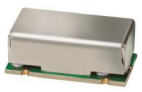
# Low Pass Filter

## JY-LPF-B35+

### Features
- High rejection, 30 dB typical
- Sharp insertion loss roll-off
- Shielded case
- Aqueous washable

### Applications
- Defence communications
- Transmitters / receivers
- Harmonic rejection



**50Ω DC to 35 MHz**

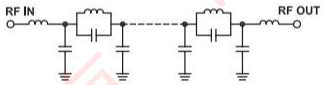
### Electrical Specifications at 25°C

| Parameter | | F# | Frequency(MHz) | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| Pass Band | Insertion Loss | DC-F1 | DC-35 | - | 0.85 | 2 | dB |
| | Freq. Cut-Off | F2 | 40 | - | 3 | - | dB |
| | VSWR | DC-F1 | DC-35 | - | 1.5 | 2 | :1 |
| Stop Band | Rejection Loss | F3-F4 | 45-2500 | 20 | 30 | - | dB |
| | VSWR | F3-F4 | 45-2500 | - | 15 | - | :1 |

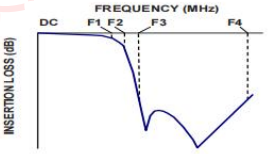
### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (nsec) |
|---|---|---|---|---|
| 0.5 | 0.13 | 1.04 | 1.00 | 22.33 |
| 5.0 | 0.21 | 1.20 | 5.00 | 22.33 |
| 10.0 | 0.25 | 1.23 | 10.00 | 22.85 |
| 20.0 | 0.36 | 1.21 | 15.00 | 24.45 |
| 30.0 | 0.50 | 1.12 | 18.00 | 25.65 |
| 35.0 | 0.78 | 1.34 | 20.00 | 26.58 |
| 40.0 | 1.82 | 1.67 | 22.00 | 27.74 |
| 42.0 | 10.39 | 9.33 | 23.00 | 28.50 |
| 44.0 | 24.43 | 19.54 | 24.00 | 29.39 |
| 45.0 | 31.15 | 22.29 | 25.00 | 30.44 |
| 46.0 | 37.80 | 24.48 | 26.00 | 31.70 |
| 48.0 | 51.90 | 28.03 | 27..00 | 33.05 |
| 50.0 | 70.55 | 31.60 | 28.00 | 34.52 |
| 70.0 | 81.69 | 62.05 | 29.00 | 36.19 |
| 100.0 | 73.91 | 108.58 | 30.00 | 37.85 |
| 500.0 | 75.80 | 217.15 | 31.00 | 39.69 |
| 1000.0 | 79.89 | 91.43 | 32.00 | 41.73 |
| 1500.0 | 69.55 | 64.35 | 33.00 | 44.33 |
| 2000.0 | 73.28 | 51.10 | 34.00 | 47.77 |
| 2500.0 | 48.48 | 46.96 | 35.00 | 52.47 |

### Functional Schematic




### Typical Frequency Response




### Maximum Ratings

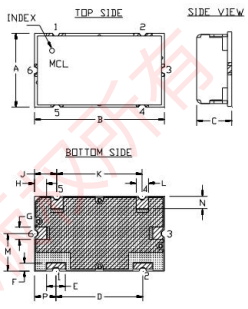
| | |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 1 W max. |

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

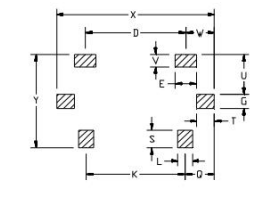
### Pin Connections

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

### Outline Drawing




### PCB Land Pattern

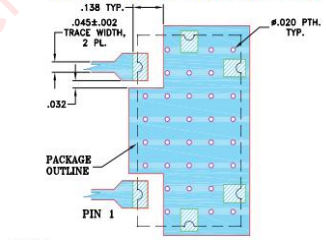



Suggested Layout,
Tolerance to be within ±.002

**Outline Dimensions：Unit ( mm)**

| | | | | | |
|---|---|---|---|---|---|
| A | 11.99 | B | 20.98 | C | 5.59 |
| D | 14.00 | E | 3.00 | F | 1.19 |
| G | 1.98 | H | 1.93 | J | 3.61 |
| K | 13.79 | L | 1.98 | M | 5.99 |
| N | 2.01 | P | 3.51 | Q | 4.11 |
| S | 2.49 | T | 2.44 | U | 5.51 |
| V | 1.70 | W | 3.99 | X | 22.00 |
| WT | | 6.0 | | Y | 13.00 |

### *Demo Board MCL P/N: TB-400+*
### *Suggested PCB Layout (PL-247)*




NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

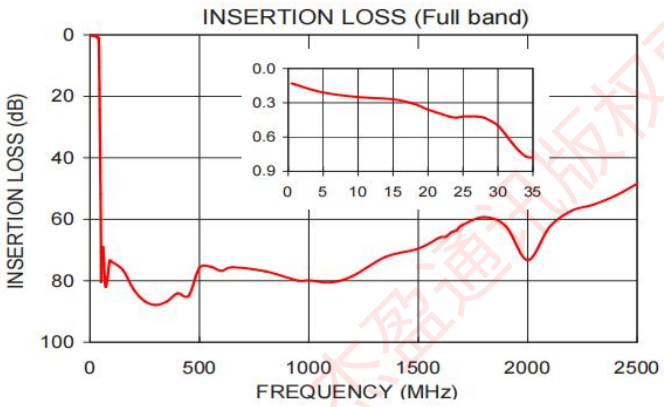
DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

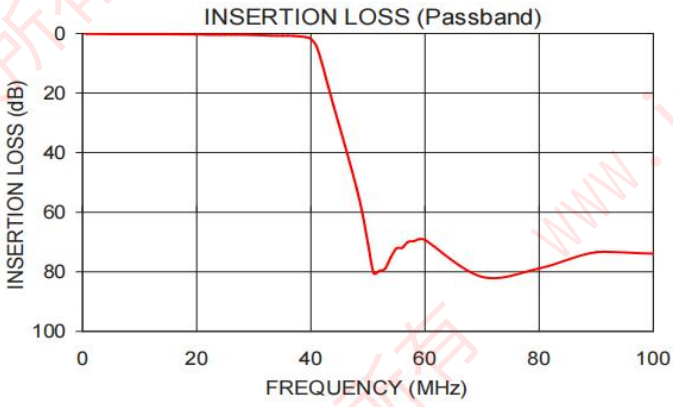
JY-LPF-B35+

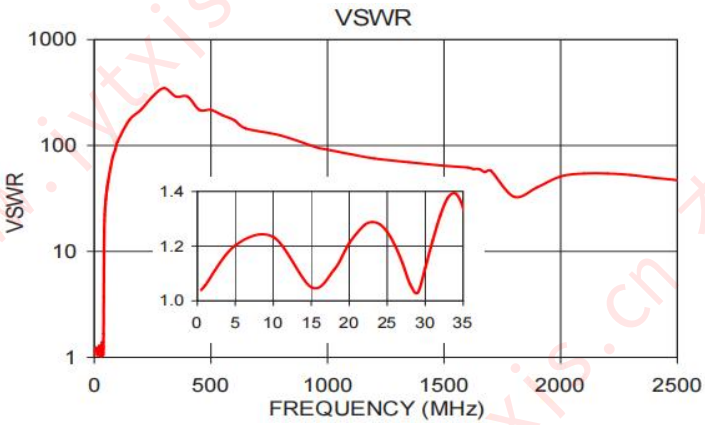
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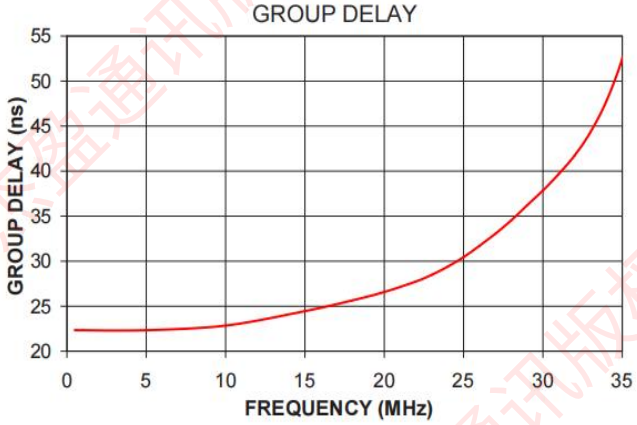
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