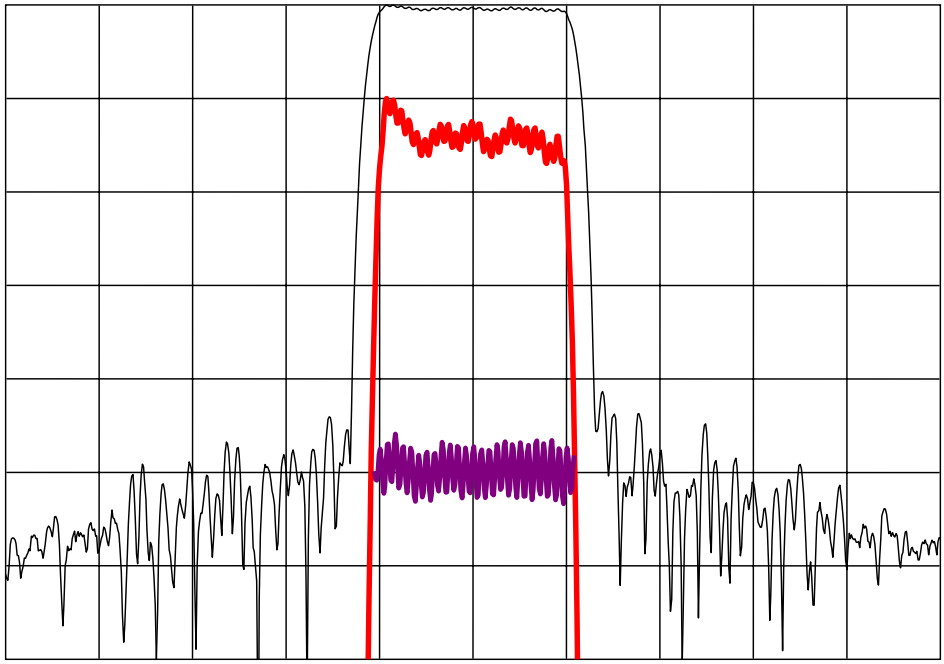
DESCRIPTION

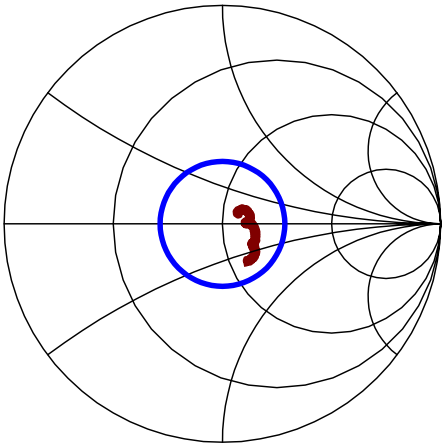
- 115 MHz SAW bandpass filter with 6 MHz bandwidth for CDMA2000 applications.
- 19 x 6.5 mm SMP.
- RoHS compliant.

TYPICAL PERFORMANCE

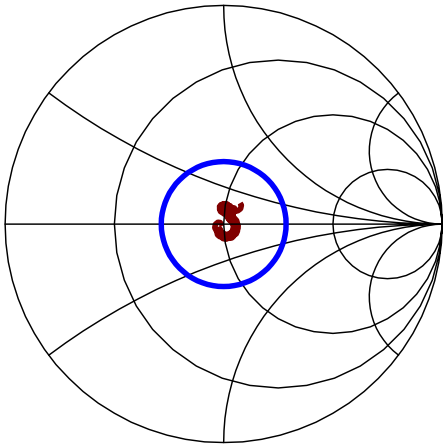


Horizontal:	Frequency :	3	MHz/div
Vertical from top:	Relative Magnitude :	10	dB/div
	Relative magnitude :	1	dB/div
	Group Delay :	150	ns/div

S11 (112.2 to 117.8 MHz)
Circle: 1.8:1 VSWR limit



S22 (112.2 to 117.8 MHz)
Circle: 1.8:1 VSWR limit



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SPECIFICATION

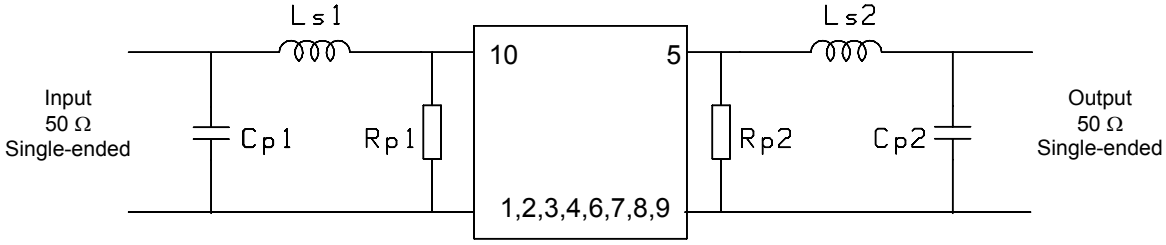
Parameter	Min	Typ	Max	Units
All electrical specifications apply over the full -10ºC to +50ºC operating range and include allowance for all manufacturing tolerances				
Center Frequency F_C [1]	114.88	115	115.12	MHz
1 dB Bandwidth [2]	5.6	6.08		MHz
3 dB Bandwidth [2]	6.0	6.44		MHz
40 dB Bandwidth [2]		7.75	8.2	MHz
Stopband Rejection, 25 MHz to 100 MHz	45	58		dB
Stopband Rejection, 130 MHz to 1000 MHz	45	53		dB
Minimum Insertion Loss		18.9	20	dB
Passband Amplitude Variation, F_C ± 2.8 MHz [3]		0.6	0.8	dB p-p
Passband Group Delay Variation, F_C ± 2.8 MHz		100	150	ns p-p
Absolute Delay		2.0	2.1	µs
Input VSWR, F_C ± 2.8 MHz [4]		1.55	1.8	: 1
Output VSWR, F_C ± 2.8 MHz [4]		1.3	1.8	: 1
Maximum Input Level	20			dBm
Source and Load Impedance		50		Ω

Notes:
1. Defined as the mean of the 10dB frequencies.
2. dB levels are taken to be relative to the insertion loss.
3. Excludes final roll-offs to the 1dB points. Note that 'Passband Amplitude Variation' includes Ripple (fast variations) and Slope (slow variations).
4. When matched using circuit below.

MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-45	85	˚C
Operating Temperature Range	-10	50	˚C
Operating Input Power Level	-	+20	dBm
D.C. Voltage between each pad	-	15	V_{DC}

MATCHING CIRCUIT

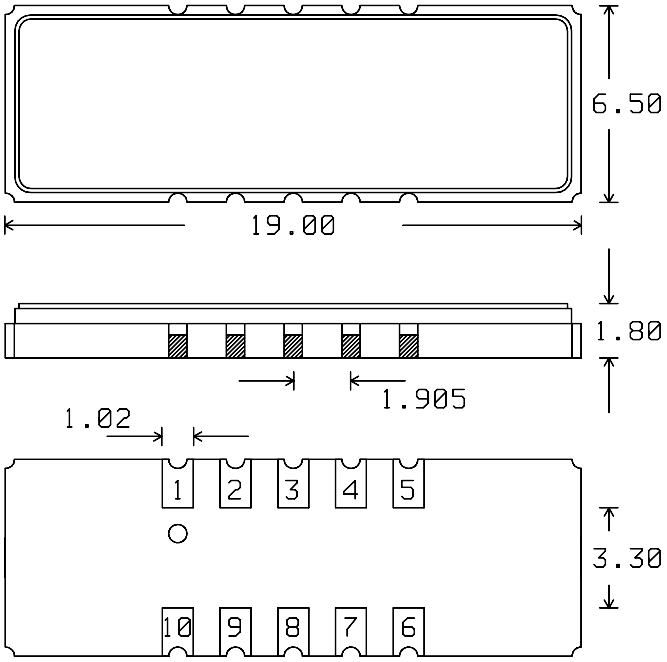


Typical component values:

Rp1	=	430	Ω	Rp2	=	200	Ω
Ls1	=	68	nH	Ls2	=	68	nH
Cp1	=	56	pF	Cp2	=	56	pF

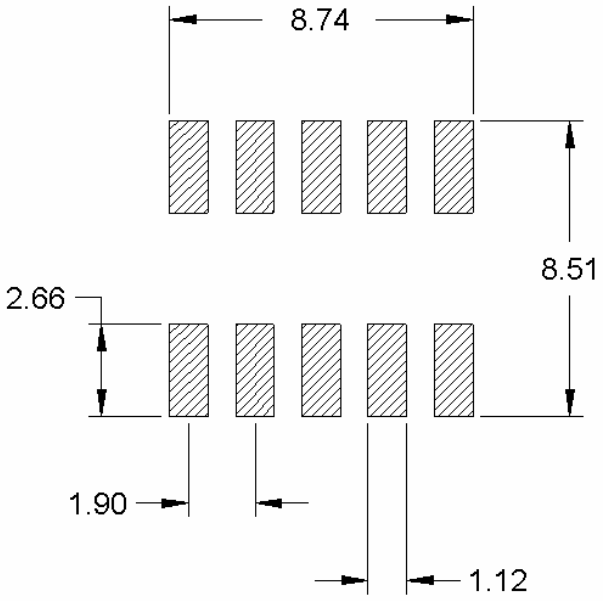
Notes:
1. Recommended tolerances: +/-2% inductors, minimum Q=40, +/-5% resistors and capacitors.
2. Component values are for reference only and may change depending on board layout.

PACKAGE OUTLINE



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

SUGGESTED FOOTPRINT



Units: mm

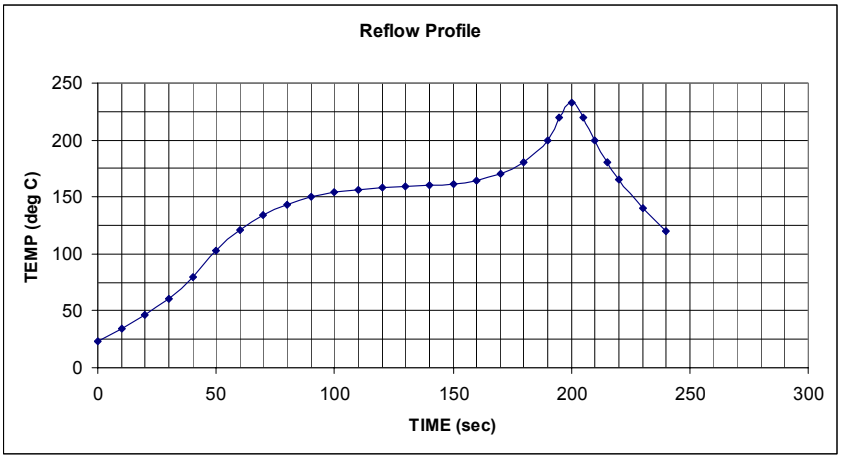
Tolerances are ±0.15 mm except for the overall length, width and pad dimensions, which are nominal values.

Pad Configuration:

Input:	10
Output:	5
Ground:	all other pads

PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

Parameter	Qualification Conditions
Life Testing	High temperature bake at +85 ºC for 168 hours.
Temperature Cycling	MIL-STD 883, Method 1010: -40 ºC to +85 ºC, 10 cycles, 10 minutes dwell at temperature extremes
Vibration	MIL-STD-202, Method 201A: 10 to 55 Hz, double amplitude of 0.06" for 2 hours in each axis.
Mechanical Shock	MIL-STD-883, Method 2002, Test Condition B: 1500 g, 3 impacts each axis
Solder Heat Resistance and Reflow Condition	Peak temperature 240+/-5 ºC for 10 seconds. Pre-heat: 150-170 ºC for 60 to 90 seconds. Peak dwell: over 200 ºC for 23 to 26 seconds. Handling: Class 1 per MIL-STD-1686 Reflow Profile is shown at the bottom of this table.
Lead Integrity	MIL-STD 883 Method 2004, Condition D 8 oz for 30 seconds.
Solderability	MIL-STD-883 Method 2003: 245 ºC +/-5 ºC; 95% coverage; no steam aging
Hermeticity	MIL-STD 883 Method 1014: Condition A2 and Condition C (no bomb)
ESD Classification	Class I per MIL-STD-883 Method 3015
Precautions	Do not subject devices to ultrasonic cleaning, which may cause deterioration and destruction of the device.



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