

# Plug-In Low Pass Filter

50Ω Flat Time Delay DC to 23 MHz

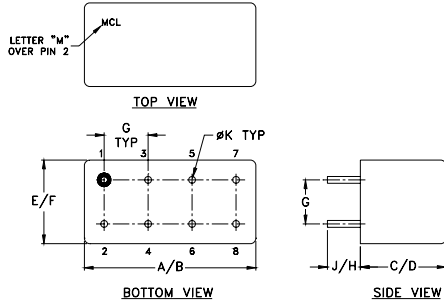
## Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -55°C to 100°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. |                |

## Pin Connections

|             |             |
|-------------|-------------|
| INPUT       | 1           |
| OUTPUT      | 8           |
| GROUND      | 2,3,4,5,6,7 |
| CASE GROUND | 2,3,4,5,6,7 |

## Outline Drawing



## Outline Dimensions (inch/mm)

| A     | B     | C    | D     | E    | F     |
|-------|-------|------|-------|------|-------|
| .770  | .800  | .385 | .400  | .370 | .400  |
| 19.56 | 20.32 | 9.78 | 10.16 | 9.40 | 10.16 |
| G     | H     | J    | K     |      | wt    |
| .200  | .20   | .14  | .031  |      | grams |
| 5.08  | 5.08  | 3.56 | 0.79  |      | 5.2   |

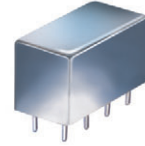
## Features

- flat group delay for low pulse distortion
- rugged shielded case, hermetic
- other PBLP models available with wide selection of cut-off frequencies

## Applications

- linear modulation techniques
- voice transmission applications
- digital communications

PBLP-39+  
PBLP-39



CASE STYLE: A01  
PRICE: \$22.20 ea. QTY: 1-9

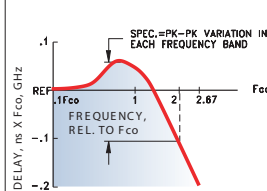
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

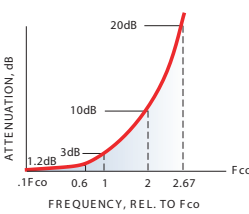
## Low Pass Filter Electrical Specifications

| PASSBAND (MHz)  | f <sub>co</sub> , MHz Nom. | STOPBAND (MHz)                | VSWR (:1)                                   | GROUP DELAY VARIATION (nsec)                                  |  |  |
|-----------------|----------------------------|-------------------------------|---------------------------------------------|---------------------------------------------------------------|--|--|
| (loss < 1.2 dB) |                            |                               | DC-0.2f <sub>co</sub> DC-0.6f <sub>co</sub> | DC-f <sub>co</sub> DC-2f <sub>co</sub> DC-2.67f <sub>co</sub> |  |  |
| Min.            | (loss 3 dB)                | (loss > 10 dB) (loss > 20 dB) | X X                                         | X X X                                                         |  |  |
| DC-23           | 39                         | 78-117 117                    | 1.3:1 2.3:1                                 | 0.7 4.0 5.0                                                   |  |  |

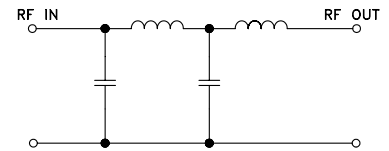
TYPICAL GROUP DELAY



TYPICAL FREQUENCY RESPONSE INSERTION LOSS

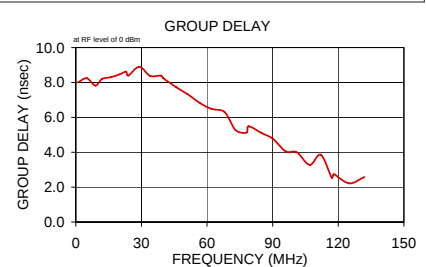
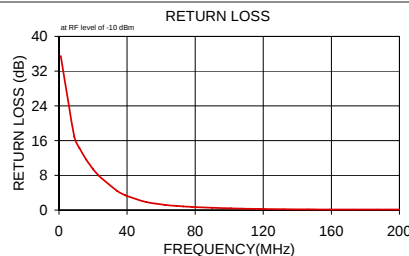
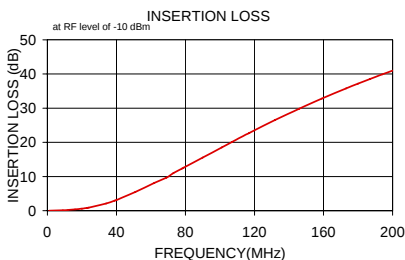


electrical schematic



## Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | Frequency (MHz) | Group Delay (nsec) |
|-----------------|---------------------|------------------|-----------------|--------------------|
|                 | $\bar{x}$           | $\sigma$         |                 |                    |
| 1.0             | 0.02                | 0.00             | 1.0             | 8.012              |
| 9.0             | 0.14                | 0.00             | 5.0             | 8.243              |
| 12.0            | 0.23                | 0.01             | 9.0             | 7.823              |
| 16.0            | 0.38                | 0.01             | 12.0            | 8.199              |
| 20.0            | 0.60                | 0.02             | 16.0            | 8.305              |
| 23.0            | 0.82                | 0.02             | 20.0            | 8.466              |
| 24.0            | 0.91                | 0.02             | 23.0            | 8.623              |
| 34.0            | 2.11                | 0.03             | 24.0            | 8.392              |
| 39.0            | 2.95                | 0.04             | 29.0            | 8.899              |
| 40.0            | 3.14                | 0.04             | 34.0            | 8.378              |
| 51.0            | 5.48                | 0.06             | 39.0            | 8.392              |
| 62.0            | 8.15                | 0.07             | 40.0            | 8.247              |
| 69.0            | 9.69                | 0.08             | 46.0            | 7.722              |
| 73.0            | 11.00               | 0.09             | 51.0            | 7.336              |
| 78.0            | 12.33               | 0.10             | 57.0            | 6.804              |
| 79.0            | 12.60               | 0.10             | 62.0            | 6.487              |
| 90.0            | 15.56               | 0.13             | 68.0            | 6.306              |
| 101.0           | 18.53               | 0.15             | 73.0            | 5.277              |
| 107.0           | 20.14               | 0.16             | 78.0            | 5.124              |
| 112.0           | 21.46               | 0.16             | 79.0            | 5.489              |
| 117.0           | 22.76               | 0.17             | 85.0            | 5.101              |
| 118.0           | 23.02               | 0.17             | 90.0            | 4.784              |
| 132.0           | 26.55               | 0.17             | 96.0            | 4.054              |
| 146.0           | 29.88               | 0.17             | 101.0           | 3.996              |
| 159.0           | 32.80               | 0.17             | 107.0           | 3.275              |
| 173.0           | 35.76               | 0.16             | 112.0           | 3.856              |
| 180.0           | 37.17               | 0.15             | 117.0           | 2.547              |
| 187.0           | 38.55               | 0.16             | 118.0           | 2.738              |
| 194.0           | 39.89               | 0.15             | 125.0           | 2.216              |
| 200.0           | 41.00               | 0.16             | 132.0           | 2.576              |



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