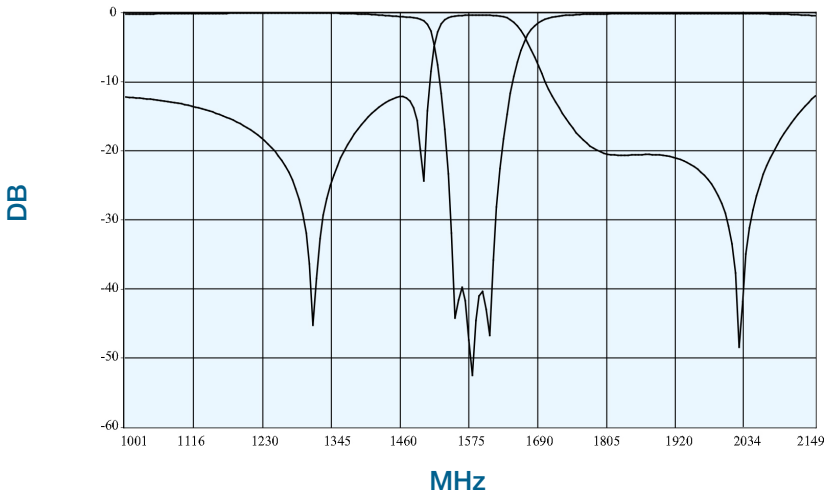
# Band Reject (Notch)
# SDN Series
# 800-2500 MHz


| Specification | Standard | *Special |
|---|---|---|
| **Electrical** | | |
| Notch Center Frequency (Fc) | 800 to 2500 MHz | 400 to 3500 MHz |
| Notch width (% of Fc) | 1 to 5 | 0.5 to 10 |
| Notch depth | 10 to 60 dB | 10 to 60 dB |
| Number of Sections available | 3 to 6 | 2 to 8 |
| Resonator Size (mm) | 3 to 8 | 2 to 12 |
| Resonator Size (inches) | 0.12 to 0.32 | 0.08 to 0.5 |
| Nominal Impedance | 50Ω | 50 to 75Ω |
| Maximum Insertion Loss | 1.25 to 3.0 dB | 0.85 to 3.0 dB |
| Maximum VSWR | 2/1 | 1.5/1 |
| Maximum Input Power (Average) (Watts to 10,000ft.) | 1 | 2 |
| Maximum Input Power (Peak) (Watts to 10,000ft.) | 2 | 10 |
| **Environmental** | | |
| Shock | 15 G's | 75 G's |
| Vibration | 5 G's | 30 G's |
| Humidity | 90% relative | 100% relative |
| Altitude | Unlimited | Unlimited |
| Temperature Range (Operating) | - 30°C to + 85°C** | - 54°C to + 100°C |
| Temperature (Non-Operating) | - 40°C to + 100°C | - 62°C to + 150°C |
| **Mechanical** | | |
| Approximate Weight (grams) | L x W x H x 50 | L x W x H x 50 |
| Mounting Provisions | See Next Page | See Next Page |

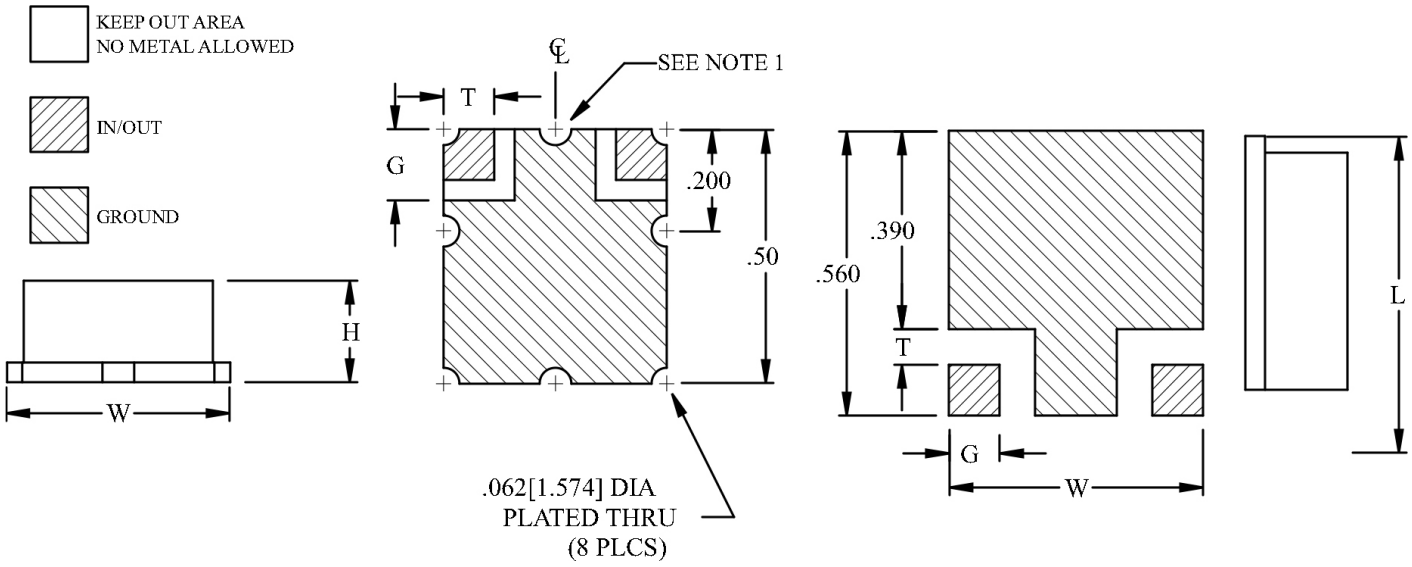
*Contact Lark Engineering

**For 1 to 1/.5% BW, 0°C to + 50°C




Typical response for a
1575MHz Band Reject filter

# MECHANICAL SPECIFICATIONS – SDN Series




Note 1 - Additional plated thru holes will be provided on this edge, as space allows.

Note 2 - All dimensions are in inches unless otherwise specified.

The approximate width (W) of a Lark SDN series filter can be determined by the formula:

W = N x RS + 0.09

Where N is the number of sections and RS is the resonator size in inches (see below). The minimum possible width (W) is 0.250, the maximum height (H) of a Lark SDN series is determined by the chart below.

For widths (W) greater than 0.400, Insulating gap (G) is 0.140 and pad size (T) is 0.100.

For widths (W) less than 0.400 and/or Fc greater than 3000 Mhz, Insulating gap (G) is 0.100 and Pad size (T) is 0.070.

The approximate length of a Lark SDN filteris a function of the PCB carrier and the resonator size (see below). Standard lengths of Printed Circuit Boards are 0.250, 0.500, and 0.750. Resonators can extend beyond the length of the PCB as much as 0.150 until the next PCB size will be used. The length (L) is equal to:

Where:

L = FAC/Fc + C

FAC = See Below

Fc = Center Frequency (MHz)

| RS (mm) | RS (inches) | H MAX (inches) |
|---|---|---|
| 1 | 0.04 | 0.12 |
| 2 | 0.08 | 0.16 |
| 3 | 0.12 | 0.20 |
| 4 | 0.16 | 0.24 |
| 5 | 0.20 | 0.28 |
| 6 | 0.24 | 0.32 |
| 8 | 0.32 | 0.40 |

| Frequency Range | FAC | C |
|---|---|---|
| 800-1200 | 330 | 0.30 |
| 1201-2000 | 490 | 0.30 |
| 2001-5000 | 660 | 0.30 |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