

SPECIFICATION

COMMERCIALY AVAILABLE

CERAMIC MONOBLOCK
 PART NUMBER: CFM-18021257
 RoHS

| ISSUED / REVISION | ENGINEER APPROVED | DOCUMENT CHECKED | DRAFTSMAN | DOCUMENT CHECKED |
|-----------------------------|-------------------|------------------|-----------|------------------|
| 11/15/2019 ^(ASM) | | | | |
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FILTRONETICS Inc

1. APPLICATION

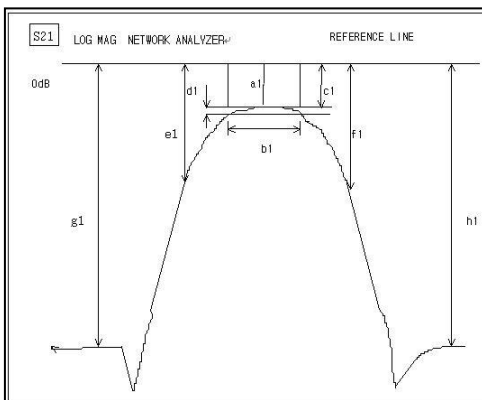
THIS SPECIFICATION APPLIES TO A BAND PASS FILTER, USING DIELECTRIC RESONATORS.

2. PART NUMBER: CFM-18021257

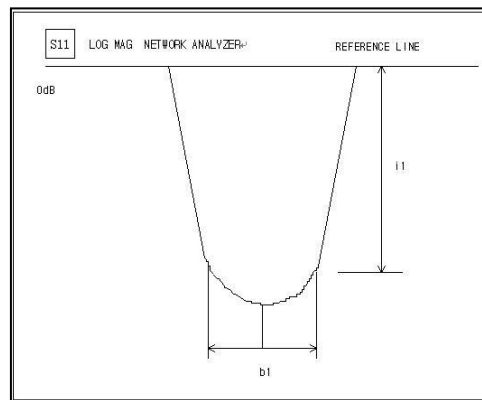
3. SPECIFICATIONS:

| Parameter | Unit | Specification |
|-----------------------------|--------------------|---------------------------------|
| Center Frequency | MHz | 1802.5 |
| Bandwidth | MHz | $F_c \pm 62.5$ (1740 ~ 1865MHz) |
| Insertion Loss in BW | dB | 1.5 Max. |
| Ripple in BW | dB | 1.0 Max. |
| Return Loss in BW | dB | 15 Min. |
| Attenuation | dB | 50 min. @ 2200 ~ 2400MHz |
| Group Delay Variation in BW | nSec. | 7.0 Max. |
| Input Power | Watt | 2 Max. |
| IN/OUT Impedance | Ω | 50 |
| Operating Temp. Range | $^{\circ}\text{C}$ | -30 ~ +75 |

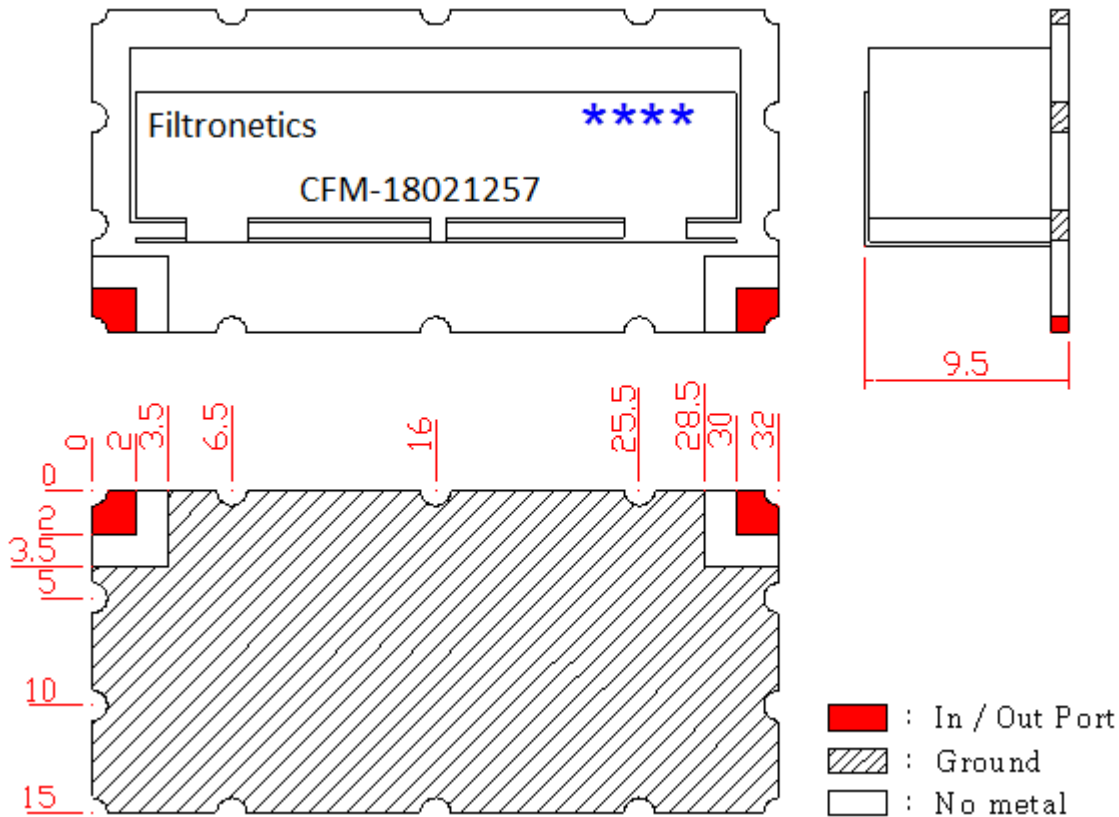
S21 LOG MAG NETWORK ANALYZER



S11 Log Mag Network Analyzer



4. DIMENSIONS:



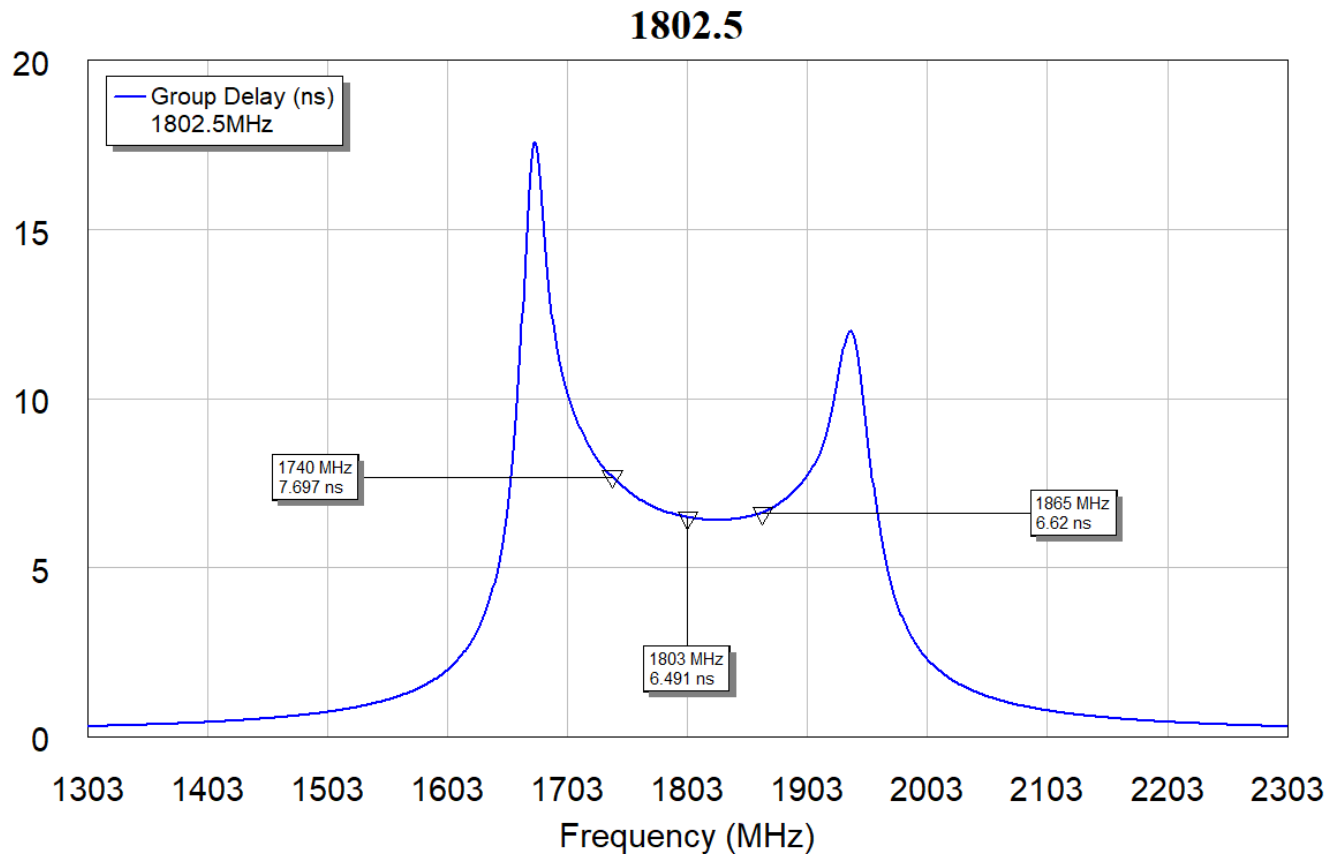
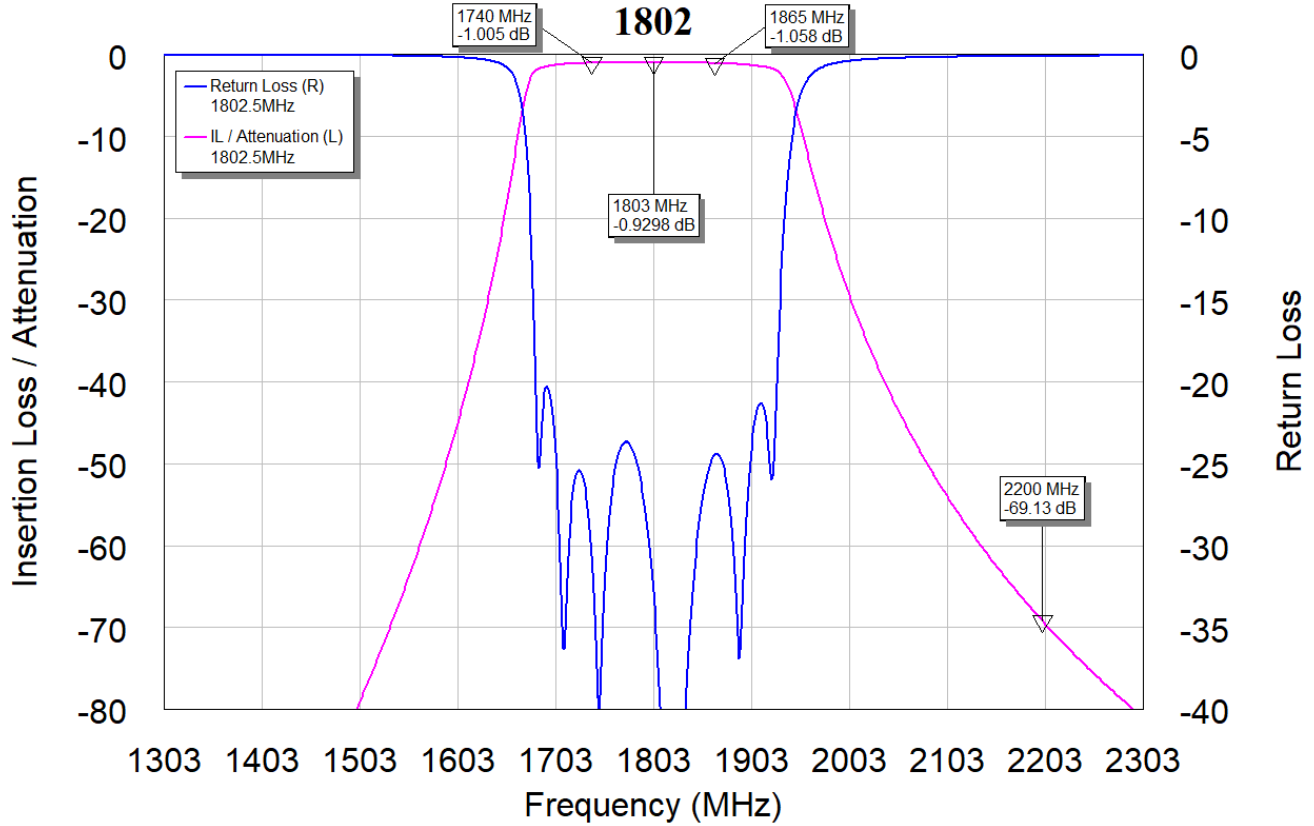
NOTES:

1. Surface mount package
2. Dimensions in millimeters
3. Max reflow temperature 230°C for 10 sec
4. If boards are cleaned after installation units must be completely dried
5. Tolerance unless specified: ± 0.3
6. **** ? Date code (YYWW)

● 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. SIMULATION:



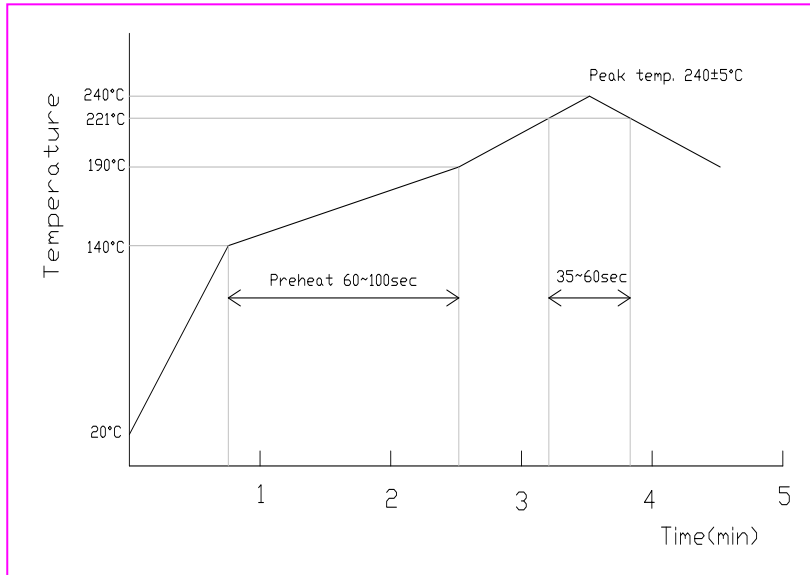
6. DEFINITIONS:

| 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. |
| 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. |

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