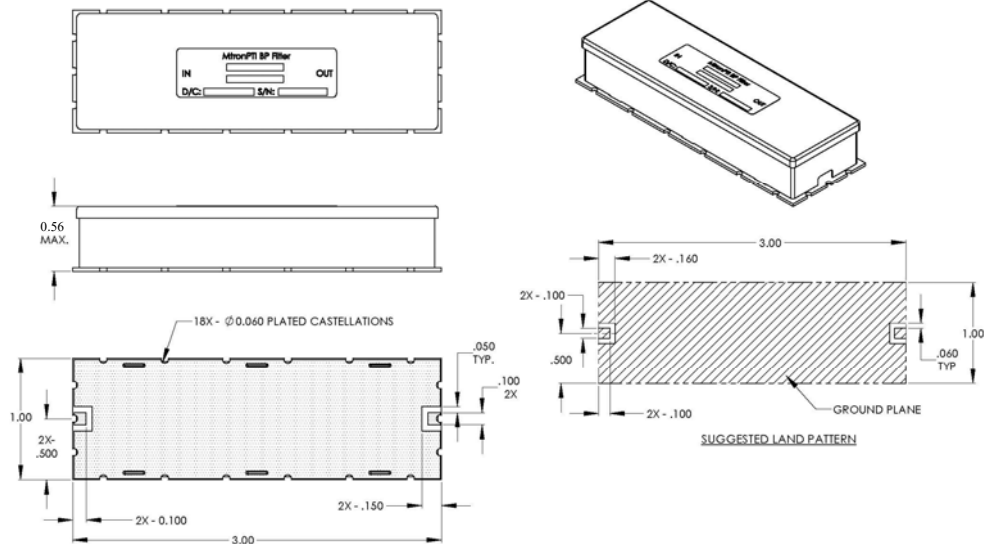
Operating: 12kFeet

Tolerances (inches): 0. XX ± 0.02; 0.XXX ± 0.010

Vibration: random 7.7Grms, 20-2000Hz, 3-axis, 1hr/axis

Shock: Terminal peak sawtooth shock pulse, 40 G pk amplitude. 11ms duration, 3-axis, 2directions/axis

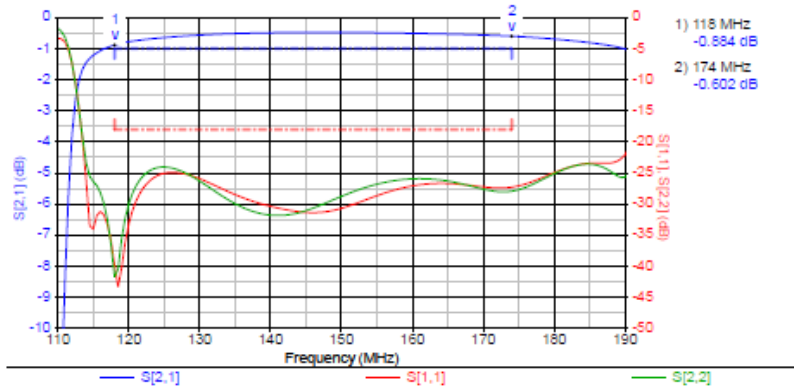
Soldering: Class2



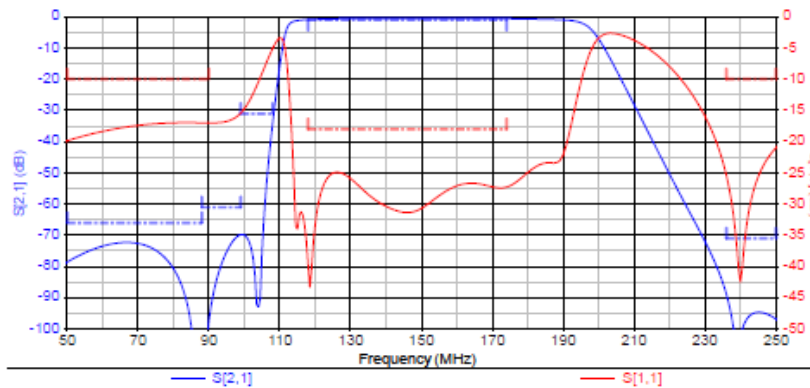
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III. Simulations

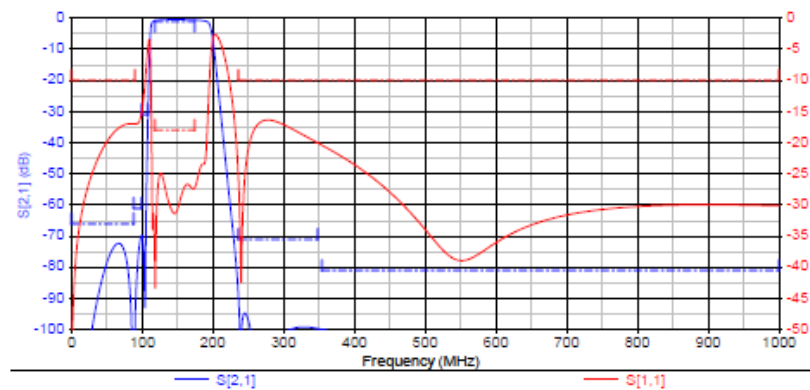
Passband



Stopband



Extended Stopband



IV. Datasheet Revision:

| | | | |
|----------|---|-----|--|
| 05-14-20 | G | DPD | Package flatness spec updated from 0.010" to 0.006". |
| 09-04-19 | F | BRR | Height Revised from 0.530" to 0.560", IL & Rejection specs updated |
| 03-27-18 | E | DPD | Outline back to 7-26-17 outline |
| 03-22-18 | D | DPD | Outline, power, IL and various specs updated. |
| 09-19-17 | C | DPD | Insertion loss and rejection spec updated |
| 07-26-17 | B | DPD | Outline drawing added. High side OT changed to +85C |
| 06-27-16 | A | DPD | Original Draft. |