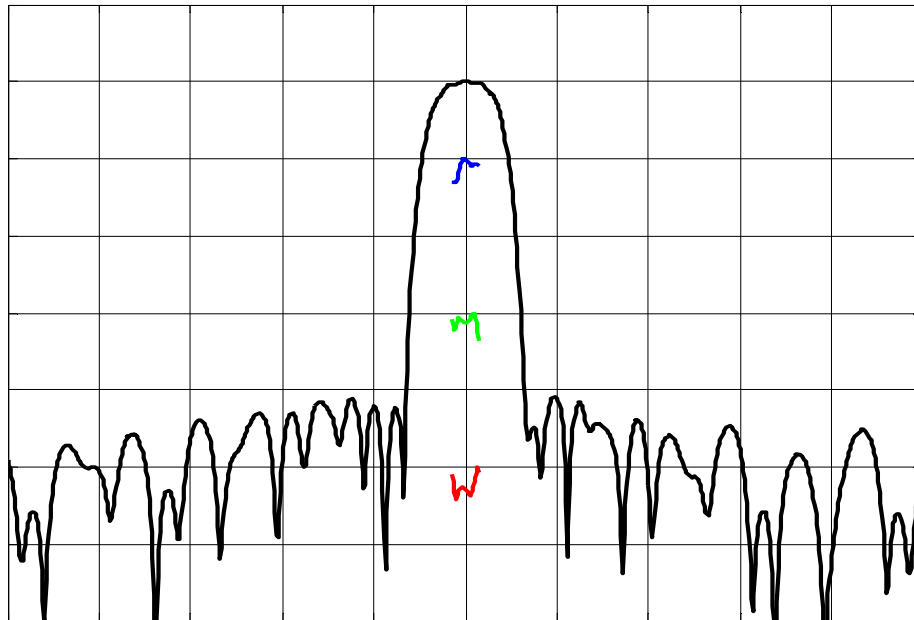


**DESCRIPTION**

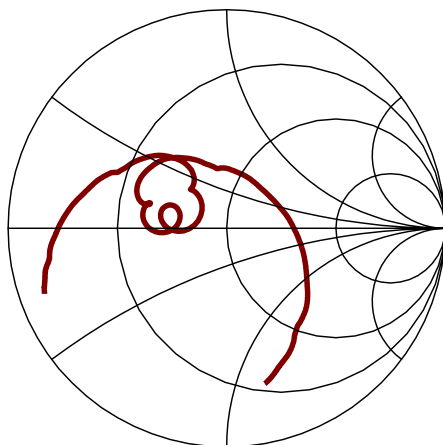
- 70 MHz SAW bandpass filter with 0.5 MHz bandwidth.
- 13.3 x 6.5 mm SMP.
- RoHS compliant.

**TYPICAL PERFORMANCE**

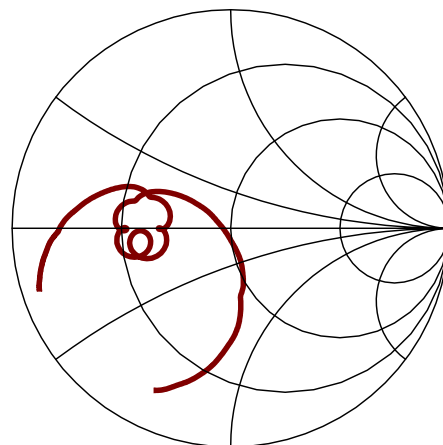


Horizontal:	Frequency :	1	MHz/div
Vertical from Top:	Relative Magnitude :	10	dB/div
	Relative magnitude :	1	dB/div
	Phase Linearity :	5	deg/div
	Group Delay Deviation :	500	ns/div

**S11**



**S22**



## SPECIFICATION

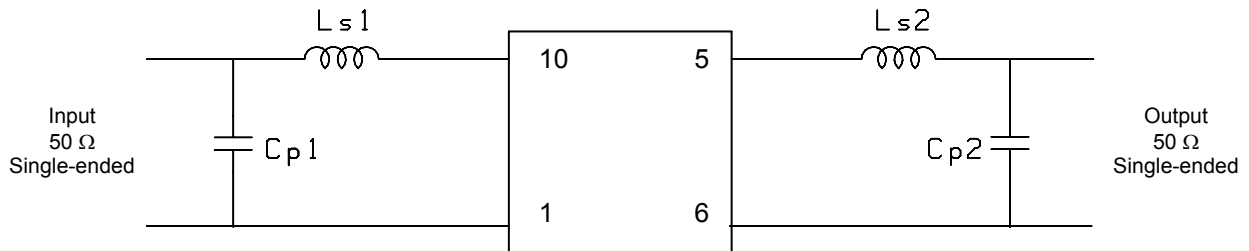
Parameter	Min	Typ	Max	Units
Center Frequency ( $F_c$ ) <sup>1</sup>	69.94	70	70.05	MHz
Insertion Loss at $F_c$	-	9.0	10.25	dB
1 dB Bandwidth <sup>2</sup>	0.35	0.49	-	MHz
3 dB Bandwidth <sup>2</sup>	0.50	0.68	-	MHz
35 dB Bandwidth <sup>2</sup>	-	1.25	1.4	MHz
Passband Ripple	-	0.35	1.2	dB p-p
Phase Deviation 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	-	$\mu$ 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)

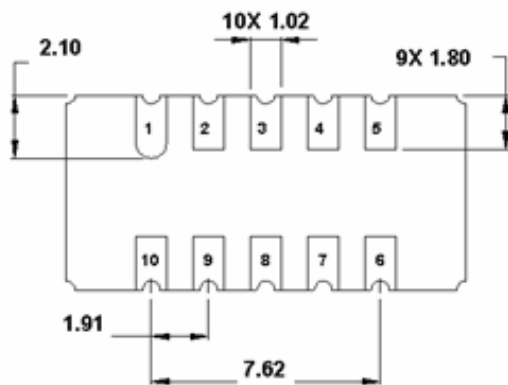
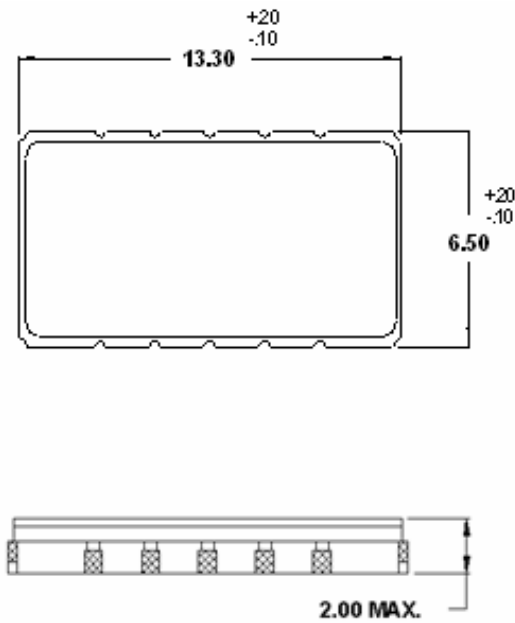
$$\begin{aligned} L_{s1} &= 550 \text{ nH} \\ C_{p1} &= 92 \text{ pF} \end{aligned}$$

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

Notes:

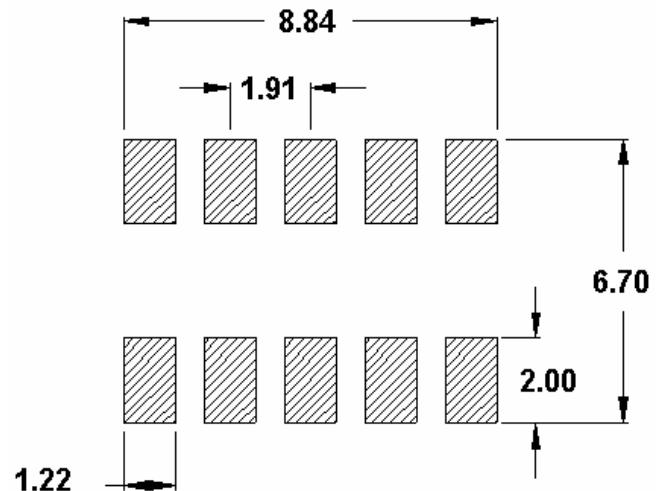
1. Recommend use of 2% tolerance matching components.
2. Component values shown are for guidance only and may change depending on board layout.

**PACKAGE OUTLINE**



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

**SUGGESTED FOOTPRINT**



**Units:** mm

Tolerances are  $\pm 0.15$  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.  
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