

SPECIFICATION**COMMERCIALY AVAILABLE****ITEM: DIELECTRIC CERAMIC FILTER****PART NUMBER: CF-25750303A****ROHS**

| ISSUED | CHECKED | CHECKED | CHECKED |
|--------------------------------|----------------------|--------------|---------------------|
| 5/27/07 ** | | | |
| 8/6/10 kn | 8/10/2010 SRJ | 8/11/2010 BF | |
| 4/28/11 kn | 5/16/2011 SRJ | 5/16/2011 BF | 5/17/2011 GL |
| <i>FILTRONETICS Inc</i> | | | |

1. APPLICATION

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

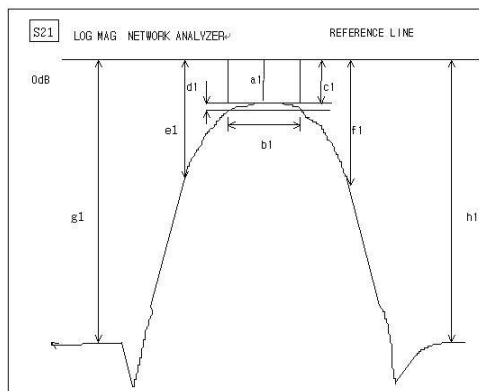
2. PART NUMBER

| | |
|------------------|---------------------|
| PART NO | CF-25750303A |
| PACKAGING | PLASTIC TRAY |

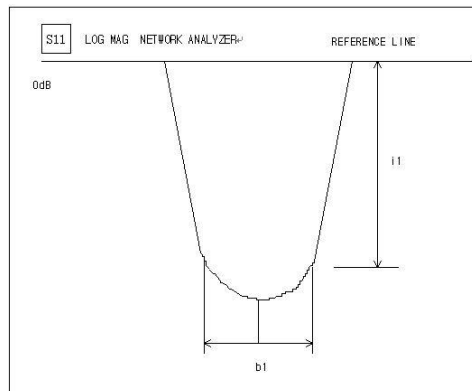
3. SPECIFICATIONS

| NO | ITEMS | Ref. | SPECIFICATION |
|----|---------------------------------|---------------|---------------|
| 1 | Center Frequency (Fo) | a1 | 2575 MHz |
| 2 | 1.0 dB Band Width (PB) | - | 30 MHz Min |
| 3 | Insertion Loss At Fo | - | 3.3 dB Max |
| 4 | Attenuation [absolute Value] | At Fo +80 MHz | 30 dB Min |
| | | At Fo -80 MHz | 30 dB Min |
| 5 | Return Loss At Fo +/-15 MHz | - | 14 dB Min |
| 6 | Impedance | - | 50Ω |
| 7 | Maximum Input Power | - | 1 W (+30 dBm) |
| 8 | Operating Temperature Range | - | -30 - +75°C |

S21 LOG MAG NETWORK ANALYZER

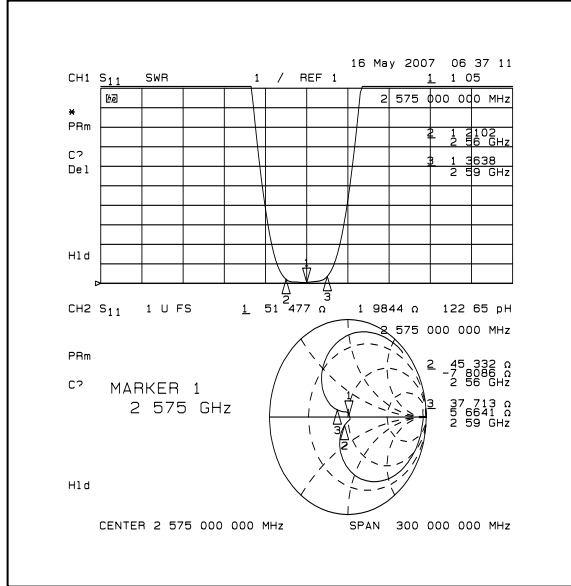
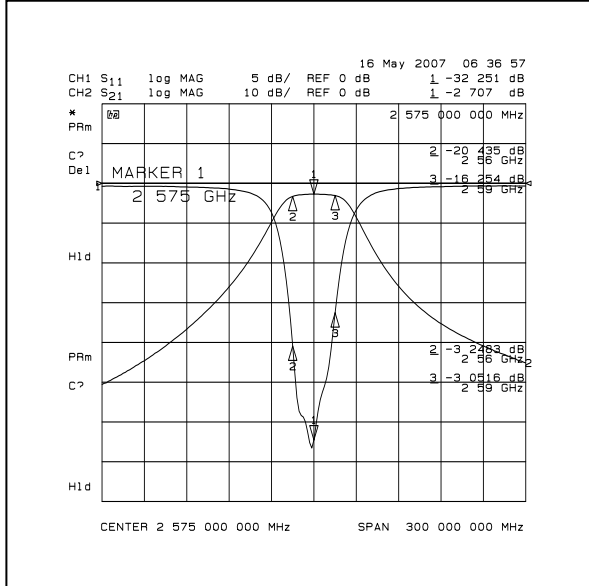


S11 LOG MAG NETWORK ANALYZER

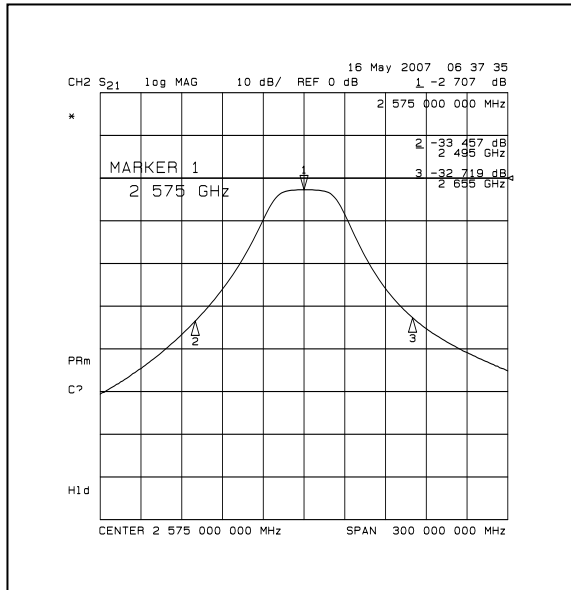
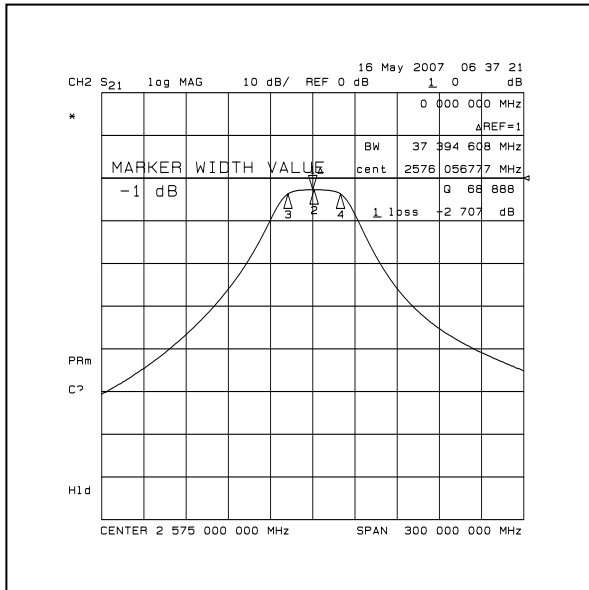


4. GRAPHS:

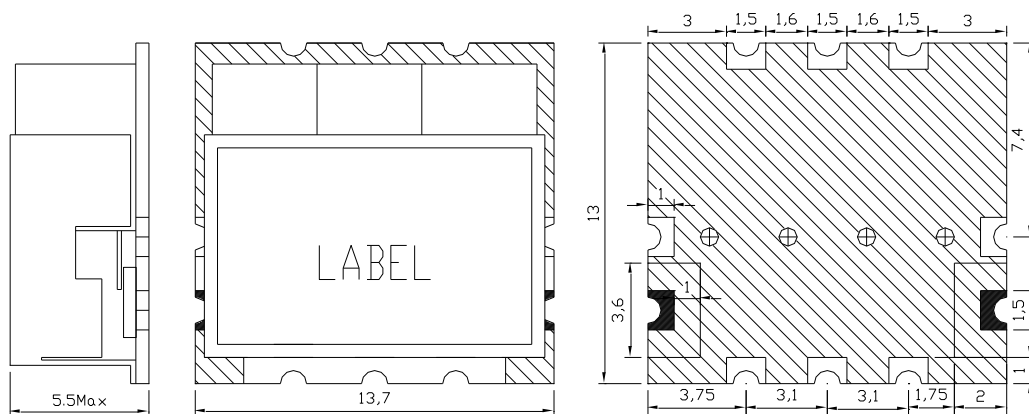
S21 & S11 (INSERTION LOSS, RETURN LOSS, V.S.W.R, SMITH CHART)



S21 (1.0dB BAND WIDTH, ATTENUATION)



5. DIMENSIONS:



□ EXPOSED METAL

▨ RESIST

IN/OUT

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
4. ROHS Compliant

MARKING

CF-25750303A
 Filtronetics, Inc
 Date Code

UNIT: MM
 TOLERANCE: +/-0.5MM
 IN/OUT LAND: +/-0.3MM

● 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.

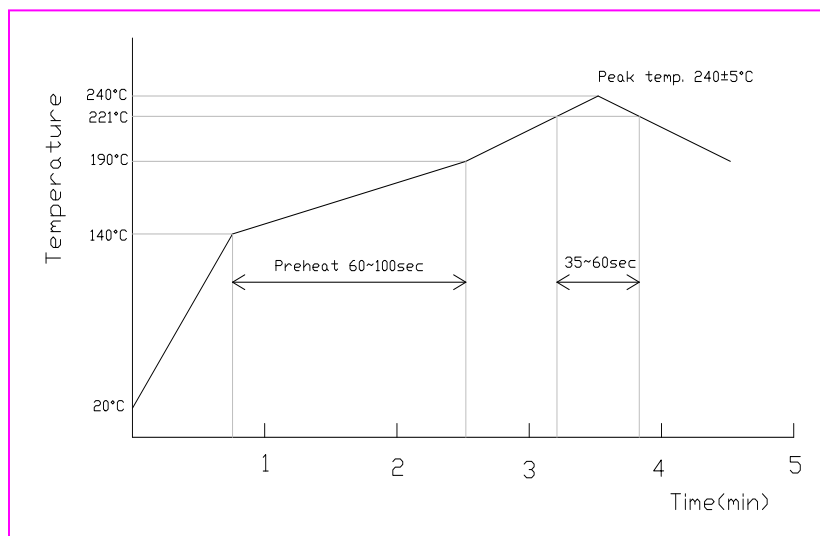
6. DEFINITIONS:

| 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°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: 1.52 mm (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



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