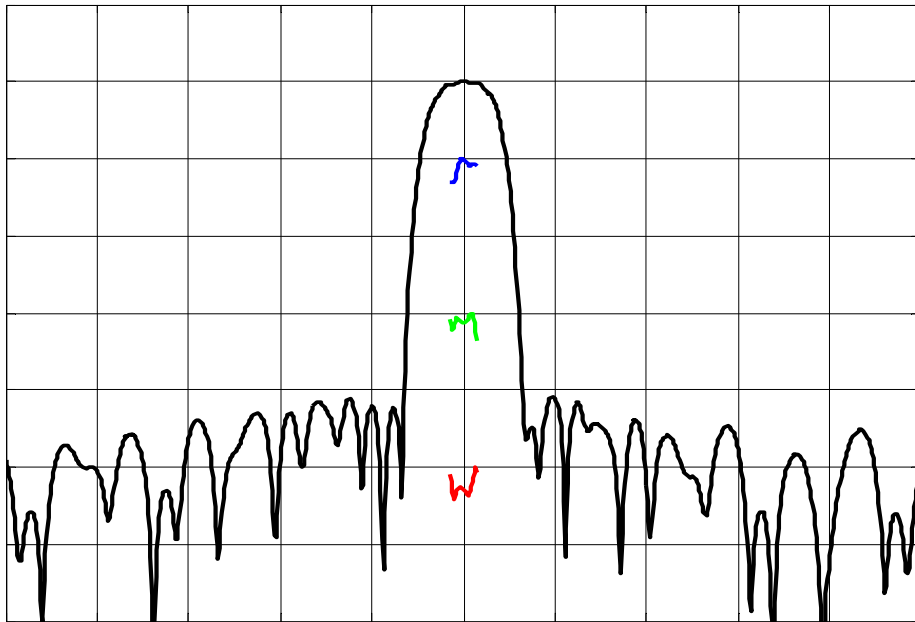


DESCRIPTION

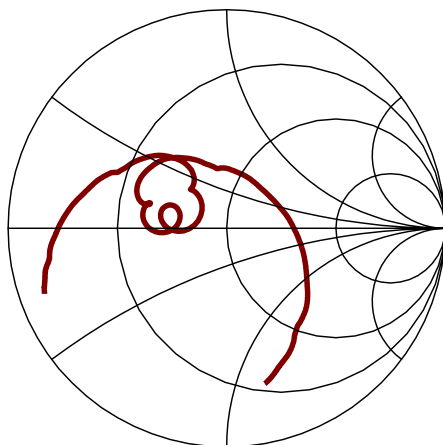
- 70 MHz SAW bandpass filter with 0.5 MHz bandwidth.
- 13.3 x 6.5 mm SMP.
- RoHS compliant.

TYPICAL PERFORMANCE

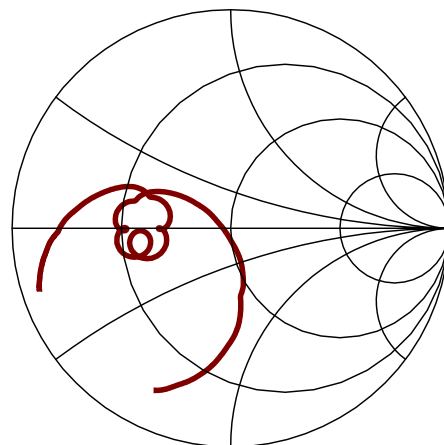


Horizontal:	Frequency :	1	MHz/div
Vertical from Top:	Relative Magnitude :	10	dB/div
	Relative magnitude :	1	dB/div
	Phase Linearity :	5	deg/div
	Group Delay Deviation :	500	ns/div

S11



S22



SPECIFICATION

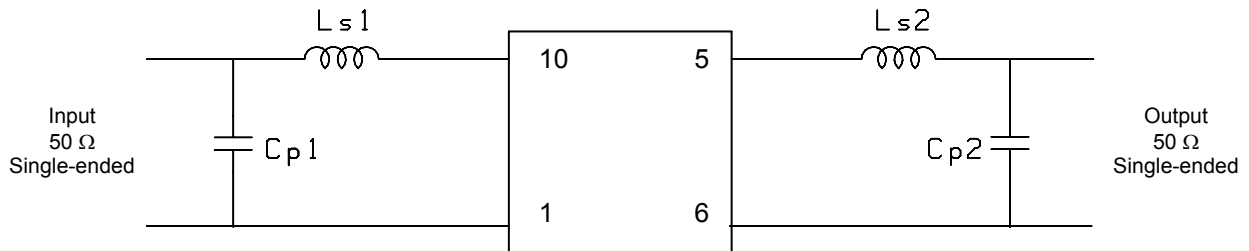
Parameter	Min	Typ	Max	Units
Center Frequency (F_c) ¹	69.94	70	70.05	MHz
Insertion Loss at F_c	-	9.0	10.25	dB
1 dB Bandwidth ²	0.35	0.49	-	MHz
3 dB Bandwidth ²	0.50	0.68	-	MHz
35 dB Bandwidth ²	-	1.25	1.4	MHz
Passband Ripple	-	0.35	1.2	dB p-p
Phase Deviation from Linear (60% of 3 dB Bandwidth)	-	2.0	8	deg p-p
Group Delay Variation (60% of 3 dB Bandwidth)	-	220	500	ns p-p
Absolute Delay	-	1.45	-	μ s
Turnover Temperature	-	21	-	$^{\circ}$ C
Substrate Material	Quartz			
Temperature Coefficient	$\Delta F/F = -[(T - T_0)/5.4]^2$ ppm			
Ambient Temperature	-	25	-	$^{\circ}$ C

Notes: 1. Defined as the average of the lower and upper 3 dB frequencies.
2. All dB levels are defined relative to the insertion loss.

MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	$^{\circ}$ C
Operating Temperature Range	-30	70	$^{\circ}$ C
Input Power Level	-	10	dBm

MATCHING CIRCUIT



Typical component values:
(Minimum inductor Q = 40)

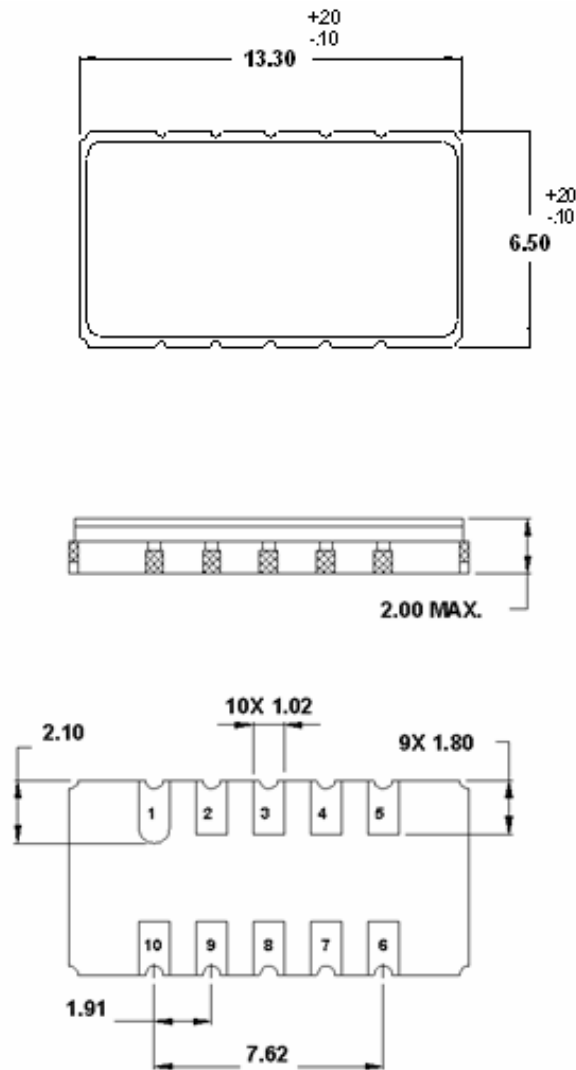
$$\begin{aligned} L_{s1} &= 550 \text{ nH} \\ C_{p1} &= 92 \text{ pF} \end{aligned}$$

$$\begin{aligned} L_{s2} &= 590 \text{ nH} \\ C_{p2} &= 90 \text{ pF} \end{aligned}$$

Notes:

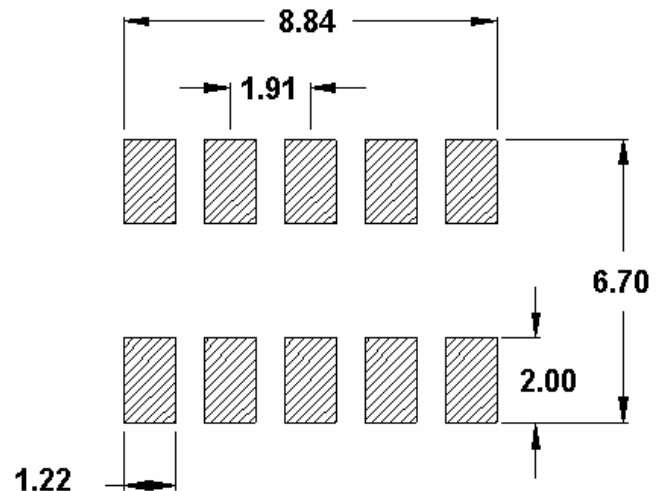
1. Recommend use of 2% tolerance matching components.
2. Component values shown are for guidance only and may change depending on board layout.

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 ± 0.15 mm except for the overall length and width, which are nominal values.

Pad Configuration:

Input:	10
Input Return:	1
Output:	5
Output Return:	6
Ground:	2,3,4,7,8,9

ISO 9001
Registered

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.
© 2010 All rights reserved.

Spectrum Microwave
400 Nickerson Road, Marlborough, MA 01752, USA • Phone 1-508-251-6400 • Fax 1-508-251-6401
www.SpectrumMicrowave.com