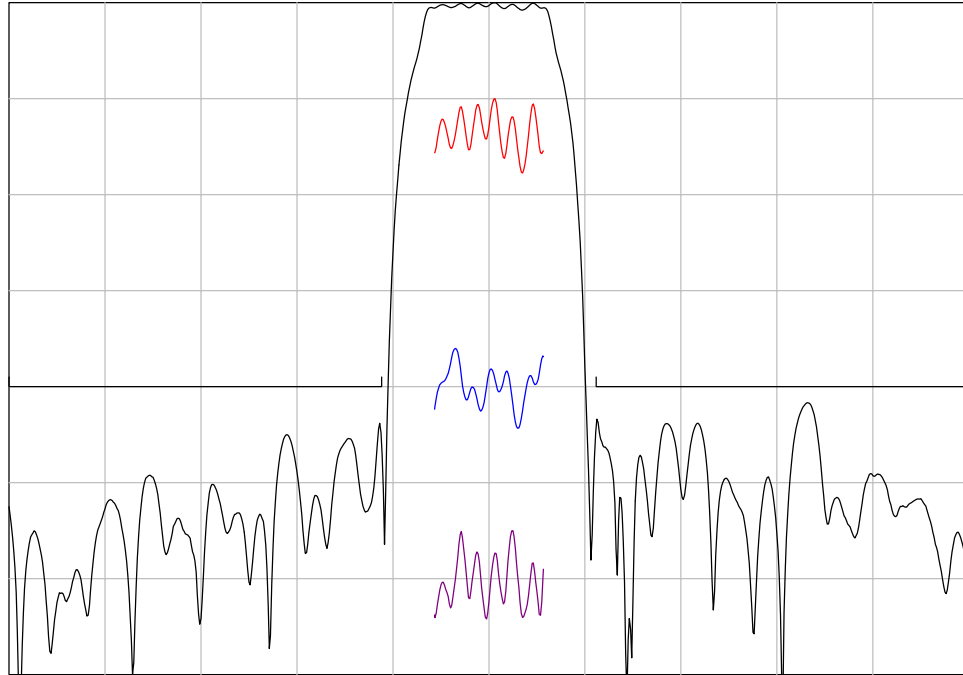


DESCRIPTION

- 456 MHz, 3.7 MHz bandwidth high performance IF SAW filter in 7x 5 mm surface mount package.
- For WiMAX applications.
- RoHS compliant.

TYPICAL PERFORMANCE



Horizontal: 3 MHz/div

Vertical from top:

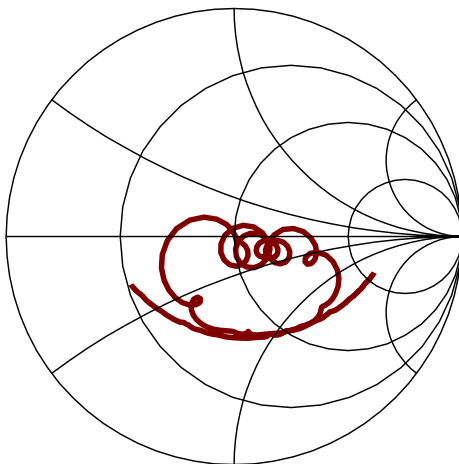
Relative Magnitude : 10 dB/div

Relative magnitude : 1 dB/div

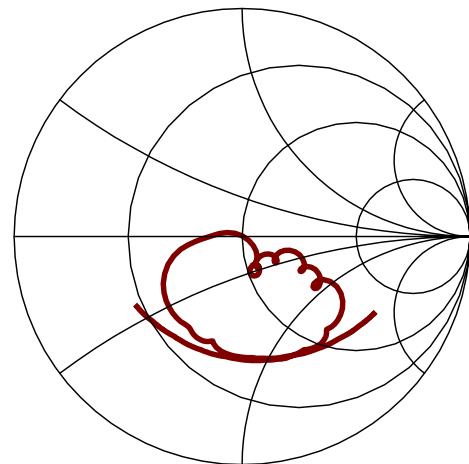
Phase Linearity : 10 deg/div

Group Delay Deviation : 150 ns/div

S11 (441 to 471MHz)



S22 (441 to 471 MHz)



SPECIFICATION

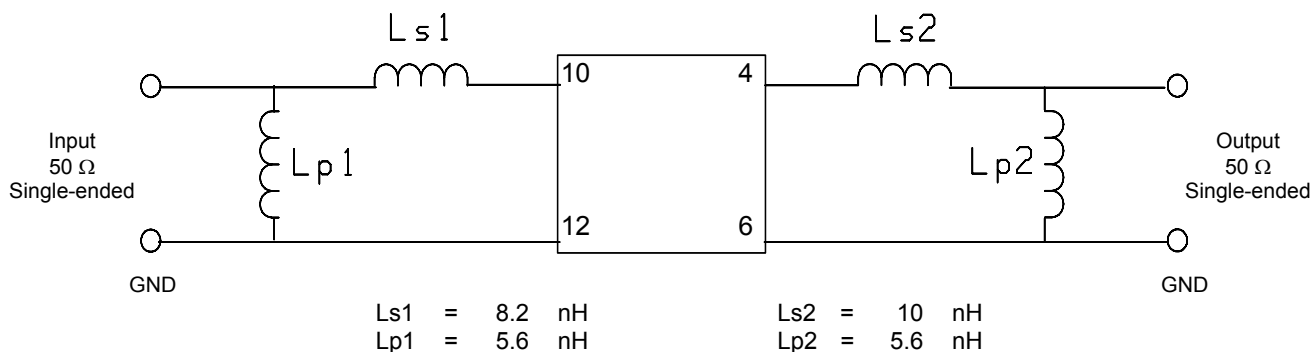
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) ¹	455.9	456.0	460.1	MHz
Insertion Loss	-	9	10	dB
Passband Ripple (456+/-1.7 MHz)	-	0.5	1	dB p-p
Passband Ripple (456+/-1.85 MHz)	-	1.5	3	dB p-p
Group Delay Ripple (456+/-1.7 MHz)	-	140	175	ns p-p
Absolute Group Delay	-	0.88	3	μs
1 dB Bandwidth ²	3.40	3.78	-	MHz
3 dB Bandwidth ²	3.70	4.05	-	MHz
Rejection (416 to 452.65 MHz) ²	40	50	-	dB
Rejection (456.35 to 656 MHz) ²	40	50	-	dB
Rejection (10 to 256 MHz) ²	30	50	-	dB
Rejection (256 to 360 MHz) ²	40	50	-	dB
Rejection (360 to 416 MHz) ²	50	60	-	dB
Rejection (656 to 946 MHz) ²	30	50	-	dB
Input and Output Return Loss at 456 MHz	8	12	-	dB
Substrate Material	-	Quartz	-	
Ambient Temperature	-	25	-	°C
Temperature Coefficient of Frequency (Tc)	-	-0.036	-	ppm/°C ²
System Source and Load Impedance	-	50	-	Ω

- Notes: 1. Average of lower & upper 30 dB frequencies.
2. Rejection relative to insertion loss.

MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	+85	°C
Operating Temperature Range	-40	+85	°C
Input Power Level	-	+17	dBm

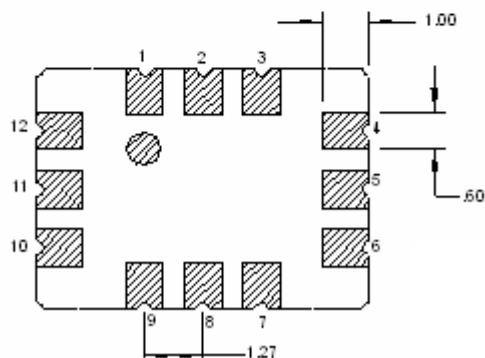
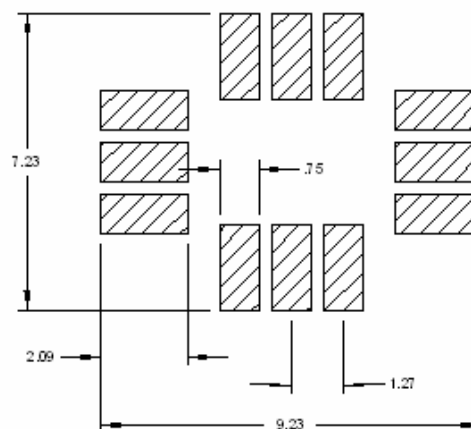
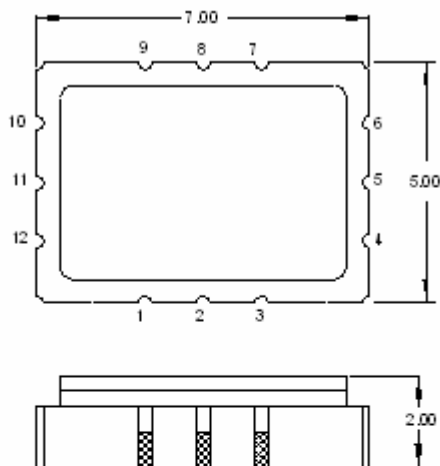
MATCHING CIRCUIT



Notes:

1. Recommended component tolerances for inductors is $\pm 1\%$ with minimum $Q=40$.
2. Values shown are for reference only. Actual values are dependent upon board layout.

PACKAGE OUTLINE AND RECOMMENDED PCB FOOTPRINT



Pin Configuration:	
10	Input
12	Input Return
4	Output
6	Output Return
All Others	Ground

NOTES:
DIMENSIONS SHOWN ARE ALL
NOMINAL IN MILLIMETRES. ALL
TOLERANCES ARE ±0.15MM

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

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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