SPECIFICATION

COMMERCIALLY AVAILABLE

CERAMIC BAND PASS
PART NUMBER: CF-25004006
RoHS

ISSUED / REVISION	ENGINEER APPROVED	DOCUMENT CHECKED	DRAFTSMAN	DOCUMENT CHECKED
2/18/05**				
9/7/11 DS	11/29/2011 TFG		11/29/2011 GL	
	05/21/2014 TFG		05/21/2014 GL	
***FILTRO**NETICS Inc*				

1. APPLICATION:

1. THIS SPECIFICATION APPLIES TO BAND PASS FILTER, USING DIELECTRIC RESONATORS.

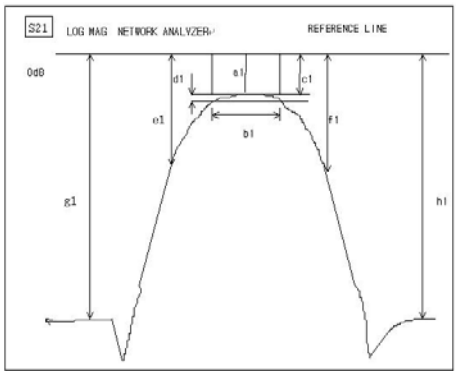
2. PART NUMBER:

PART NO	**CF-25004006**
PACKAGING	**PLASTIC TRAY**

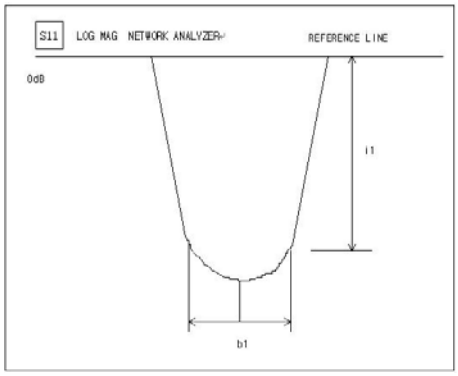
3. SPECIFICATIONS:

NO	ITEMS		Ref.	SPECIFICATION
1	Center Frequency (Fo)		a1	2500 MHz
2	1.0 dB Band Width (PB)		b1	400 MHz +/-10%
3	Insertion Loss At Fo		a1	2.0 dB Max
4	V.S.W.R (PB 95%)			2 : 1
5	Attenuation	AT 2185MHz	g1	20dB Min
		AT 2815MHz	h1	20dB Min
6	Impedance			50Ω
7	Maximum Input Power			1 W (+30dBm)
8	Operating Temperature Range			-40 - +75°C

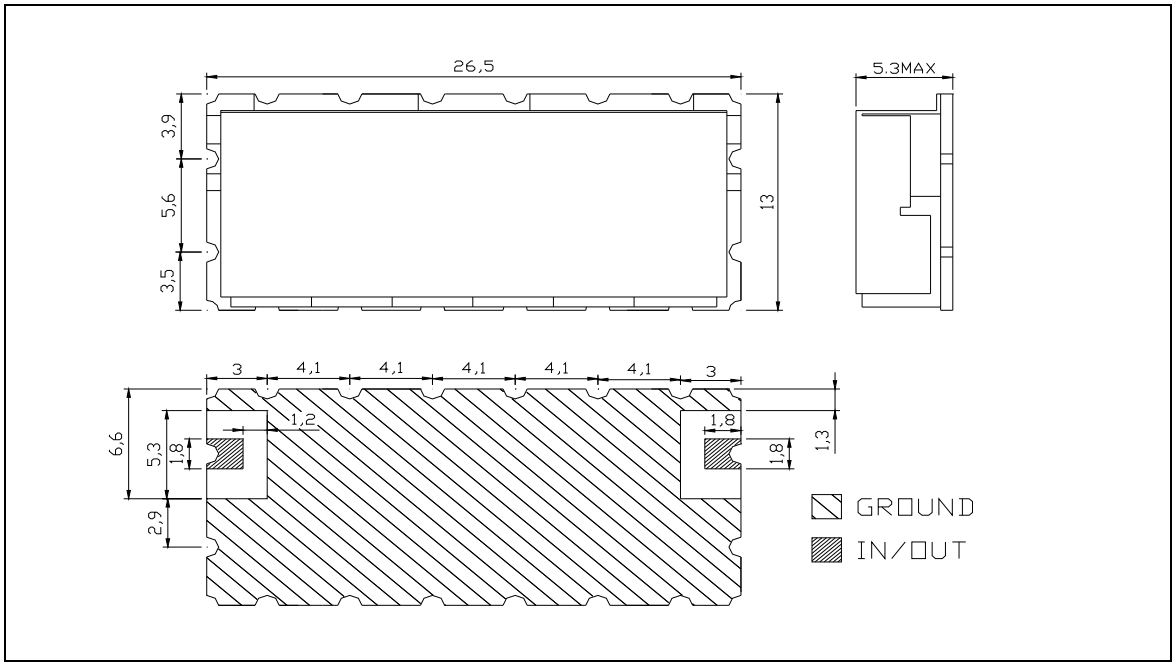
S21 LOG MAG NETWORK ANALYZER



S11 LOG MAG NETWORK ANALYZER



4. DIMENSIONS:



MATERIAL SPECIFICATION

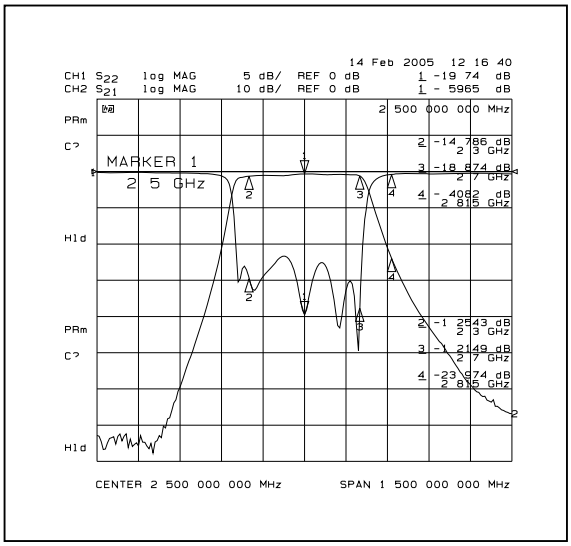
1. PCB
   1) MATERIAL: FR4
   2) TERMINALS: Au PLATED
2. METAL CASE
   1) MATERIAL: Sn OR Ni PLATED
3. RESONATOR
   1) COATING MATERIAL: Ag

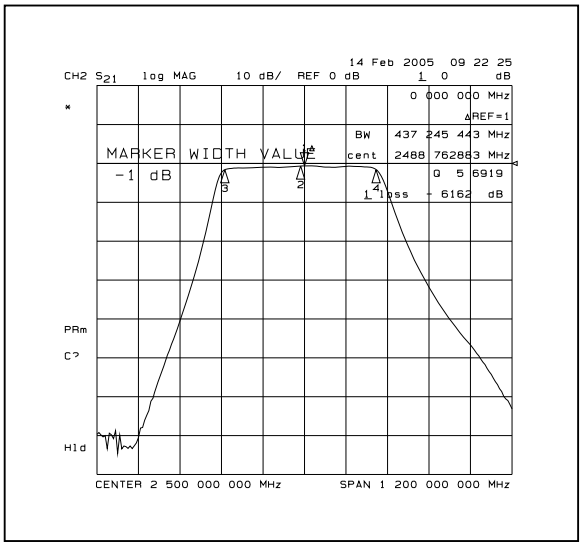
MARKING
Part Number: CF-25004006
Filtronetics

- CAUTIONS:
  1. When handling products, be careful not to damage the outer-electrode.
  2. When handling products, be careful not to touch the outer-electrode with bare hands or solder-ability is reduced.
  3. Do not apply excessive pressure or shock to product in handling or in transportation or damage to the ceramic filters may result.

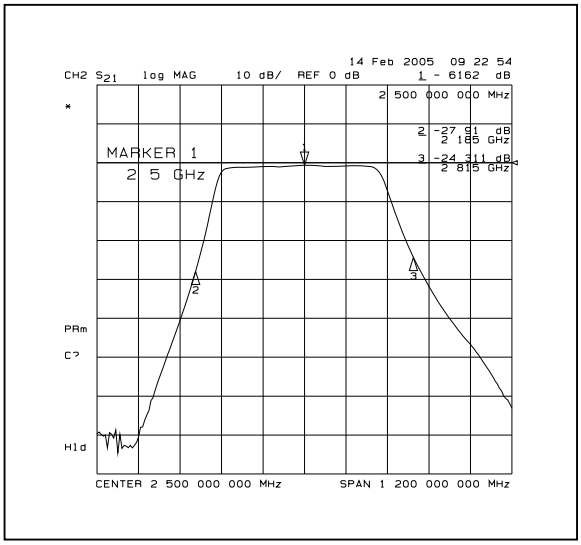
5. GRAPHS:

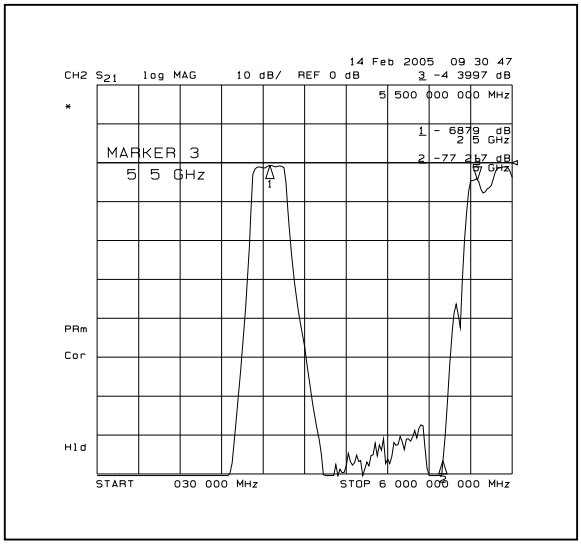
S21 & S11 (INSERTION LOSS, RETURN LOSS, 1dB BAND WIDTH)





S21 (ATTENUATION, OUT BAND ATTENUATION)





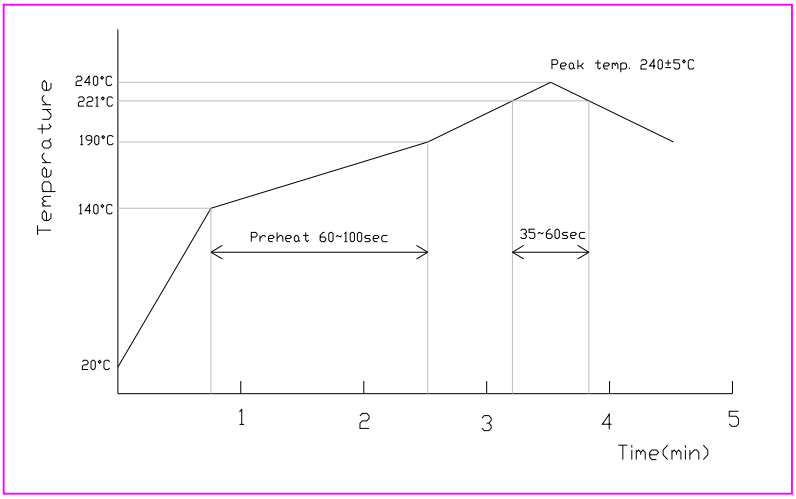
6. DEFINITIONS:

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

7. RELIABILITY TEST AND CONDITIONS:

ITEM	TEST CONDITIONS	REQUIREMENTS
Resistance to solder heat	Preheat temperature : 120 to 150℃ Preheat time: 1 to 1.5 min Solder temperature: 260 +/- 10℃ Dipping time: 10 +/- 0.5 sec	No damage such as cracks should be caused in chip element.
Solderability	Preheat temperature: 120 to 150℃ Preheat time: 1 to 1.5 min Solder temperature: 235 +/- 5℃ 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℃ 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℃ 15 min Step 2 : - 30℃ 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℃ 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: 1.52 ㎜ (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.

8. REFLOW SOLDERING STANDARD CONDITIONS FOR RoHS



- Measuring point of temperature in-out terminals of the device.
- Reflow Soldering
- Both convection and infrared rays
- Hot air
- Hot plates
- Solder Cream: Sn96.5/Ag3.5