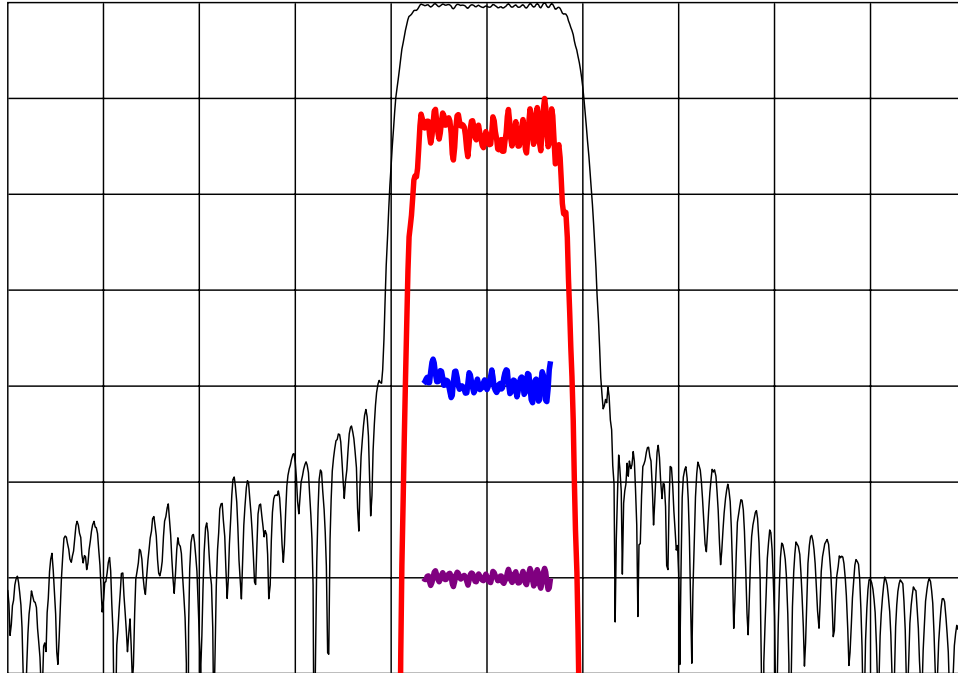


DESCRIPTION

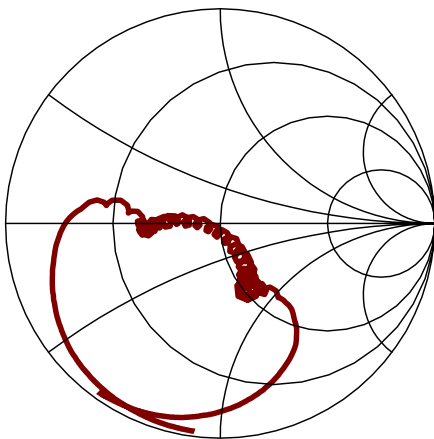
- 168.5 MHz SAW bandpass filter with 20 MHz bandwidth.
- 5 x 5 mm LCC package.
- RoHS compliant.

TYPICAL PERFORMANCE

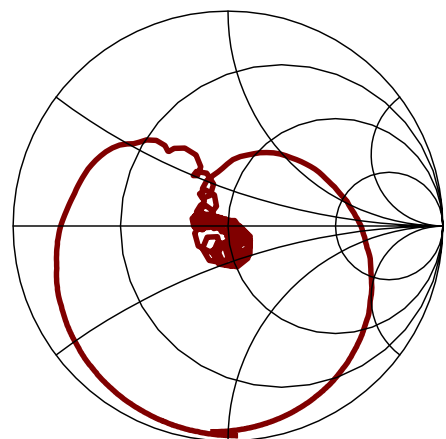


Horizontal: Frequency : 15 MHz/div
Vertical: Relative Magnitude : 10 dB/div
Relative Magnitude : 1 dB/div
Phase Linearity : 10 deg/div
Group Delay : 100 ns/div

S11 (93.5-243.5 MHz)



S22 (93.5-243.5 MHz)



SPECIFICATION

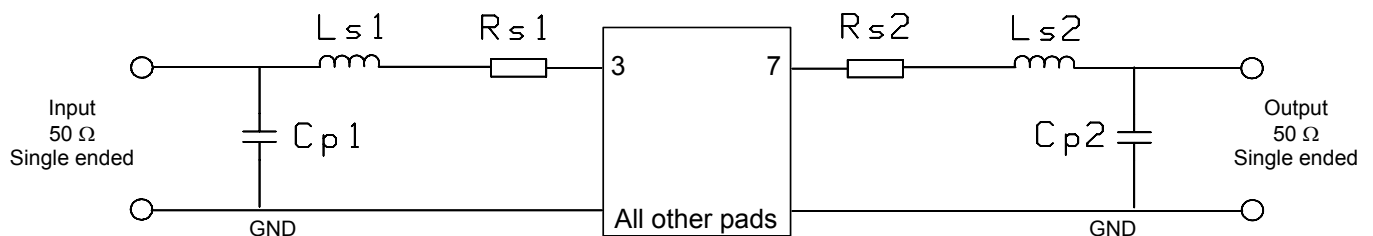
Parameter	Min	Typ	Max	Units
Center Frequency, F_c	-	168.5	-	MHz
Insertion Loss ¹	-	9.2	10	dB
1 dB Bandwidth ³	20	23.4	-	MHz
3 dB Bandwidth ³	22	26.1	-	MHz
35 dB Bandwidth ³	-	33.7	36	MHz
Passband Amplitude Ripple ^{2,4}	-	0.7	1.0	dB p-p
Passband Phase Ripple ²	-	5	9	deg p-p
Passband Group Delay Ripple ²	-	45	70	ns p-p
Absolute Delay	-	0.44	-	us
Rejection (140 to 150 MHz)	35	42	-	dB
Rejection (190 to 200 MHz)	35	42	-	dB
Rejection (50 to 140 MHz)	40	47	-	dB
Rejection (200 to 250 MHz)	40	50	-	dB
Source/Load Impedance	50			ohms
Temperature Coefficient of Frequency	-86			ppm/°C
Ambient Temperature	-	25	-	°C

- Notes:
1. Measured as minimum attenuation in passband.
 2. Measured within $F_c \pm 10$ MHz.
 3. Measured relative to the Insertion Loss Value.
 4. Amplitude ripple requirement is 1.3 dB p-p at temperature extremes.

MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	°C
Operating Temperature Range	-40	85	°C
Input Power Level	-	13	dBm

MATCHING CIRCUIT

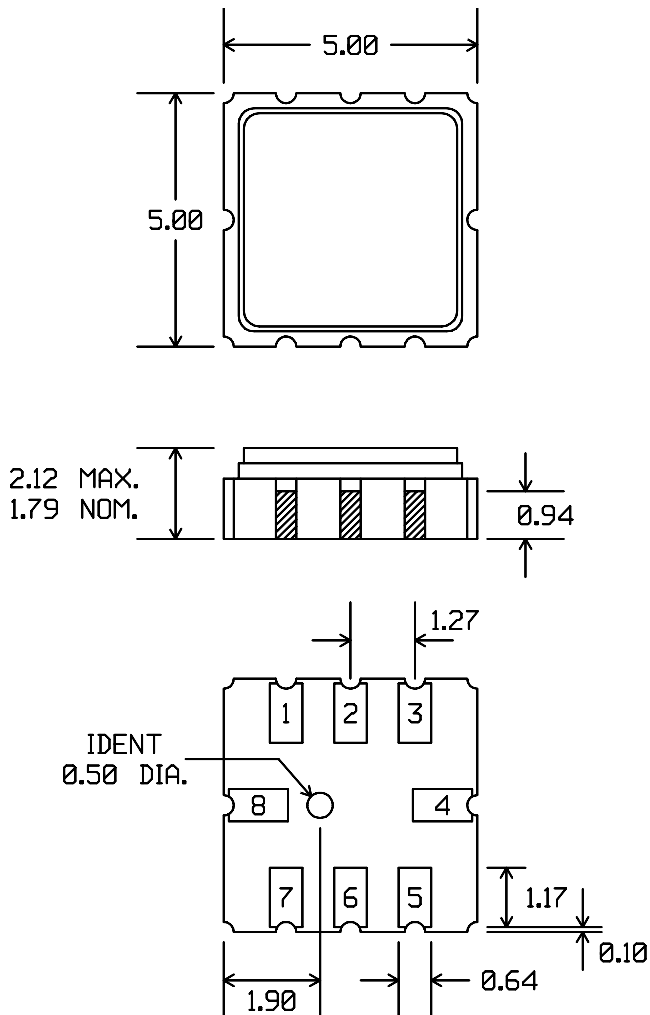


Typical Component Values: $R_{s1} = 2.2 \Omega$ $L_{s1} = 150 \text{ nH}$ $C_{p1} = 27 \text{ nH}$
 $R_{s2} = 2.2 \Omega$ $L_{s2} = 120 \text{ nH}$ $C_{p2} = 18 \text{ pF}$

Notes:

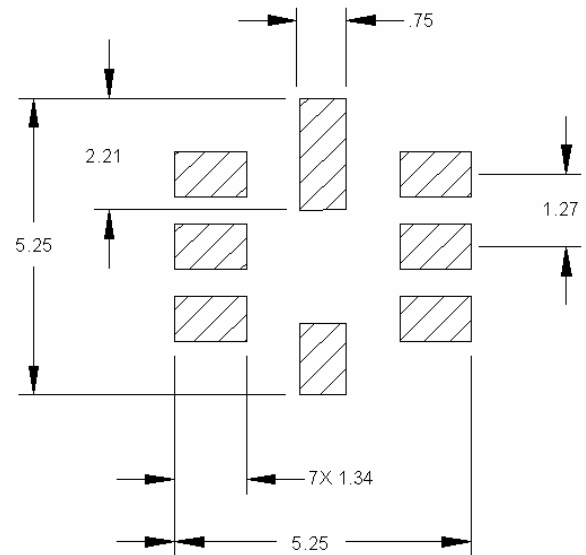
1. Recommend $\pm 2\%$ tolerance matching components. Typical Inductor $Q=40$.
2. Values shown are for reference only and may change depending on board layout.

PACKAGE OUTLINE



Package Material:
Body: Al_2O_3 ceramic
Lid: Kovar, Ni plated
Terminations: Au plating 1 μ m
min, over a 1.3-8.9 μ m Ni
plating

SUGGESTED FOOTPRINT



Units: mm

Tolerances are typically ± 0.15 mm
except where indicated.

Pad Configuration:

Input: 3
Output: 7
Ground: All other pads

ISO 9001
Registered

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.
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