SPECIFICATION

COMMERCIALLY AVAILABLE

ITEM: DIELECTRIC CERAMIC FILTER
PART NUMBER: CF-24120206C

Prepared By:
Revised By:

ISSUED	CHECKED	CHECKED	CHECKED	APPROVED

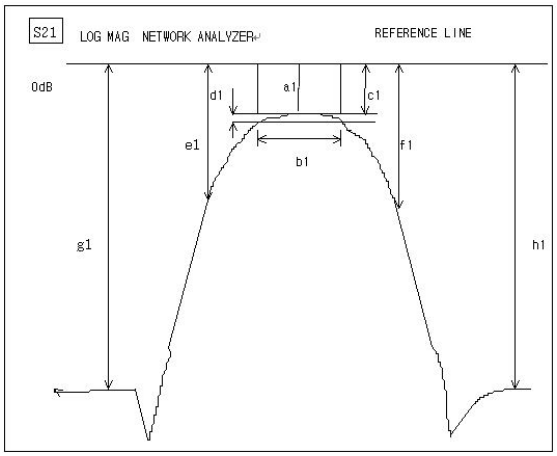
***FILTRO**NETICS Inc*

1. PART NUMBER: CF-24120206C

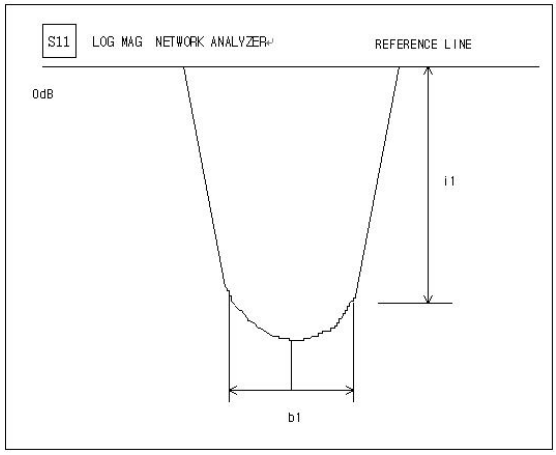
2. SPECIFICATION:

No	ITEMS			SPECIFICATION
1	Center Frequency (Fo)		a1	2412 MHz
2	3 dB Band Width (BW)		b1	Fo ± 10 MHz Min
3	Insertion Loss at Fo		c1	3.0 dB Max
4	Attenuation	At Fo - 22 MHz	e1	7 dB Min
		At Fo + 18 MHz	f1	13 dB Min
		At Fo + 20 MHz	f1	17 dB Min
		At Fo + 25 MHz to + 32 MHz	f1	20 dB Min
		At Fo + 50 MHz	h1	45 dB Min
5	Return Loss in BW		i1	10 dB Min
6	Impedance			50 Ohms
7	Maximum Input Power			4 W
8	Operating Temperature			-45°C to +85°C

S21 LOG MAG NETWORK ANALYZER

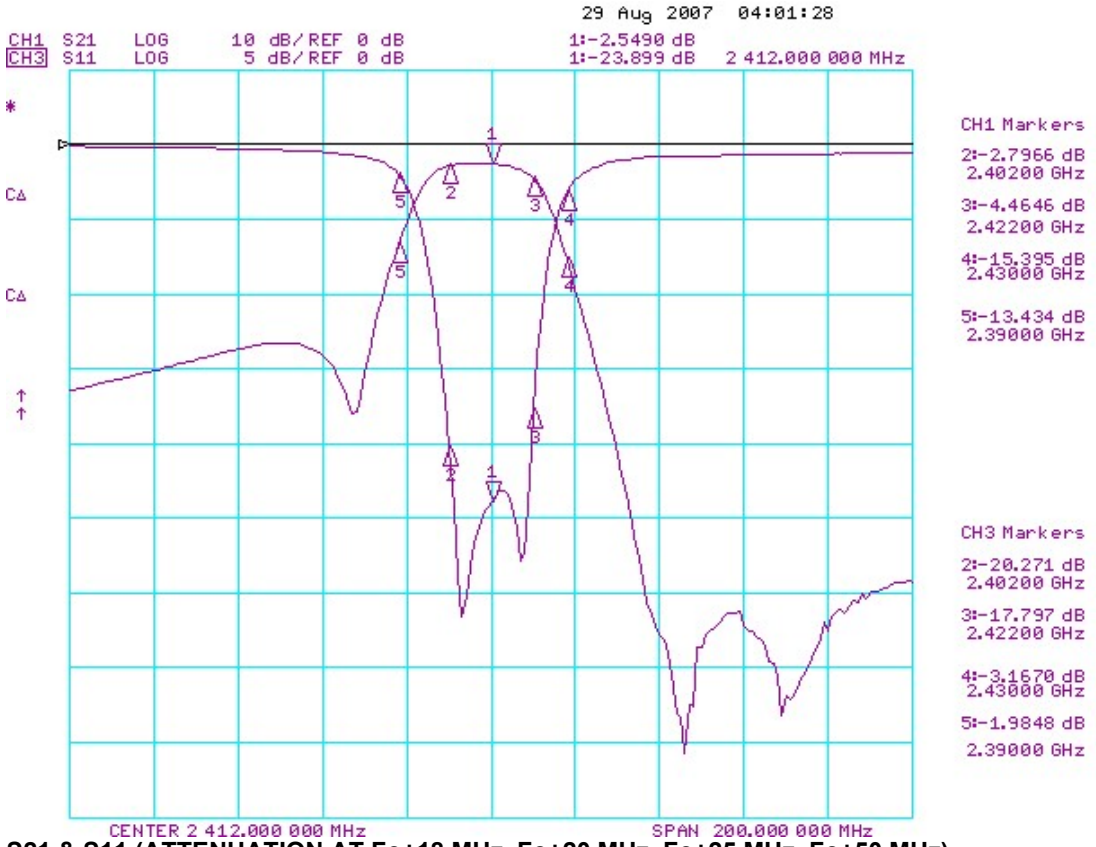


S11 LOG MAG NETWORK ANALYZER

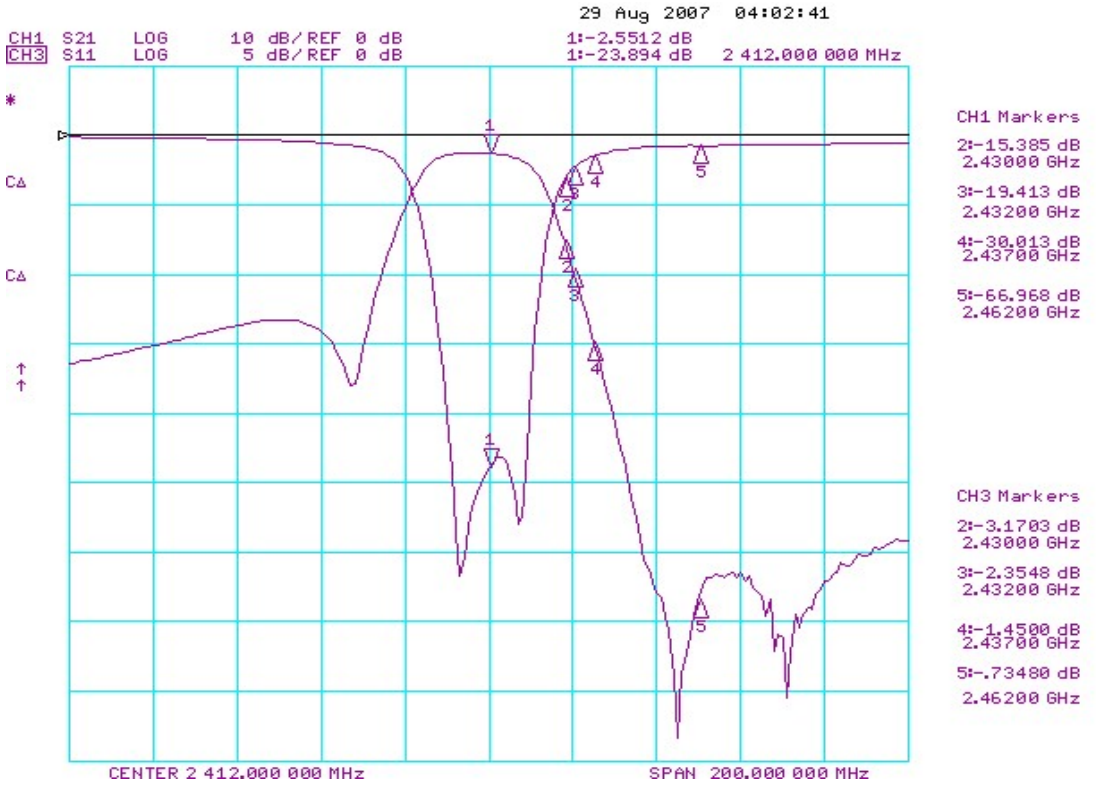


3. Graphs:

S21 & S11 (INSERTION LOSS, RETURN LOSS, ATTENUATION AT Fo-22 MHz, Fo+18 MHz)



S21 & S11 (ATTENUATION AT Fo+18 MHz, Fo+20 MHz, Fo+25 MHz, Fo+50 MHz)

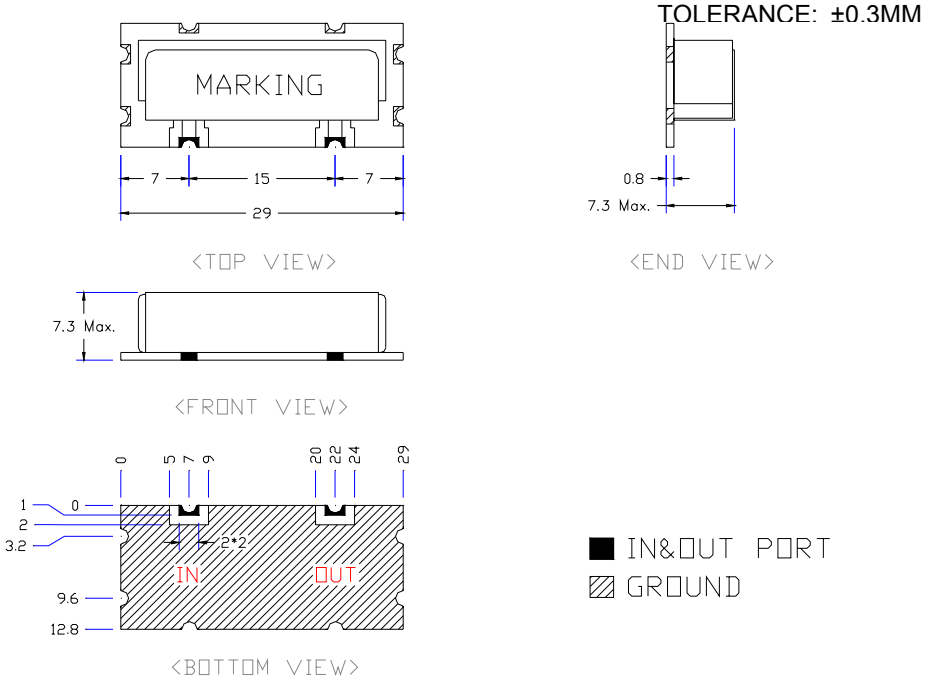


4. DEFINITIONS:

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 Bandwidth	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 -1.0 dB bandwidth. Also called BW.	
Insertion Loss at Fo	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)	
Ripple in BW	Variations in loss in the pass band of the filter, superimposed upon the fundamental shape of the pass band.	
Return Loss in BW	The ratio, at the junction of a transmission line and a terminating impedance or other discontinuity, of the amplitude of the reflected wave to the amplitude of the incident wave.	

5. DIMENSIONS

UNIT: MM
TOLERANCE: ±0.3MM



□ MATERIAL SPECIFICATION
1. PCB
 1) MATERIAL: FR4
 2) TERMINALS: Sn OR Au PLATED
2. METAL CASE
 1) MATERIAL: Sn OR Ni PLATED
3. RESONATOR
 1) COATING MATERIAL: Ag
 2) DIMENSION: 6MM 6POLE

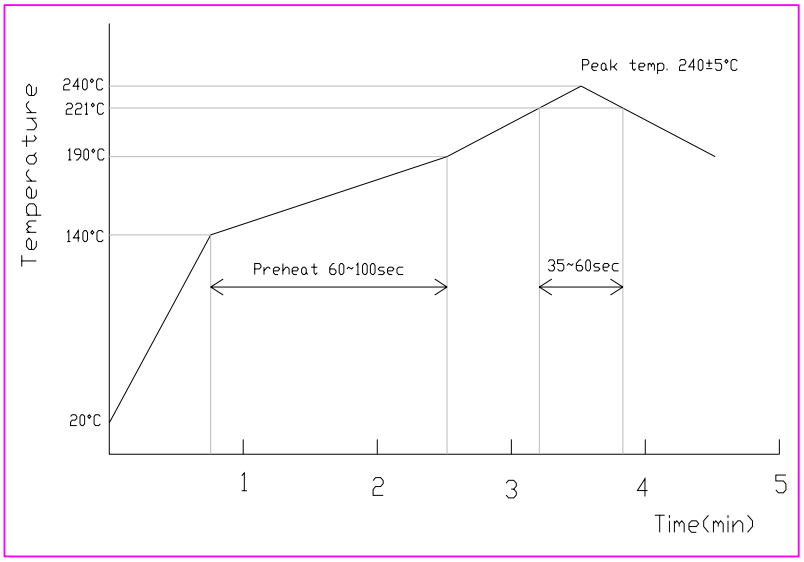
□ MARKING

CF-24120206C
Filtronetics
Date Code

6. RELIABILITY TEST AND CONDITIONS

ITEM	TEST CONDITIONS	REQUIREMENTS
Operating Temp. Range		- 45°C ~ + 85°C
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 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°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 (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
- Hot plates
- Solder Cream: Sn96.5/Ag3.5