SPECIFICATION

COMMERCIALLY AVAILABLE

CERAMIC FILTER
PART NUMBER: CF-03380205

Revision Made:

ISSUED / REVISION	ENGINEER APPROVED	DOCUMENT CHECKED	DRAFTSMAN
7/2/10 kn	**7/6/2010 SRJ**	**7/7/2010 BF**	**7/7/2011 GIL**

***FILTRO**NETICS Inc*

6010 Parretta Dr. Kansas City, MO 64120
(p) 816-231-7375 (f) 816-241-0368
***FILTRO**NETICS, Inc*
www.filtro.net

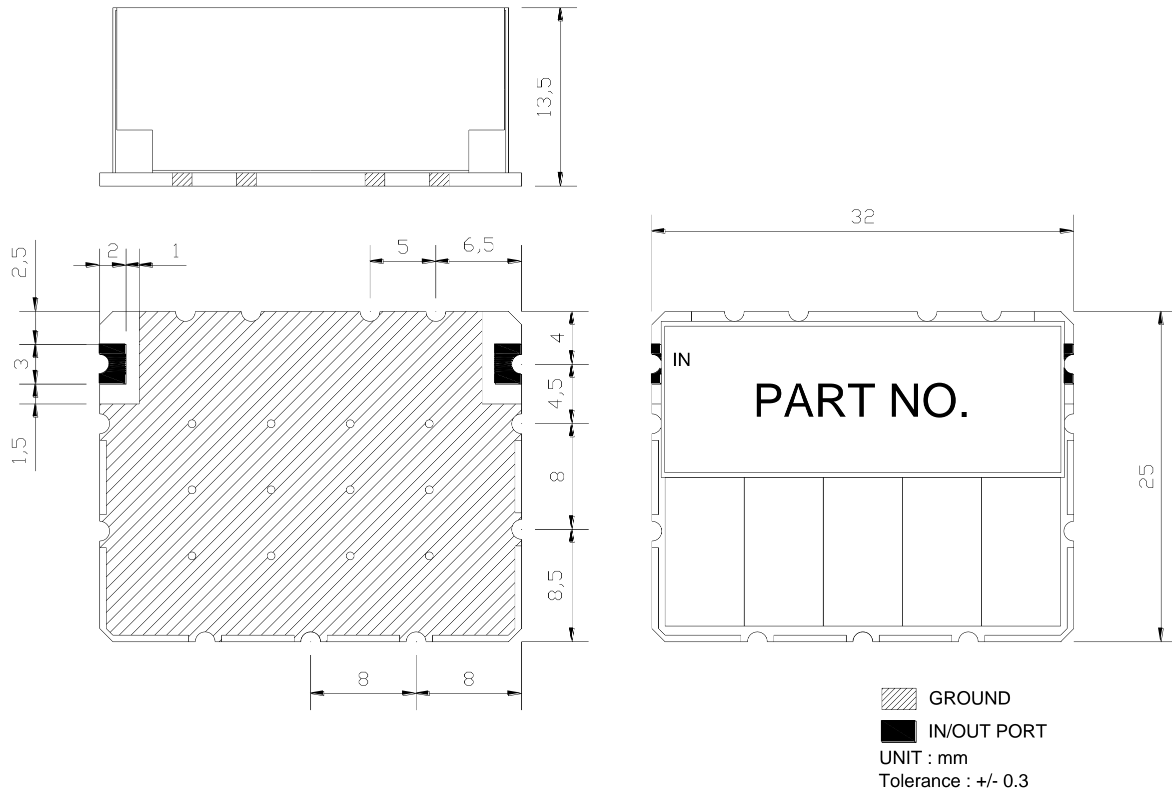
1. APPLICATION

THIS SPECIFICATION APPLIES TO BAND PASS FILTER USING DIELECTRIC RESONATORS.

2. SPECIFICATIONS:

Parameter	Value
Center Frequency (F0)	**338 MHz**
Poles	**5**
Bandwidth (BW)	**20 MHz**
Insertion Loss (F0)	**3.0 dB max**
Ripple in BW	**1.0 dB max**
VSWR (BW)	**1.5:1 min**
Attenuation	**45 dB min at 288 MHz** **45 dB min at 388 MHz**
In/Out Impedance	**50 Ω**
Operating Temp Range	**-40 ~ 85°C**
Input power	**1 watt**
Group delay variation	**15 nSec max**
Absolute Group delay	**60 nSec max**
This product is RoHS compliant.	

3. DIMENSIONS:



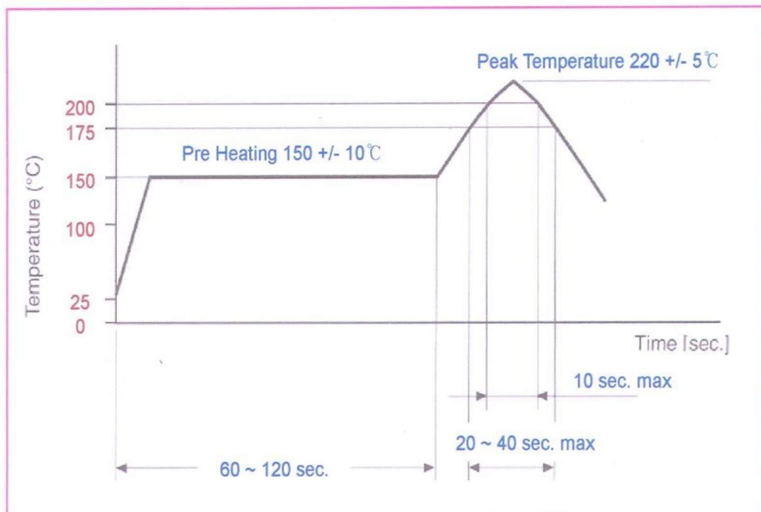
4. DEFINITIONS:

<table>
<tr><th>TERMS</th><th>DESCRIPTION</th><th>SPECIFICATION</th></tr>
<tr><td>Center Frequency</td><td>The midpoint of through band pass filter pass band, normally expressed as the arithmetic mean of the -3dB point. Also called Fo.</td><td rowspan="4">3. SPECIFICATION</td></tr>
<tr><td>Pass Band Width</td><td>The width of the pass band of a filter referenced to the minimum insertion loss point in the pass band. The pass band of a filter is stated as -1.0dB bandwidth.</td></tr>
<tr><td>Insertion Loss</td><td>The loss of the filter, in dB, measured at center frequency relative to a through line (0 dB).</td></tr>
<tr><td>Attenuation</td><td>Reduction of RF power through a filter measured in dB, at desired band and referenced to 0 dB. (Filter to be removed from circuit)</td></tr>
<tr><td>Pass Band Ripple</td><td>Variations in loss in the pass band of the filter, superimposed upon the fundamental shape of the pass band.</td><td rowspan="2"></td></tr>
<tr><td>V.S.W.R in Pass Band</td><td>The ratio of the maximum value of a standing wave to its minimum value, related to the return loss in pass band.</td></tr>
</table>

5. RELIABILITY TEST AND CONDITIONS

ITEM	TEST CONDITIONS	REQUIREMENTS
Resistance to solder heat	Preheat temperature : 120 to 150°C Preheat time: 1 to 1.5 min Solder temperature: 260 +/- 10°C Dipping time: 10 +/- 0.5 sec	No damage such as cracks should be caused in chip element.
Solderability	Preheat temperature: 120 to 150°C Preheat time: 1 to 1.5 min Solder temperature: 235 +/- 5°C Dipping time: 5 +/- 1 sec	More than 80% of the terminal electrode shall be covered with new solder
Heat resistance (High-temperature Load)	Temperature: 85 +/- 2°C Applied voltage: Rated voltage Applied current: Rated current Recovery: 1 to 2hrs of recovery under the standard condition after the removal from test chamber.	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Thermal shock (Temperature cycle)	Conditions for 1 cycle Step 1: + 85°C 15 min Step 2 : - 30°C 15 min Number of cycle: 10	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Humidity Resistance	Temperature: 40 +/- 2°C Humidity: 90 to 95% RH Duration: 96 +/- 5 hrs Recovery: 1 to 2hrs of recovery under the standard condition after the removal from test chamber.	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Vibration	Frequency: 10 ~ 50 Hz Amplitude: 1.52mm (0.060 inches) Direction: X, Y and Z Time: each 30 min for all directions	No mechanical damage. After test, the device shall satisfy the specification in section 3.

6. REFLOW SOLDERING STANDARD CONDITIONS



- Measuring point of temperature in-out terminals of the device.
- Reflow Soldering
- Both convection and infrared rays
- Hot air
- Hot plates
- Solder Cream: Sn64/Pb36