

Low Pass Filter

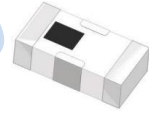
Features

- excellent power handling
- small size
- 7 sections
- temperature stable
- LTCC construction

Applications

- harmonic rejection
- VHF/UHF transmitters/receivers

HT-LFCN-225+



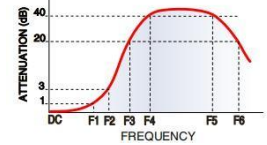
50Ω DC to 225 MHz

Maximum Ratings

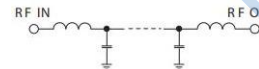
| | |
|-----------------------|------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 10W max. at 25°C |

* Passband rating, derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

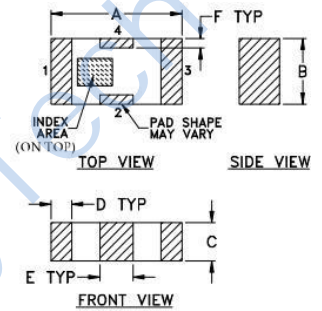
Typical Frequency Response



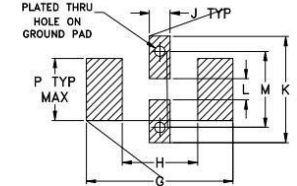
Electrical Schematic



Outline Drawing



PCB Land Pattern



Suggested Layout
Tolerance to be within ±0.02

Outline Dimensions: Unit (mm)

| | | | | | |
|---|------|---|------|----|-------|
| A | 3.20 | B | 1.60 | C | 0.94 |
| D | 0.51 | E | 0.81 | F | 0.23 |
| G | 4.29 | H | 2.21 | J | 0.61 |
| K | 3.10 | L | 0.61 | M | 2.21 |
| N | 0.30 | P | 1.80 | wt | 0.02g |

Electrical Specifications at 25°C

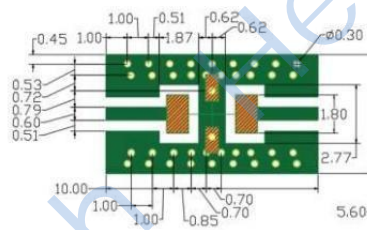
| Parameter | | F# | Frequency(MHz) | Min. | Typ. | Max. | Unit |
|-----------|----------------|-------|----------------|------|------|------|------|
| Pass Band | Insertion Loss | DC-F1 | DC-225 | - | - | 1.2 | dB |
| | Freq.Cut-Off | F2 | 350 | - | 3.0 | - | dB |
| | VSWR | DC-F1 | DC-225 | - | 1.2 | - | :1 |
| Stop Band | Rejection Loss | F3 | 460 | 20 | - | - | dB |
| | | F4-F5 | 510-2500 | - | 40 | - | dB |
| | VSWR | F6 | 5500 | - | 20 | - | dB |
| | | F3-F6 | 460-5500 | - | 17 | - | :1 |

Typical Performance Data

(TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1 | 0.12 | 1.03 |
| 100 | 0.32 | 1.02 |
| 225 | 0.74 | 1.16 |
| 240 | 0.83 | 1.19 |
| 425 | 21.57 | 10.78 |
| 450 | 32.98 | 11.98 |
| 460 | 62.62 | 12.16 |
| 495 | 32.08 | 12.52 |
| 510 | 31.97 | 12.56 |
| 610 | 48.51 | 13.12 |
| 900 | 39.76 | 25.24 |
| 1400 | 39.84 | 52.14 |
| 2500 | 40.77 | 66.83 |
| 3220 | 52.29 | 77.73 |
| 5500 | 27.81 | 56.03 |

Suggested PCB Layout



- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350 WITH THICKNESS 508" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

