

SPECIFICATION

COMMERCIALLY AVAILABLE

ITEM: CERAMIC BAND PASS
PART NUMBER: CF-10900265
RoHS

Revised - 04/10/2020 – To add ground footprint note.

ISSUED	CHECKED	CHECKED	CHECKED	APPROVED
9/14/2004 **				
3/14/2013 ^(KN)	03/28/2013 TFG	03/28/2013 GL	03/28/2013 GL	03/28/2013 TFG
04/10/2020 ^(ASM)				
<i>FILTRONETICS Inc</i>				

1. APPLICATION

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

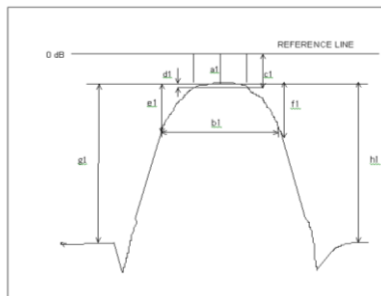
2. PART NUMBER

PART NO	CF-10900265
PACKAGING	PLASTIC TRAY

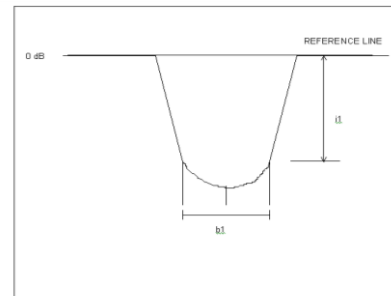
3. SPECIFICATIONS

ITEMS			Ref.	SPECIFICATION
Center Frequency (Fo)			a1	1090 MHz
1.0 dB Band Width			b1	26 MHz Min
3.0 dB Band Width			b1	36 MHz Min
Insertion Loss At Fo			a1	4.5 dB Max
V.S.W.R (With in Fo+/-12MHz)				2 : 1
Attenuation	1015 to 1055MHz		g1	22dBc Min
	1125 to 1165MHz		h1	22dBc Min
	AT 970MHz		g1	50dBc Min
	AT 1210MHz		h1	30dBc Min
Amplitude flatness	Fc+/-12MHz	Linear		-
		Parabolic		1.0dB Max
Group Delay		Linear		-
		Parabolic		6.5ns Max
Impedance				50Ω
Maximum Input Power				1 W (+30dBm)
Operating Temperature Range				-40 - +85℃

S21 LOG MAG NETWORK ANALYZER

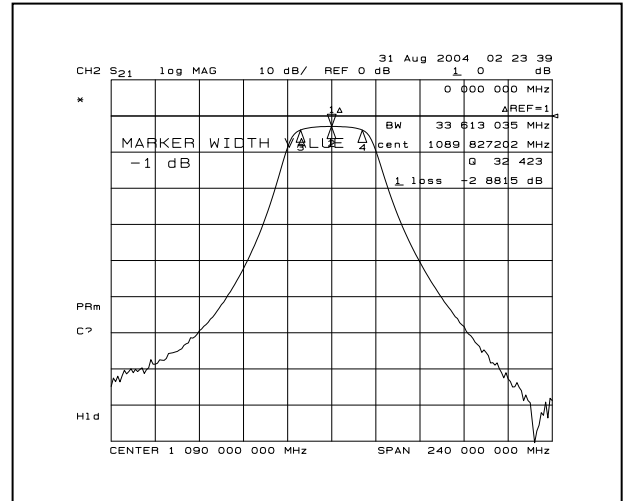
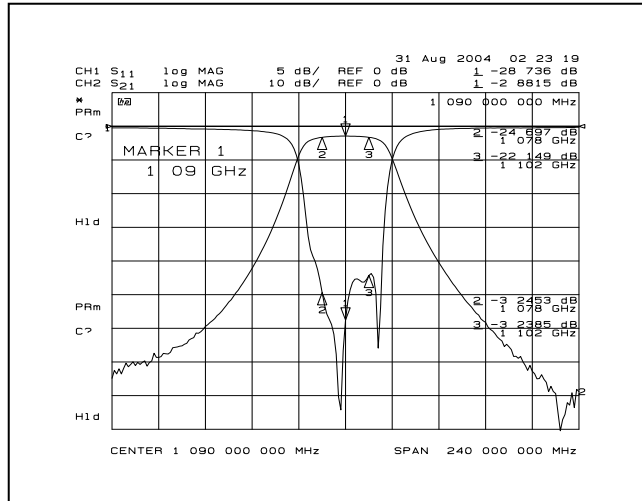


S11 SWR NETWORK ANALYZER

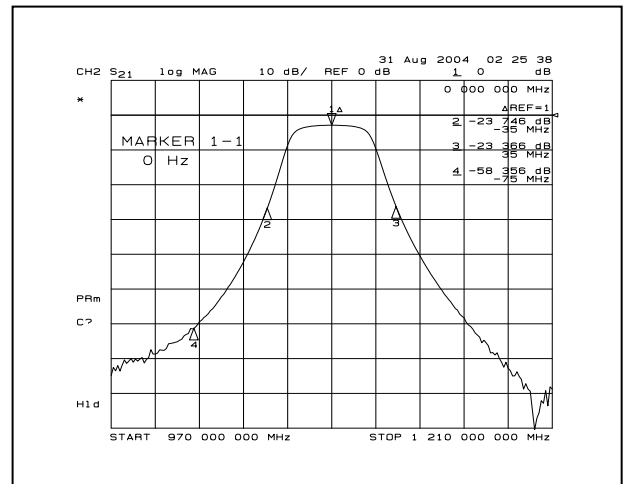
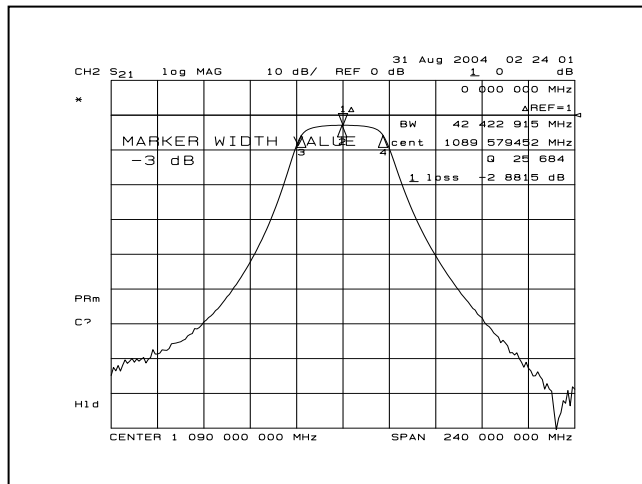


4. GRAPHS:

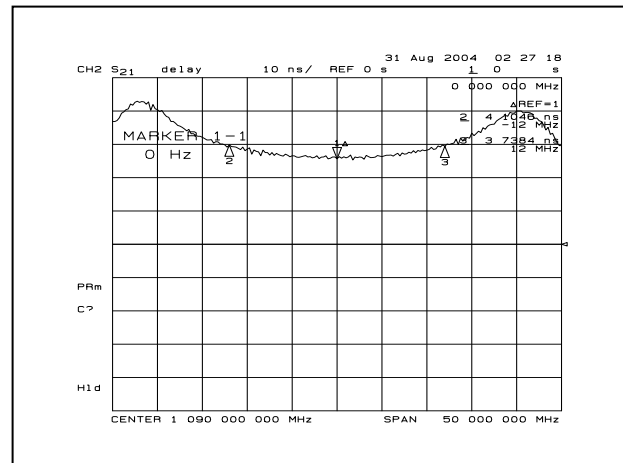
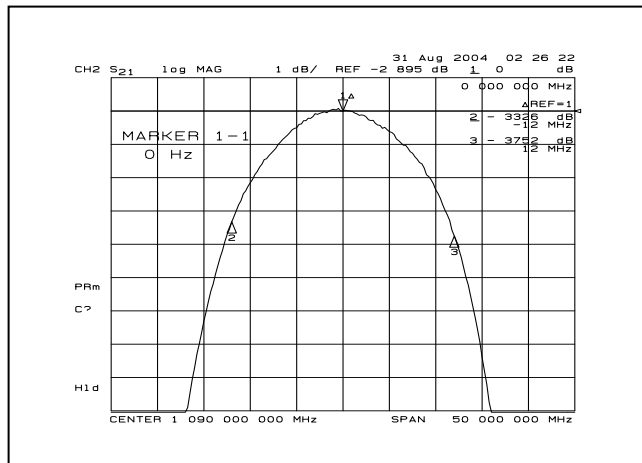
S21 & S11 (INSERTION LOSS, RETURN LOSS, 1dB BAND WIDTH)



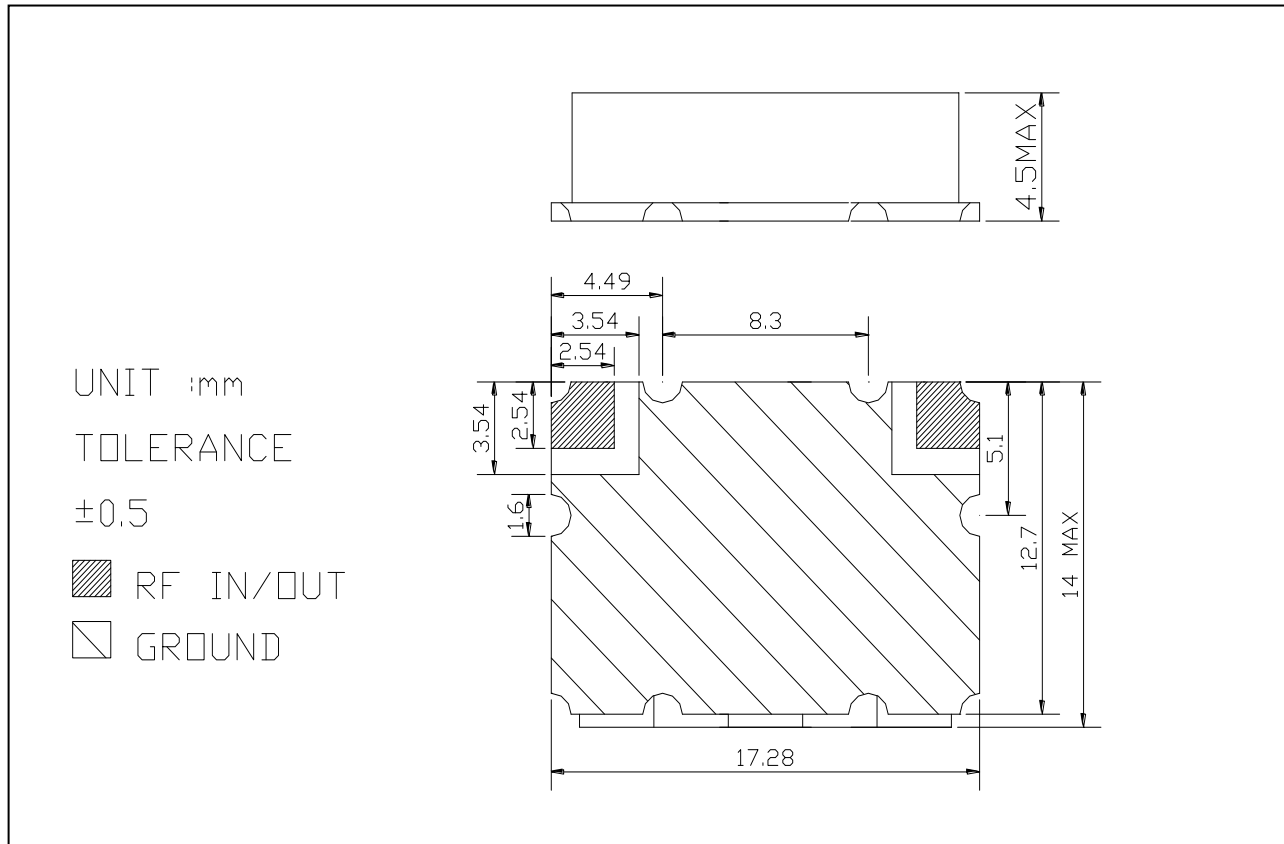
S21 (3dB BAND WIDTH, ATTENUATION)



S21 (RIPPLE, GROUP DELAY)



5. DIMENSIONS



NOTE: Ground footprint may be pulled back from the edge within tolerance to meet production needs and better comply with IPC-A-600.

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
 - 2) DIMENSION: 8MM x 8MM
4. LEAD FREE CONSTRUCTION

MARKING

CF-10900265
Filtronetics

IN/OUT LAND
TOLERANCE: +/-0.3MM

UNIT: MM
TOLERANCE: +/-0.5MM

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.

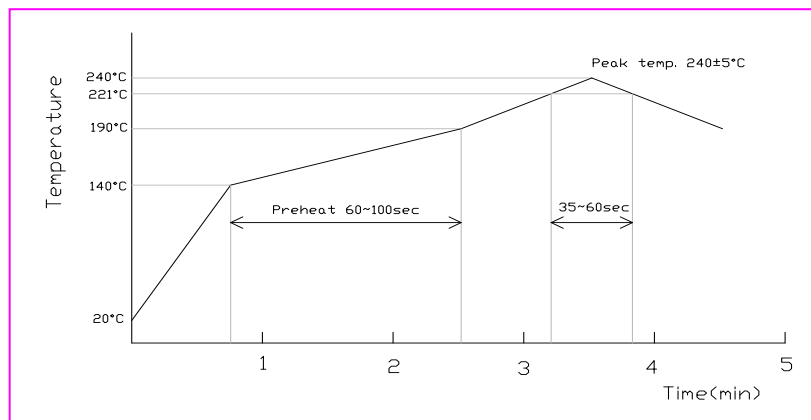
6. DEFINITIONS

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 f_0 .	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
Operating Temp. Range	- 45°C ~ + 85°C	- 40°C ~ + 70°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°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 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