

Specifications



FEATURES

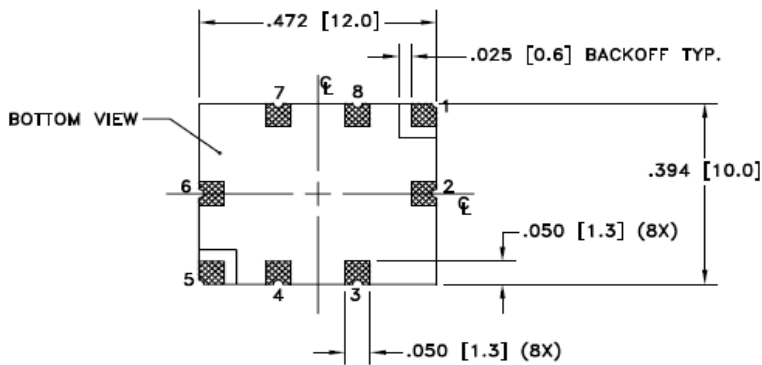
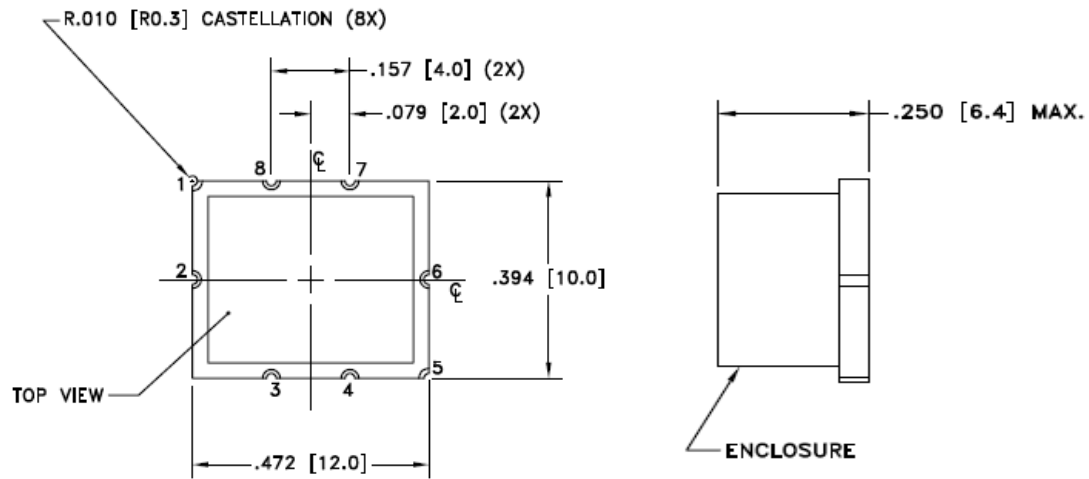
Netcom's 3618M2 is a bandpass LC filter with a center frequency of 70MHz.

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.

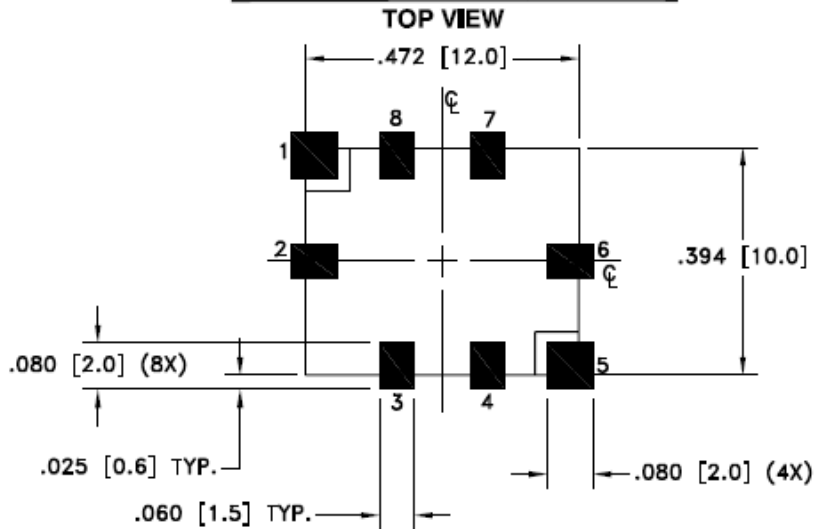
The following table shows the typical performance of the filter.

Passband Frequency Range	69.5 - 70.5MHz
1dB Passband Frequency Range (BW = 1.25MHz min)	69.375MHz (min) 70.625MHz (max)
Passband Insertion Loss	5.0dB (max)
1dB Bandwidth Phase Deviation	± 1 degrees
Insertion Loss Variation Over Temperature	0.5dB max
Pass Band Ripple	0.5dB (max)
High Power Input	27dBm (max)
Absolute Group Delay	180nsec (max)
Group Delay Variation	20nsec (max)
Selectivity (max)	
10 - 35MHz	-65dBc
35 - 55MHz	-50dBc
85 - 105MHz	-50dBc
105 - 130MHz	-65dBc
130 - 1000 MHz	-65dBc
1000 - 2500 MHz	-35dBc
DC - 10MHz	-65dBc
Return Loss	15dB (min)
Operating Temperature Range	-40 to +85°C
Storage Temperature Range	-55 to +125°C
Moisture Sensitivity Level (MSL)	3
Dimensions	0.47 x .39 x 0.25 inches

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:

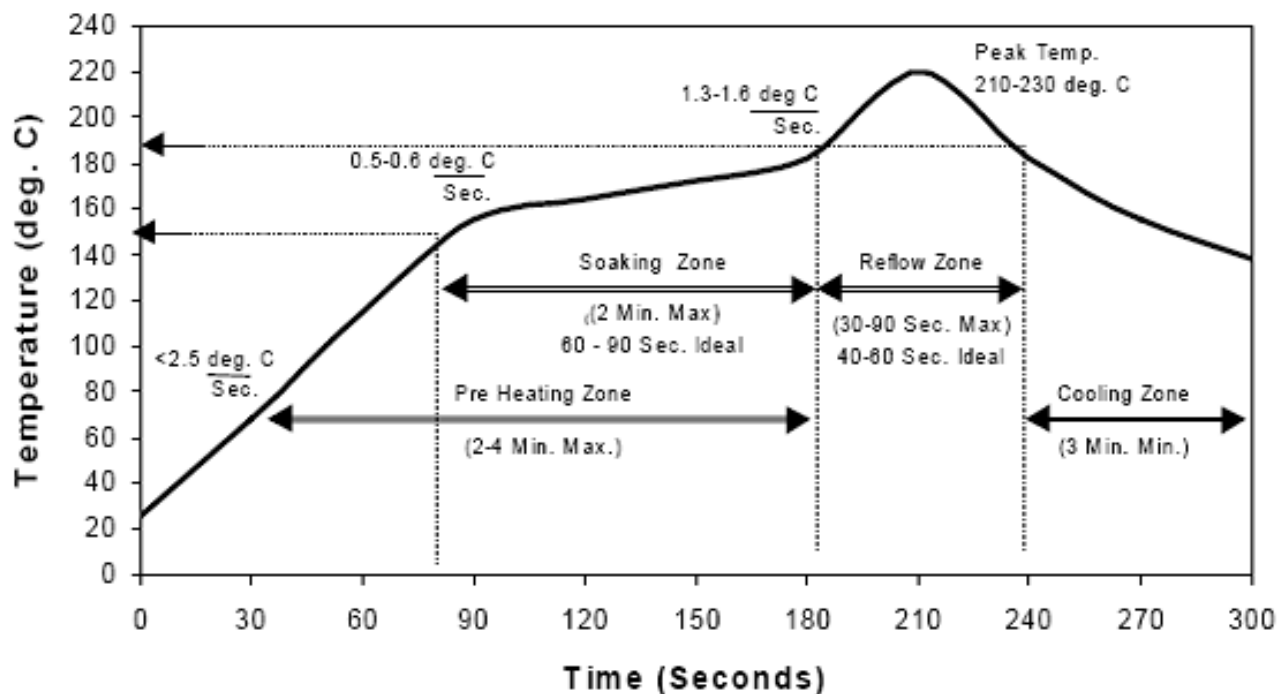
1. TOLERANCES ± 0.010 [0.25] UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS ARE INCHES [mm].

Solder Process

Filter model 3618M2 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

ELECTRLESS 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

Leak Testing

Units leak tested per MIL-STD 202G Method 112 Test Condition D

Acceptance Testing

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

Parameter		AT	QT	DT
[1]	Pass Band Frequency	+	+	+
[2]	1dB Pass Band frequency Range	+	+	+
[3]	Pass Band Insertion Loss	+	+	+
[4]	Insertion Loss variation over Temperature	+	+	+
[5]	Pass Band Ripple	+	+	+
[6]	Deviation from linear Phase	+	+	+
[7]	High Power Input		+	+
[8]	Absolute Group Delay	+	+	+
[9]	Group Delay variation	+	+	+
[10]	10 - 35MHz	+	+	+
[11]	35 - 55MHz	+	+	+
[12]	85 - 105MHz	+	+	+
[13]	105 - 130MHz	+	+	+
[14]	130MHz – 2500MHz	+	+	+
[15]	DC-10MHz		+	+
[16]	In/Out Return Loss @ Pass Band	+	+	+
[17]	Load VSWR		+	+
[18]	Thermal Shock Per MIL-STD-202 Method 107 Test A	+	+	+

Acceptance Testing

1. **AT (Acceptance Test)** are performed on production units based on AQL profile.
Acceptable Quality Limit (AQL) testing option available on AT specifications when data supports option.
2. **QT (Qualification Test)** is performed on 3 units minimum, and will be tested at 25°C, -40°C, and +85°C.
3. **DT (Development Test)** is performed on development units and will be tested at 25°C, -40°C, and +85°C.
4. All AT testing performed; all parts are 100% tested at 25°C temperature.
5. ESS / Thermal Shock performed during assembly phase of unit.



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