

Specifications



FEATURES

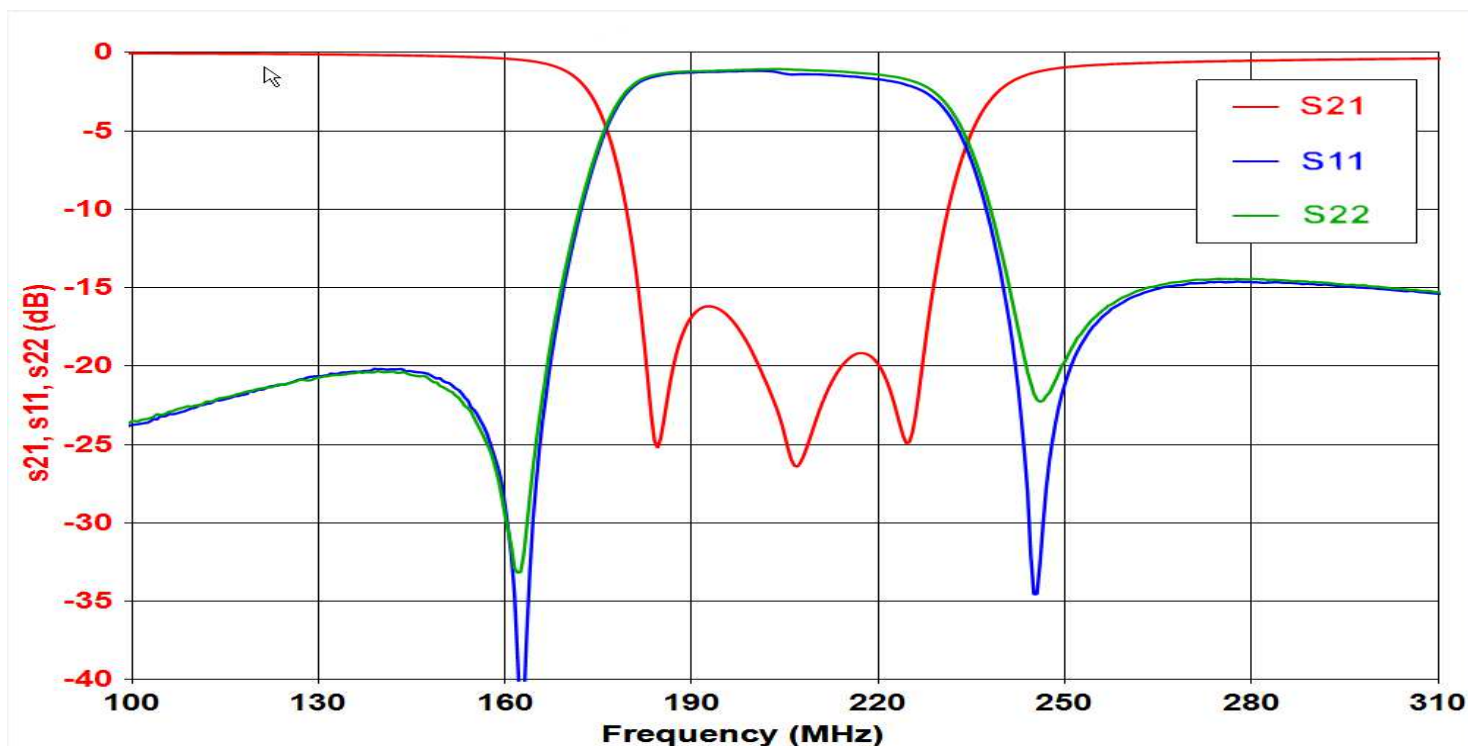
Netcom's 3619 is a StopBand LC filter with a center frequency of 205 MHz.

The filter is an industry leading design specifically targeting military and commercial radio applications. This filter is designed to meet military standards for test methods of industry ANSI standards for dimensioning and Tolerancing. The relative size of the filter makes it an ideal option for use within military and commercial handset radios as well as vehicular mounted radio applications.

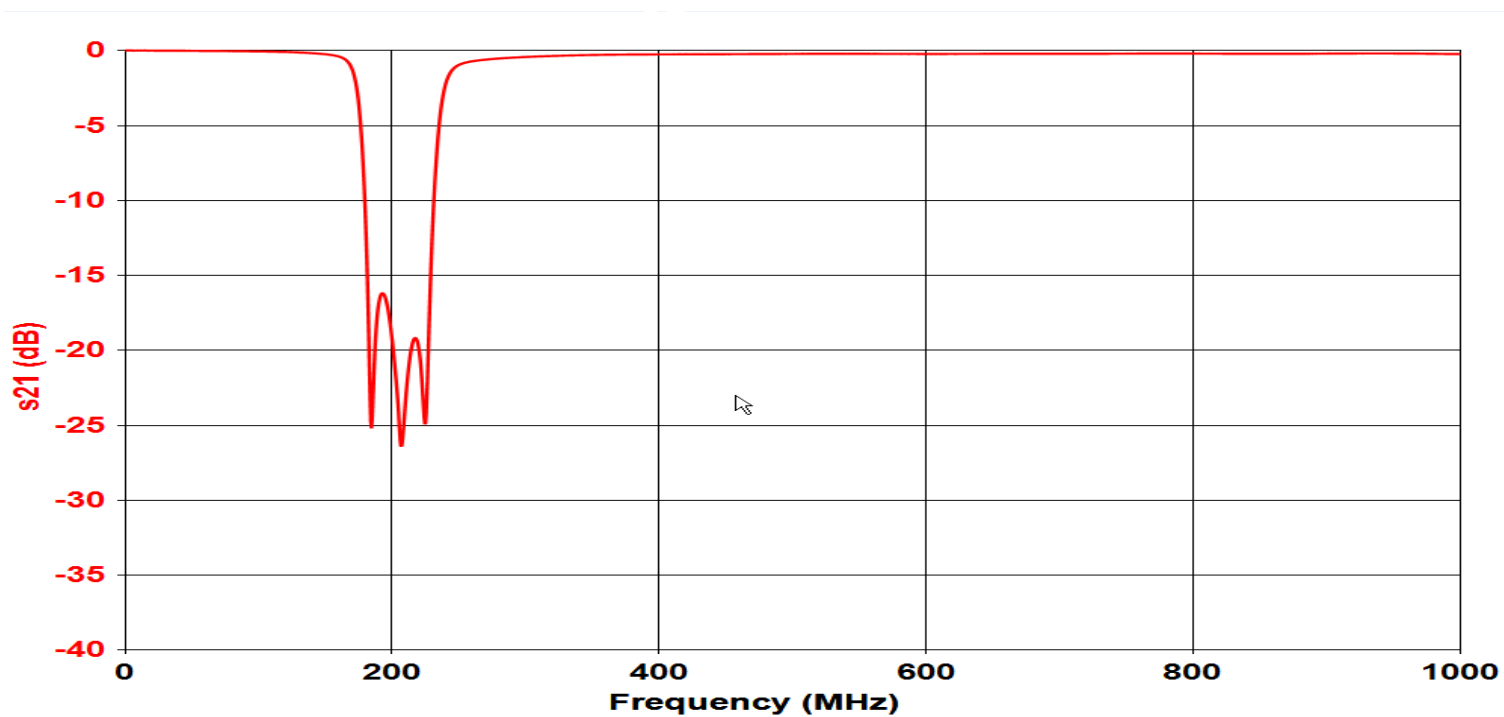
The following table shows the typical performance of the filter.

	Min	Max	Units
Low Side Pass Band	20	166	MHz
1dB Pass Band 20MHz -166MHz Ripple (peak -2-Valley)		0.5	dB
1dB Pass Band 20MHz -166MHz Return Loss	12		dBr
1dB Point	166		MHz
3dB Point	172		MHz
174MHz Insertion Loss		4.0	dB
Band Stop Rejection at 180-230MHz	10		dBc
Band Stop Rejection at 185-225MHz	15		dBc
High Side Pass Band	253	1000	MHz
3dB Point		240	MHz
248MHz Insertion Loss		1.4	dB
1dB Pass Band 253 - 1000MHz Ripple (peak-2-valley)		0.5	dB
1dB Pass Band 253 - 1000MHz Return Loss	12		dBr
High Power Input		27	dBm
Operating Temperature	-40	+115	°C
Case Style	0.47 x .39 x 0.25 inches		
Connector Interface	SMT		
ESD Class	2		
MSL	3		

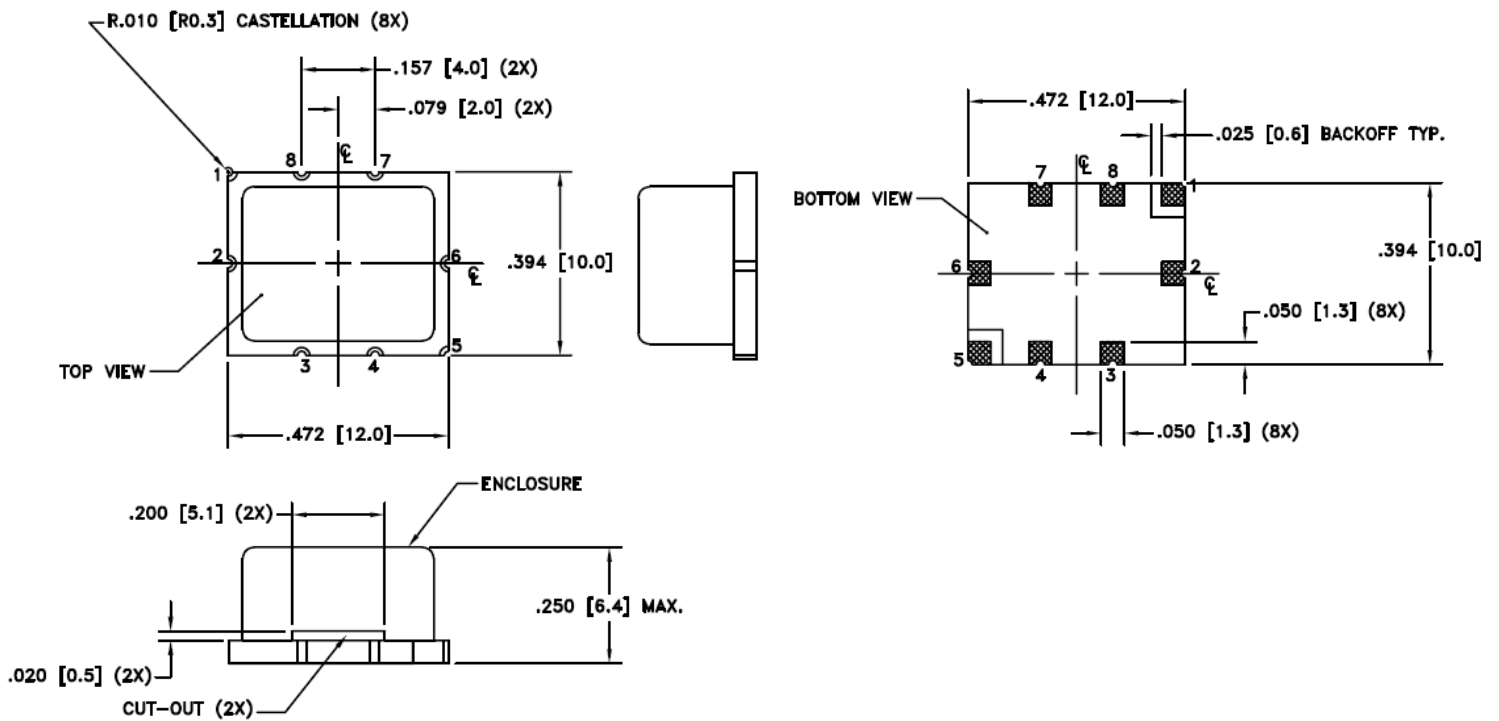
3619 Stop Band Response



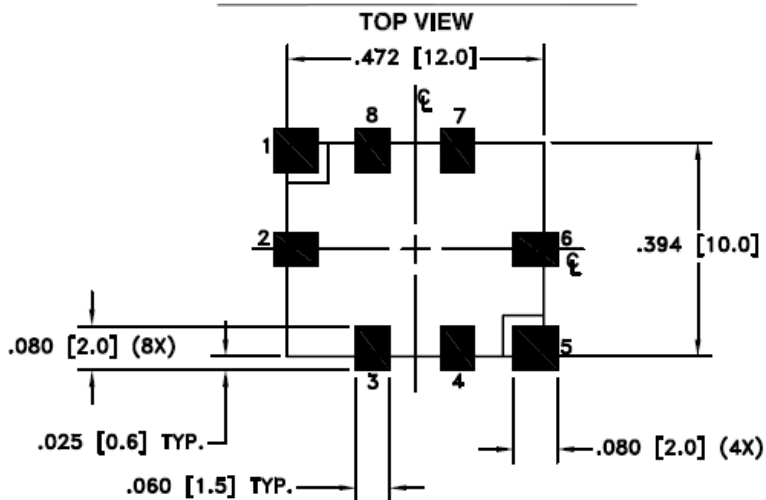
3619 Full Band Rejection Plot



Mechanical



RECOMMENDED LAYOUT PATTERN



PIN DESIGNATORS	
PIN NUMBER	DESCRIPTION
1	INPUT
2	GND
3	GND
4	GND
5	OUTPUT
6	GND
7	GND
8	GND

NOTES:

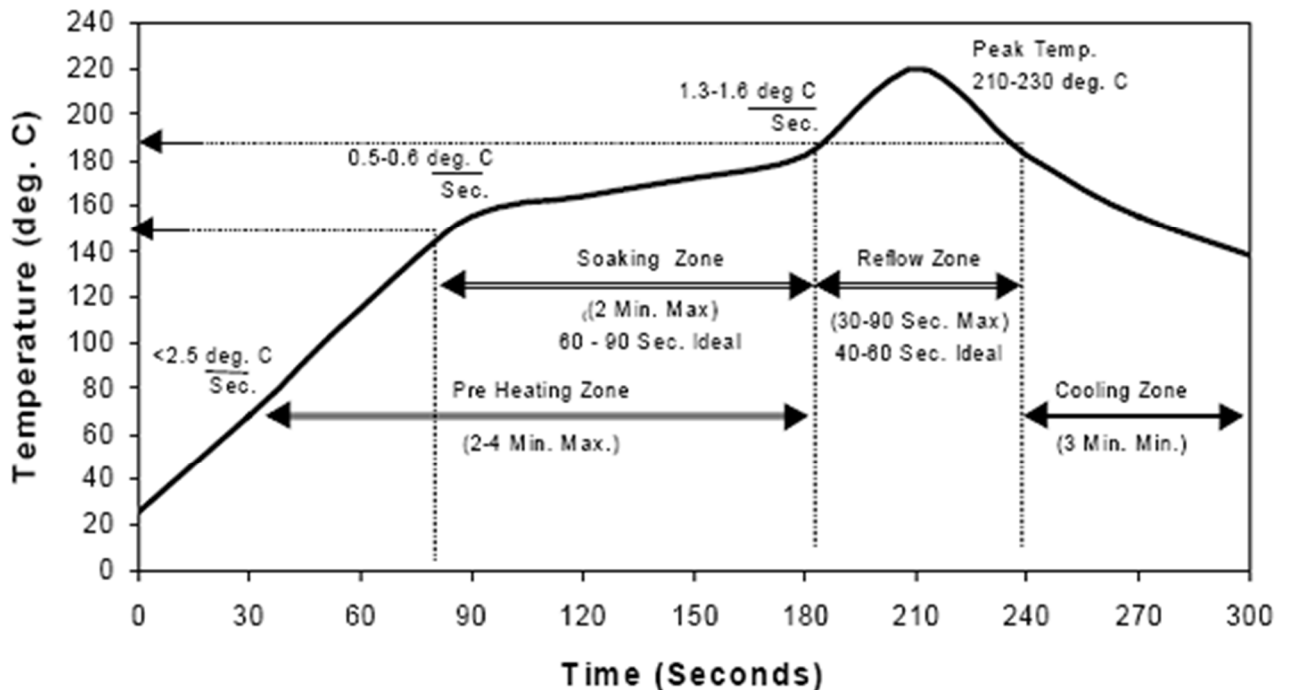
1. TOLERANCES ± 0.010 [0.25] UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS ARE INCHES [mm].

Solder Process

Filter model 3619 is designed for system assembly through SMT reflow soldering. All filter components have been selected for secondary reflow and are assembled using Sn95Sb5 high temp solder. The system level SMT reflow temperature profile is as specified in the IPC/JEDEC J-STD-020 standard for a Sn-Pb Eutectic Process. In systems using Pb-Free and high temp solder, the filter must be mounted through a hand soldering process.

The exact reflow profile required will depend on the characteristics of the circuit board assembly like thickness, size, and heat transfer. Also affecting the reflow profile is the solder paste type, flux, and density of other components. Temperature limitations of other components on the circuit board also must be considered. The recommended profile below is at the printed circuit board interface using Sn63/Pb37 tin lead solder.

Recommended Solder Profile



Lead Plating

ELECTROLESS NICKEL TYPE 1, CLASS 1 Cu/Ni P7 100 MICRO INCHES (0.000001 INCHES) MINIMUM IMMERSION
GOLD PLATE 2 TO 6 MICRO INCHES (0.000002 TO 0.000006 INCHES) ON OUTER LAYERS

Housing Finish

SILVER ELCTROPLATED IAW ASTM B700-97
TYPE 1, GRADE A, CLASS N, 8um - 15um THICK
OVER: STRESS FREE NICKEL SULFAMATE IAW 5AE AMS 2424, 3um - 5um THICK

Thermal Shock

THERMAL SHOCK -55°C to $+125^{\circ}\text{C}$ with 5 cycles at -55°C and 5 cycles at $+125^{\circ}\text{C}$ for 10 total cycle thermal exposure to all units.

Pre-Assembly Baking

All units baked at $+115^{\circ}\text{C}$ for 72 hours prior to initial and final assembly.

Product is:

- Compliant with Abzol cleaner

Acceptance Testing

Netcom shall test the following filter parameters at each stage of development and production as listed below:

Parameter		AT	QT	DT
[1]	1dB Pass Band 20MHz -166MHz Ripple (peak -2-Valley)	+	+	+
[2]	1dB Pass Band 20MHz -166MHz Return Loss	+	+	+
[3]	1dB Point Low Side Pass Band	+	+	+
[4]	3dB Point Low Side Pass Band	+	+	+
[5]	174MHz Insertion Loss	+	+	+
[6]	Band Stop Rejection at 180-230MHz	+	+	+
[7]	Band Stop Rejection at 185-225MHz	+	+	+
[8]	3dB Point High Side Pass Band	+	+	+
[9]	248MHz Insertion Loss	+	+	+
[10]	1dB Point High Side Pass Band	+	+	+
[11]	1dB Pass Band 253 - 1000MHz Ripple (peak-2-valley)	+	+	+
[12]	1dB Pass Band 253 - 1000MHz Return Loss	+	+	+
[13]	High Power Input		+	+
[14]	High Operating Temperature +115°C	+	+	+
[15]	Low Operating Temperature -40°C	+	+	+
[16]	ESS / Thermal Shock	+	+	+

Acceptance Testing Notes

1. All AT testing performed; all parts are 100% tested at 25°C temperature.
2. QT (Qualification Test) is performed on 3 units minimum and will be tested at 25°C, -40°C and +115°C.
3. DT (Development Test) is performed on development units and will be tested at 25°C, -40°C and +115°C.
4. AT (Acceptance Test) are performed on production units based on AQL profile. Acceptable Quality Limit (AQL) testing option available on AT specification when data supports option.
5. ESS / Thermal Shock is performed during assembly phase of unit.



Notes:



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