

## Specification for a 300-420MHz ROHS Compliant Bandpass Filter MtronPTI P/N: LF9771R

### I. General & Electrical Requirements

Insertion loss across Passband 320 to 420MHz:  $\leq 0.9$  dB

Rejection @138MHz to 180MHz:  $>20$ dBc

Rejection@ DC-138MHz:  $> 65$ dBc

Rejection@ 490MHz to 600MHz:  $>25$ dBc

Rejection@ 640MHz to 840MHz:  $>65$ dBc

Rejection@ 960MHz to 2.0GHz:  $>72$ dBc

Passband Return Loss :  $> 17$ dB

RF Power Handling @output (in Passband, 300 to 420MHz): 10W avg. /28W peak with a 3:1 VSWR load @ output

RF Power Handling @input (Out of band, 1MHz to 2.0GHz) : 0.5W avg. /1W peak

Out of band VSWR @input (1MHz to 2.0GHz) :  $< 10: 1$

$Z_{IN}/Z_{OUT}$ : 50 $\Omega$  nominal

### II. Environmental & Physical Requirements:

Temperature Range:

Operating:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

Package (LXWXH): 2.50"x0.75"x0.50"

Flatness: 0.010"

Altitude (To be validated on next build):

Non-Operating: 50kFeet

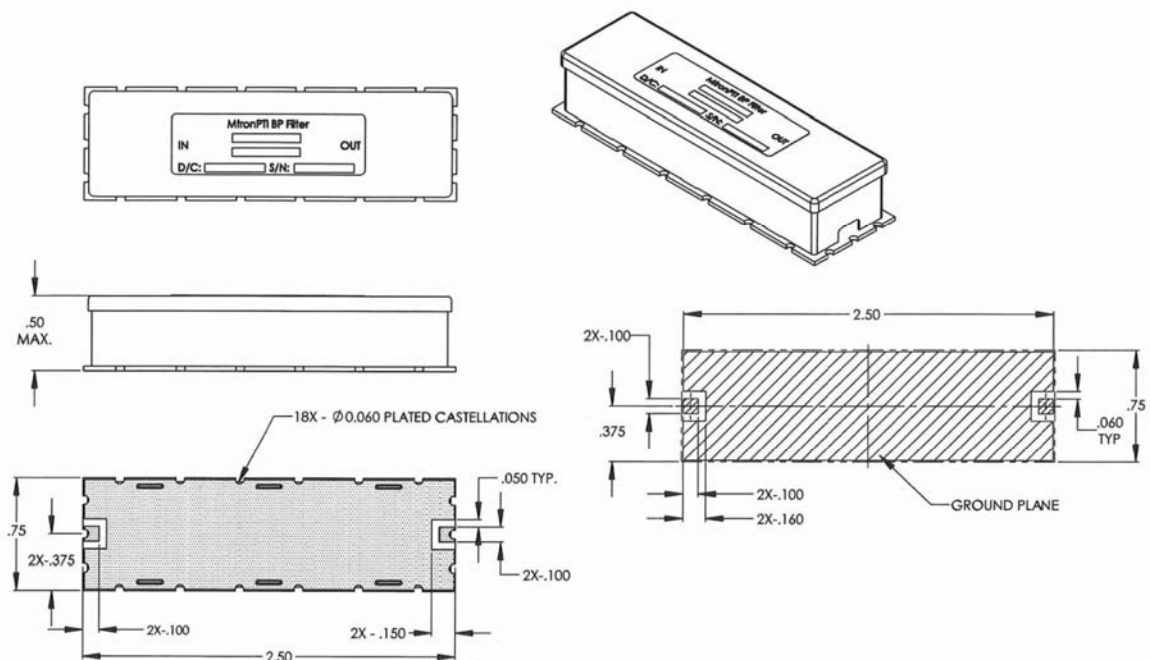
Operating: 12kFeet

Tolerances (inches): 0. XX  $\pm 0.02$ ; 0.XXX  $\pm 0.010$

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

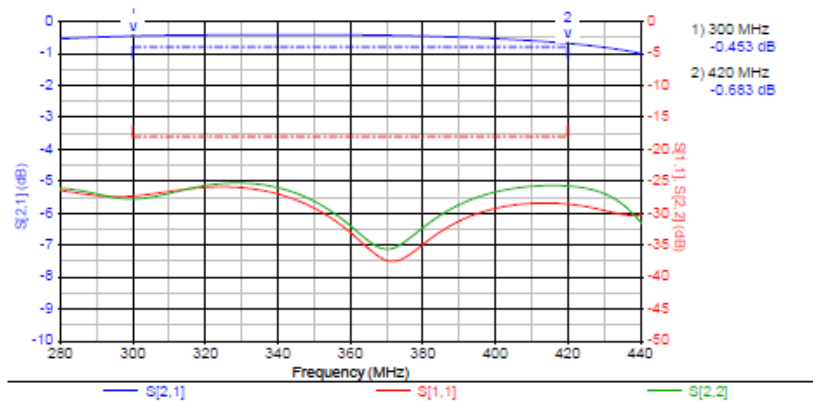
Soldering: Class2



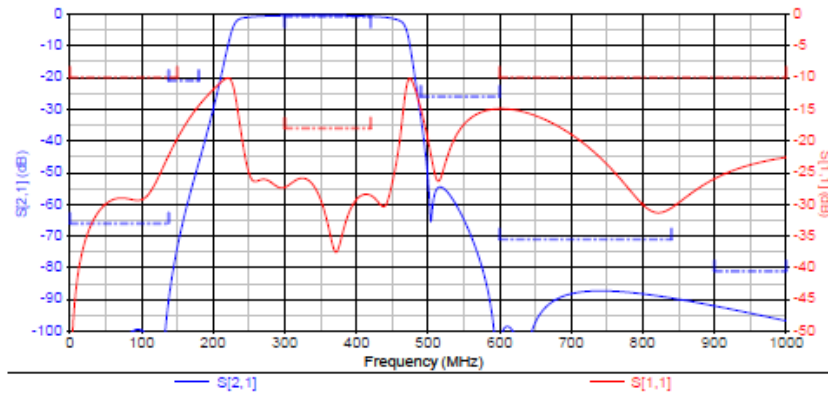
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### III. Simulations

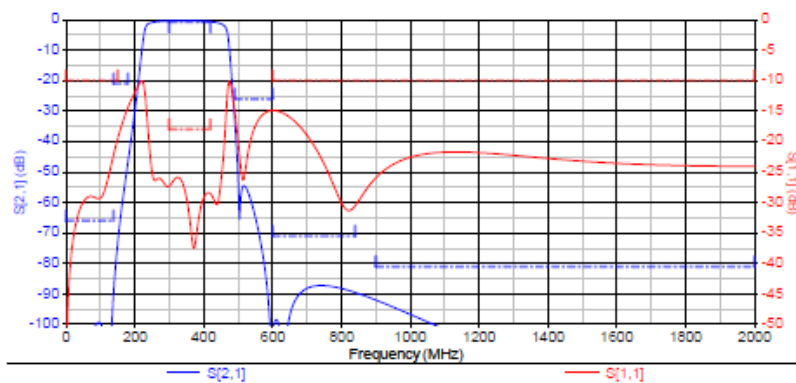
Passband



Stopband



Extended Stopband





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### IV. Datasheet Revision:

09-04-19	F	BRR	IL & Rejections specs revised
03-27-18	E	DPD	Revert back to 07-26-17 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.