

Coaxial

# Low Pass Filter

50Ω Flat Time Delay DC to 850 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.

## Features

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

## Applications

- linear modulation techniques
- voice transmission applications
- digital communications

SBLP-1870+  
SBLP-1870



CASE STYLE: FF99

| Connectors | Model        | Price       | Qty.  |
|------------|--------------|-------------|-------|
| SMA        | SBLP-1870(+) | \$38.95 ea. | (1-9) |

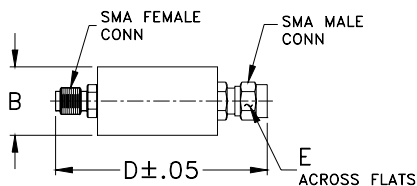
+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)

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

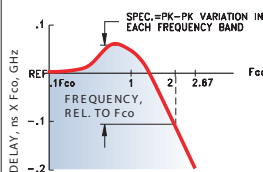
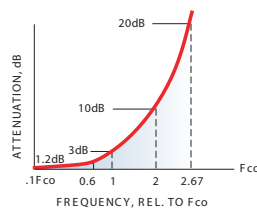
## Low Pass Filter Electrical Specifications

| PASSBAND<br>(MHz) | fco, MHz<br>Nom. | STOPBAND<br>(MHz)       |                                  | VSWR<br>(:1)   |                | GROUP DELAY VARIATION<br>(nsec) |              |                 |
|-------------------|------------------|-------------------------|----------------------------------|----------------|----------------|---------------------------------|--------------|-----------------|
|                   |                  | (loss < 1.2 dB)<br>Min. | (loss > 10 dB)<br>(loss > 20 dB) | DC-0.2fco<br>X | DC-0.6fco<br>X | DC-fco<br>X                     | DC-2fco<br>X | DC-2.67fco<br>X |
| DC-850            | 1870             |                         | 3740-5000<br>5000                | 1.45:1         | 2.9:1          | 0.05                            | 0.1          | 0.15            |

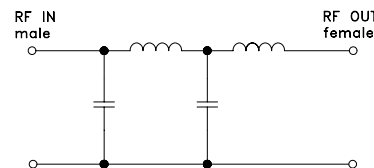
## Outline Drawing



TYPICAL GROUP DELAY

TYPICAL FREQUENCY RESPONSE  
INSERTION LOSS

## electrical schematic

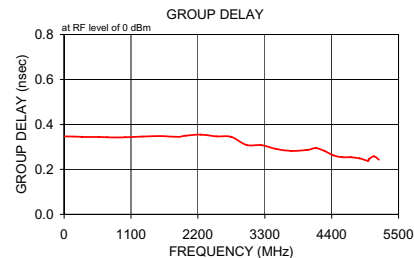


## Outline Dimensions (inch mm)

| B     | D     | E    | wt    |
|-------|-------|------|-------|
| .67   | 1.98  | .312 | grams |
| 17.02 | 50.29 | 7.92 | 42.0  |

## Typical Performance Data

| Frequency<br>(MHz) | Insertion Loss<br>(dB) |          | Return Loss<br>(dB) | Frequency<br>(MHz) | Group Delay<br>(nsec) |
|--------------------|------------------------|----------|---------------------|--------------------|-----------------------|
|                    | $\bar{X}$              | $\sigma$ |                     |                    |                       |
| 10.0               | 0.01                   | 0.1      | 47.2                | 10.0               | 0.347                 |
| 152.3              | 0.05                   | 0.1      | 22.6                | 152.3              | 0.346                 |
| 433.0              | 0.22                   | 0.1      | 14.1                | 290.8              | 0.345                 |
| 571.6              | 0.36                   | 0.1      | 11.6                | 433.0              | 0.344                 |
| 710.1              | 0.53                   | 0.1      | 9.8                 | 571.6              | 0.344                 |
| 850.0              | 0.73                   | 0.1      | 8.3                 | 710.1              | 0.343                 |
| 1002.1             | 0.96                   | 0.1      | 7.2                 | 850.0              | 0.342                 |
| 1582.4             | 2.28                   | 0.1      | 4.0                 | 1002.1             | 0.343                 |
| 1870.0             | 3.21                   | 0.1      | 3.1                 | 1290.4             | 0.346                 |
| 2001.7             | 3.65                   | 0.1      | 2.8                 | 1582.4             | 0.348                 |
| 2499.6             | 5.91                   | 0.3      | 1.6                 | 1870.0             | 0.345                 |
| 2997.5             | 9.36                   | 0.7      | 0.7                 | 2001.7             | 0.350                 |
| 3244.6             | 11.63                  | 1.0      | 0.5                 | 2248.8             | 0.355                 |
| 3491.7             | 13.38                  | 1.1      | 0.3                 | 2499.6             | 0.347                 |
| 3740.0             | 15.60                  | 1.2      | 0.3                 | 2746.7             | 0.345                 |
| 4000.8             | 17.72                  | 1.2      | 0.3                 | 2997.5             | 0.309                 |
| 4289.1             | 20.35                  | 1.2      | 0.3                 | 3244.6             | 0.308                 |
| 4573.6             | 23.49                  | 1.3      | 0.3                 | 3491.7             | 0.291                 |
| 4715.9             | 25.12                  | 1.3      | 0.3                 | 3740.0             | 0.282                 |
| 4858.2             | 26.62                  | 1.4      | 0.2                 | 4000.8             | 0.287                 |
| 5000.0             | 28.10                  | 1.4      | 0.3                 | 4143.1             | 0.295                 |
| 5011.7             | 28.25                  | 1.4      | 0.3                 | 4289.1             | 0.281                 |
| 5176.4             | 30.15                  | 1.5      | 0.2                 | 4431.4             | 0.262                 |
| 5341.1             | 32.09                  | 1.8      | 0.2                 | 4573.6             | 0.254                 |
| 5505.8             | 34.13                  | 2.6      | 0.2                 | 4715.9             | 0.254                 |
| 5670.6             | 36.22                  | 4.0      | 0.2                 | 4858.2             | 0.249                 |
| 5752.9             | 37.22                  | 5.2      | 0.2                 | 5000.0             | 0.238                 |
| 5835.3             | 37.22                  | 6.7      | 0.2                 | 5011.7             | 0.245                 |
| 5917.6             | 39.23                  | 8.2      | 0.2                 | 5094.0             | 0.258                 |
| 6000.0             | 39.53                  | 8.0      | 0.2                 | 5176.4             | 0.243                 |



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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