

# Coaxial Low Pass Filter

## ZX75LP-83+

50Ω DC to 83 MHz

### The Big Deal

- High rejection
- Low Insertion loss, 1.4 dB typical in passband
- Fast roll-off
- Good VSWR
- Connectorized package



CASE STYLE: KE1467

### Product Overview

ZX75LP-83+ is a 50Ω low pass filter built in a connectorized package. Covering DC-83 MHz bandwidth, these units offer good matching within the passband and high rejection in stopband. This will find its applications in receivers and transmitters to suppress spurious emission and harmonics. It has repeatable performance across production lots and consistent performance across temperature.

### Key Features

| Feature                     | Advantages  |
|-----------------------------|---|
| Low passband insertion loss | Suitable for high performance application   |
| Fast roll-off               | Provides very good adjacent band rejection  |
| Connectorized package       | The connectorized package is easy to interface with other devices and well suited for test setups |
| Good VSWR                   | Provides good interface when used with other devices.   |



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 [The Design Engineers Search Engine](http://www.minicircuits.com) Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

# Low Pass Filter

## ZX75LP-83+

50Ω DC to 83 MHz



CASE STYLE: KE1467

| Connectors | Model        | Price       | Qty.  |
|------------|--------------|-------------|-------|
| SMA-MF     | ZX75LP-83-S+ | \$49.95 ea. | (1-9) |

### Features

- High rejection
- Low Insertion loss
- Fast roll-off
- Good VSWR
- Connectorized package

### Applications

- Satellite
- Wireless communications
- Receivers / Transmitters

### Electrical Specifications at 25°C

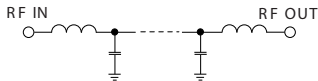
| Parameter | F#             | Frequency (MHz) | Min.    | Typ. | Max. | Unit |    |
|-----------|----------------|-----------------|---------|------|------|------|----|
| Pass Band | Insertion Loss | DC-F1           | DC-83   | —    | 1.4  | 2.0  | dB |
|           | Freq. Cut-Off  | F2              | 93      | —    | 3.0  | —    | dB |
|           | VSWR           | DC-F1           | DC-83   | —    | 1.2  | 1.5  | :1 |
| Stop Band | Rejection Loss | F3-F4           | 119-850 | 20   | 30   | —    | dB |
|           | VSWR           | F3-F4           | 119-850 | —    | 22   | —    | :1 |

### Maximum Ratings

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

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

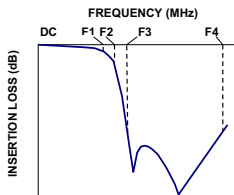
### Functional Schematic



### Typical Performance Data at 25°C

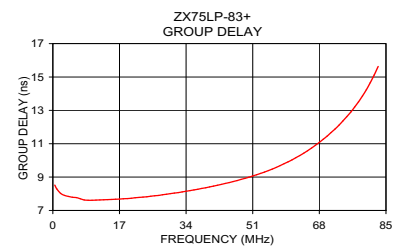
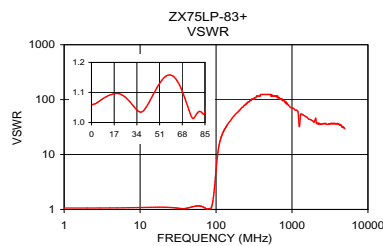
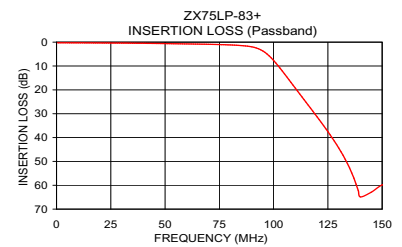
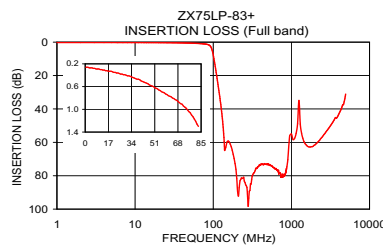
| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (nsec) |
|-----------------|---------------------|-----------|-----------------|--------------------|
| 1               | 0.26                | 1.06      | 1               | 8.29               |
| 35              | 0.44                | 1.04      | 6               | 7.77               |
| 70              | 0.90                | 1.08      | 12              | 7.63               |
| 83              | 1.30                | 1.03      | 18              | 7.70               |
| 93              | 2.76                | 1.79      | 24              | 7.82               |
| 98              | 5.78                | 3.80      | 30              | 8.01               |
| 104             | 12.10               | 8.99      | 36              | 8.23               |
| 113             | 22.88               | 17.75     | 42              | 8.51               |
| 119             | 30.06               | 22.29     | 46              | 8.73               |
| 140             | 64.89               | 34.07     | 53              | 9.22               |
| 160             | 59.76               | 44.55     | 59              | 9.80               |
| 210             | 92.20               | 66.82     | 62              | 10.16              |
| 245             | 80.88               | 82.73     | 65              | 10.58              |
| 280             | 98.35               | 96.51     | 68              | 11.08              |
| 320             | 79.47               | 108.58    | 71              | 11.67              |
| 440             | 73.41               | 124.09    | 74              | 12.36              |
| 650             | 76.54               | 115.81    | 75              | 12.62              |
| 750             | 79.91               | 96.51     | 77              | 13.20              |
| 815             | 80.00               | 91.43     | 80              | 14.24              |
| 850             | 76.88               | 86.86     | 83              | 15.63              |

### Typical Frequency Response



+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.



For detailed performance specs & shipping online see web site

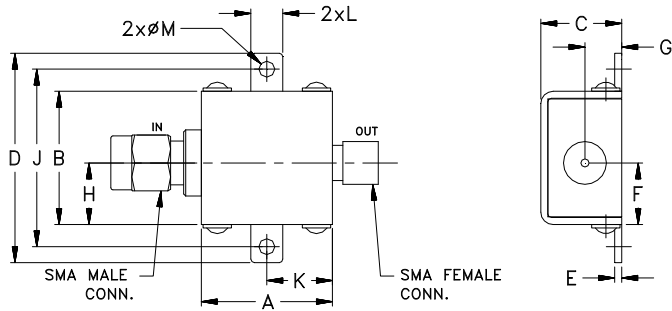
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## Coaxial Connections

|        |            |
|--------|------------|
| INPUT  | SMA-Male   |
| OUTPUT | SMA-Female |

## Outline Drawing



## Outline Dimensions ( $\frac{\text{inch}}{\text{mm}}$ )

|       |       |       |       |      |       |      |
|-------|-------|-------|-------|------|-------|------|
| A     | B     | C     | D     | E    | F     | G    |
| 0.74  | .75   | .46   | 1.18  | .04  | .349  | .21  |
| 18.80 | 19.05 | 11.68 | 29.97 | 1.02 | 8.86  | 5.33 |
| H     | J     | K     | L     | M    | wt    |      |
| .349  | 1.00  | .37   | .18   | .09  | grams |      |
| 8.86  | 25.40 | 9.40  | 4.57  | 2.29 | 24.4  |      |