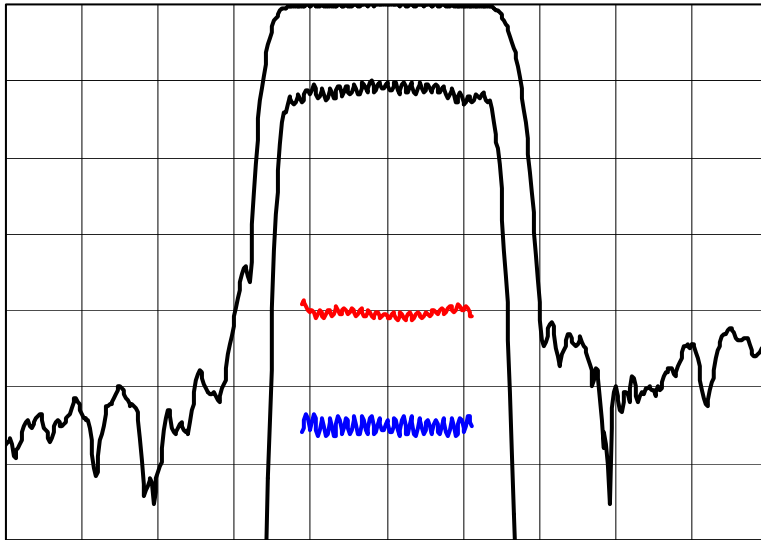


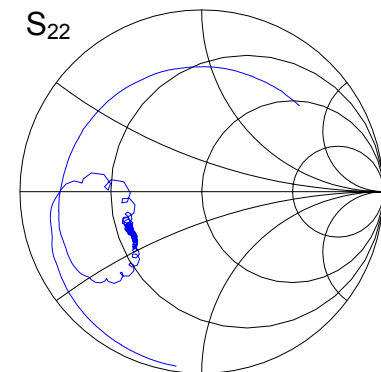
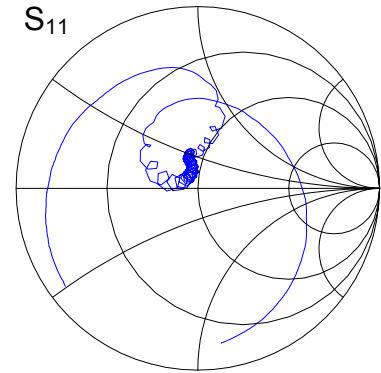
DESCRIPTION

- 140 MHz SAW bandpass filter with 14 MHz bandwidth in 13.3x6.5mm SMP.
- RoHS compliant.

TYPICAL PERFORMANCE



Horizontal :	Frequency	5	MHz / div
Vertical (from top)	Magnitude	10	dB/div
	Magnitude	1	dB/div
	Phase Deviation	10	deg/div
	Group Delay Deviation	100	ns/div



Input and Output Impedances
 Frequency Span : 100-180 MHz



Wide Band Response
 Frequency Span : 0-500 MHz
 Vertical Scale : 10 dB/div

SPECIFICATION

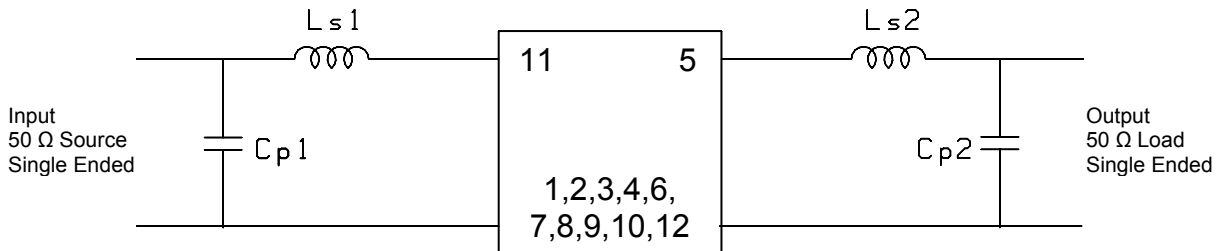
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) ¹	139.6	140	140.4	MHz
Insertion Loss ²		8.4	10	dB
1 dB Bandwidth	13	14.5		MHz
3 dB Bandwidth	14	15.5		MHz
35 dB Bandwidth		19.4	20	MHz
Passband Ripple ³		0.3	1	dB p-p
Phase Deviation from Linear ³		2.1	15	deg p-p
Group Delay Variation ³		30	140	ns p-p
Absolute Delay		0.94		µs
Ultimate Rejection ⁴	40	43		dB
Substrate	Lithium Niobate			
Temperature Coefficient of Frequency		-90		ppm/°C
Ambient Temperature		25		°C
System Source and Load Impedance		50		Ω

- Notes:
1. Average of the lower and upper 3 dB frequencies.
 2. Average level in the passband.
 3. Evaluated over 80% of the 3dB bandwidth (i.e. $F_c \pm 5.6$ MHz).
 4. Evaluated over the intervals 20 – 126 MHz and 154 – 280 MHz.

MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	+85	°C
Input Power Level		+17	dBm
DC Voltage Between Each Terminal		15	V

MATCHING CIRCUIT



Component values (minimum inductor Q = 45):

$$L_{s1} = 100 \text{ nH} \quad C_{p1} = 22 \text{ pF} \quad L_{s2} = 120 \text{ nH} \quad C_{p2} = 12 \text{ pF}$$

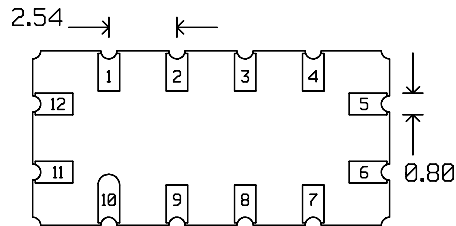
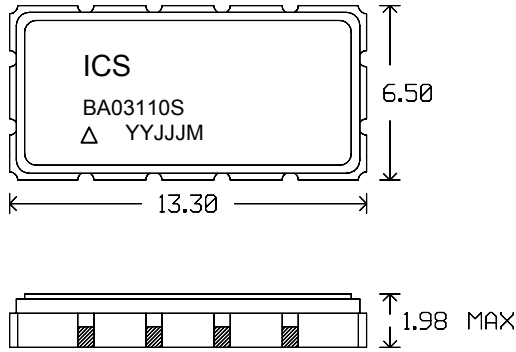
Notes:

1. The component values shown above are those used in the Micro Networks test fixture. Optimum values may change depending on board layout.
2. 5% tolerance components or better are recommended.



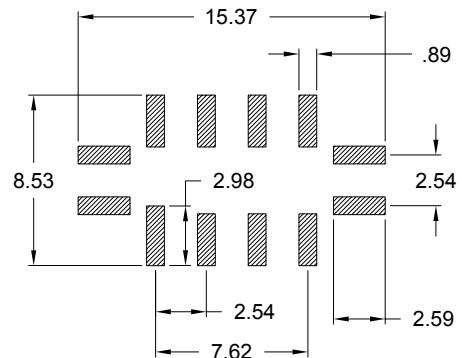
PACKAGE OUTLINE AND RECOMMENDED PCB LAYOUT

PACKAGE INFORMATION



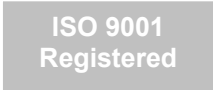
Package Material:
Body: Al_2O_3 ceramic
Lid: Kovar, Ni plated
Terminations: Au plating 1 μ m min,
over a 1.3-8.9 μ m Ni plating

RECOMMENDED PCB FOOTPRINT



Pin Configuration:	
11	Input
12	Input Return
5	Output
6	Output Return
All Others	Ground

NOTES:
DIMENSIONS SHOWN ARE ALL NOMINAL IN MILLIMETRES. ALL TOLERANCES ARE ± 0.15 MM EXCEPT OVERALL LENGTH AND WIDTH



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