*Coaxial*

# Low Pass Filter

## NLP-500+

50Ω DC to 500 MHz

CASE STYLE: FF967

## The Big Deal

- Low insertion loss (0.5 dB typical)
- Wide stop band (up to 10 GHz)
- Rugged connectorized package

## Product Overview

The NLP-500+ is a connectorized low pass filter, built in N-unibody. The NLP-500+ offers a very low passband insertion loss 0.5 dB typical and a wide stop band rejection.

## Key Features

| Feature | Advantages |
|---|---|
| Designed for any environment | The NLP-500+ is equipped with a rugged shielded case and with a wide operating temperature range (-55°C to 100°C). Suitable for many environments and applications the NLP-500+ offers excellent performance and value. |
| Wide rejection, stop band is extending beyond typical theoretical limits. | This enables the filter to attenuate spurious signals and reject harmonics for broad band of frequency. |
| Minimal passband insertion loss | Provides low signal loss. |
| More than 40dB rejection up to 4500 MHz and 40 dB typical up to 10GHz | This enables the filter to attenuate spurious signals and reject harmonics over a broad frequency band. |

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| Input | Output | Connectors | Model | Price | Qty |
|---|---|---|---|---|---|
| **Male** | **Female** | **N-type** | NLP-500+ | $32.95ea. | (10) |

### Features

- Excellent stop band rejection, 40dB typical up to 10GHz
- Rugged connectorized package

### Applications

- Harmonic rejection
- Test equipment
- Lab use

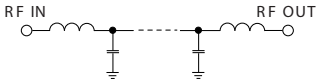
### Electrical Specifications at 25°C

| Parameter | | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| **Pass Band** | Insertion Loss | DC - F1 | DC - 500 | — | 0.5 | 1.0 | dB |
| | Freq. Cut-Off | F2 | 630 | — | 3.0 | — | dB |
| | VSWR | DC - F1 | DC - 500 | — | 1.2 | 1.75 | :1 |
| **Stop Band** | Rejection Loss | F3 - F4 | 1000 - 1400 | 20 | — | — | dB |
| | | F4 - F5 | 1400 - 4500 | 40 | 51 | — | dB |
| | | F5 - F6 | 4500 - 10000 | — | 40 | — | dB |
| | VSWR | F3 - F6 | 4500 - 10000 | — | 15 | — | :1 |

| Maximum Ratings | |
|---|---|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 2W max. |

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

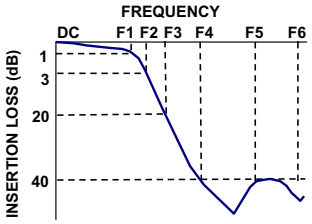
### Functional Schematic




### Typical Performance Data at 25°C

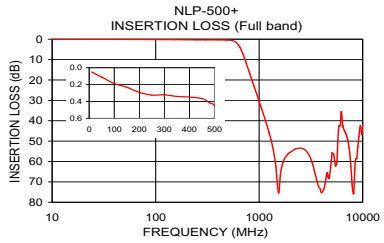
| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (nsec) |
|---|---|---|---|---|
| 10 | 0.06 | 37.85 | 10.0 | 1.25 |
| 50 | 0.12 | 27.47 | 50.0 | 1.21 |
| 150 | 0.23 | 18.65 | 100.0 | 1.21 |
| 500 | 0.46 | 20.07 | 120.0 | 1.21 |
| 550 | 0.74 | 13.19 | 150.0 | 1.21 |
| 600 | 1.66 | 6.95 | 180.0 | 1.23 |
| 630 | 3.11 | 4.60 | 190.0 | 1.23 |
| 700 | 7.84 | 1.28 | 200.0 | 1.23 |
| 800 | 16.35 | 0.40 | 220.0 | 1.25 |
| 1000 | 30.89 | 0.23 | 250.0 | 1.27 |
| 1200 | 43.25 | 0.21 | 270.0 | 1.29 |
| 1400 | 57.33 | 0.20 | 300.0 | 1.32 |
| 3000 | 56.59 | 0.18 | 320.0 | 1.33 |
| 4500 | 72.30 | 0.41 | 340.0 | 1.36 |
| 5000 | 66.23 | 0.58 | 350.0 | 1.36 |
| 6220 | 30.91 | 1.14 | 370.0 | 1.40 |
| 7000 | 45.51 | 0.75 | 380.0 | 1.42 |
| 8000 | 67.21 | 0.71 | 400.0 | 1.45 |
| 9000 | 51.59 | 1.91 | 450.0 | 1.57 |
| 10000 | 40.89 | 1.57 | 500.0 | 1.73 |

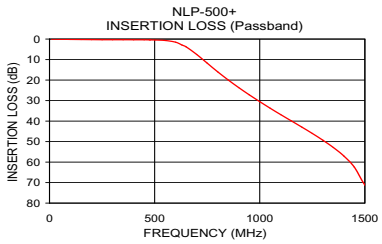
### Typical Frequency Response

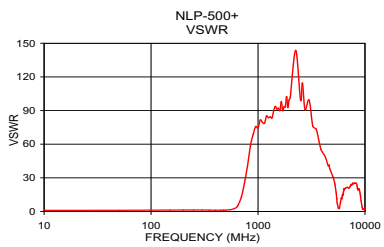


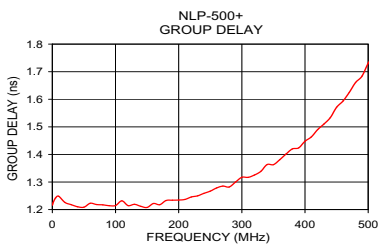

*+ RoHS compliant in accordance with EU Directive (2002/95/EC)*

*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 & shopping online see web site*



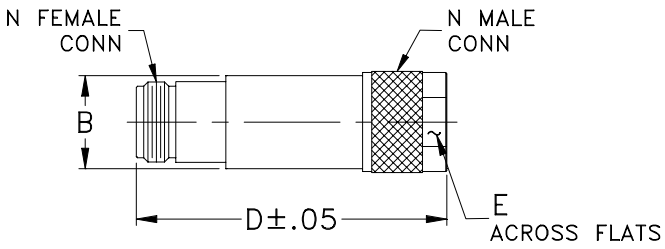
**Notes: 1.** Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. **2.** Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable 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.


REV. OR
M130750
NLP-500+
EDR-9568U
RAV/URJ/NY
110728

## Coaxial Connections

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

## Outline Drawing




## Outline Dimensions ( inch / mm )

| B | D | E | wt |
|---|---|---|---|
| .68 | 2.11 | .718 | grams |
| 17.27 | 53.59 | 18.24 | 72.5 |