

# Coaxial Low Pass Filter

SLP-25+

50Ω

DC to 25 MHz



Generic photo used for illustration purposes only  
CASE STYLE: FF99

## The Big Deal

- Low insertion loss, 0.5 dB typ.
- High rejection, 45 dB typ.
- Sharp cut-off
- Good VSWR, 1.3:1 typ. in passband
- Connectorized package

## Product Overview

SLP-25+ is a 50Ω Low pass filter in a connectorized package covering DC to 25 MHz. This filter uses miniature high Q capacitors and wire welded inductors for high reliability. This filter offers high rejection and low insertion loss. It has consistent performance across temperature and repeatable performance across production lots.

## Key Features

| Feature                              | Advantages   |
|--------------------------------------|--|
| Low insertion loss, 0.5 dB typ.      | It enables the filter to be used in high performance applications.                           |
| High rejection, 45 dB typ.           | Attenuates unwanted spurious signals and harmonics.  |
| Sharp cut-off                        | This enables the filter rejects the near band interaction and provides the high selectivity. |
| Good VSWR, 1.3:1 typical in passband | This provides good matching when used with other devices.                                    |
| Connectorized package                | Easy to interface with other devices and well suited for test setups.                        |

### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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# Low Pass Filter

50Ω DC to 25 MHz

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## Features

- Low insertion loss, 0.5 dB typ.
- High rejection, 45 dB typ.
- Good VSWR, 1.3:1 typical in passband
- Sharp cut-off
- Rugged shielded case
- Connectorized package

## Applications

- Defense communications
- Transmitters / Receivers
- Harmonic rejection

CASE STYLE: FF99

|            |         |
|------------|---------|
| Connectors | Model   |
| SMA        | SLP-25+ |

## Electrical Specifications at 25°C

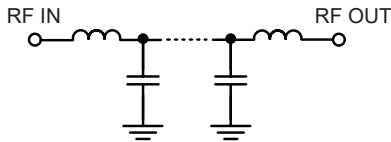
| Parameter | F#             | Frequency (MHz) | Min.      | Typ. | Max. | Unit |
|-----------|----------------|-----------------|-----------|------|------|------|
| Pass Band | Insertion Loss | DC-F1           | DC - 25   | —    | 0.5  | dB   |
|           | Freq. Cut-Off  | F2              | 28        | —    | 3.0  | dB   |
|           | VSWR           | DC-F1           | DC - 25   | —    | 1.3  | :1   |
| Stop Band | Rejection Loss | F3-F4           | 36 - 47   | 20   | 25   | dB   |
|           |                | F4-F5           | 47 - 1000 | 40   | 45   | dB   |

## Maximum Ratings

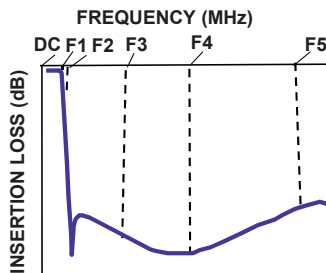
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.5 W max.     |

Permanent damage may occur if any of these limits are exceeded.

## Functional Schematic



## Typical Frequency Response

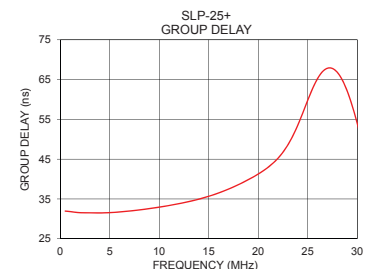
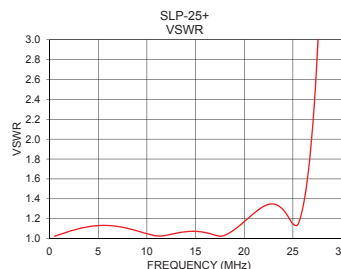
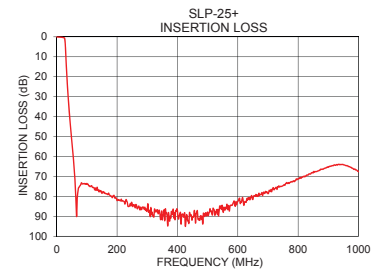
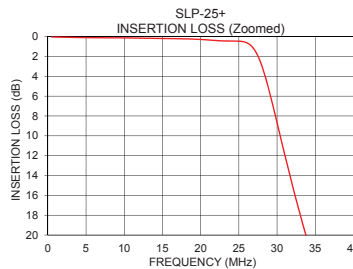


### +RoHS Compliant

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## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (ns) |
|-----------------|---------------------|-----------|-----------------|------------------|
| 0.5             | 0.04                | 1.02      | 0.5             | 31.95            |
| 10.0            | 0.14                | 1.05      | 1.0             | 31.83            |
| 20.0            | 0.29                | 1.17      | 2.0             | 31.56            |
| 22.0            | 0.40                | 1.32      | 3.0             | 31.53            |
| 24.0            | 0.45                | 1.29      | 4.0             | 31.49            |
| 25.0            | 0.46                | 1.15      | 5.0             | 31.57            |
| 26.0            | 0.61                | 1.30      | 6.0             | 31.74            |
| 28.0            | 2.93                | 3.98      | 7.0             | 31.97            |
| 34.0            | 20.62               | 58.66     | 8.0             | 32.25            |
| 36.0            | 25.67               | 74.25     | 9.0             | 32.58            |
| 38.0            | 30.24               | 84.45     | 10.0            | 32.94            |
| 40.0            | 34.44               | 93.05     | 12.0            | 33.82            |
| 47.0            | 47.29               | 113.06    | 13.0            | 34.35            |
| 100.0           | 73.54               | 147.30    | 14.0            | 34.96            |
| 300.0           | 86.95               | 174.56    | 15.0            | 35.67            |
| 400.0           | 87.14               | 162.64    | 16.0            | 36.51            |
| 500.0           | 87.91               | 142.65    | 20.0            | 41.27            |
| 600.0           | 82.54               | 138.37    | 21.0            | 42.97            |
| 800.0           | 71.23               | 107.38    | 25.0            | 59.79            |
| 1000.0          | 67.50               | 80.03     | 28.0            | 66.79            |



## Notes

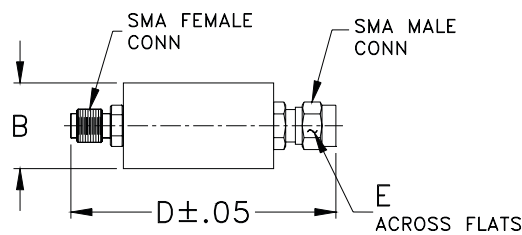
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Coaxial Connections

|          |            |
|----------|------------|
| PORT - 1 | SMA-Male   |
| PORT - 2 | SMA-Female |

Outline Drawing



Outline Dimensions ( <sup>inch</sup>/<sub>mm</sub> )

| B     | D     | E    | Wt.   |
|-------|-------|------|-------|
| .70   | 1.98  | .312 | grams |
| 17.78 | 50.29 | 7.92 | 42.0  |

Note: Please refer to case style drawing for details

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