

## Features

- excellent power handling
- Small size
- 7 sections
- temperature stable
- LTCC construction with great moisture resistance, corrosion resistance, and high reliability

## Applications

- sub-harmonic rejection
- transmitters/receivers
- base station of mobile communication and lab use

## Electrical Specifications<sup>1</sup> (T<sub>AMB</sub>= 25° C)

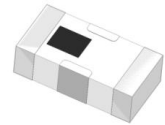
| STOP BAND<br>(MHz)  |                     | FCO <sub>0</sub> (MHz)<br>Nom. | PASS BAND<br>(MHz)   |                      | VSWR<br>(:1)     |                             | POWER<br>INPUT<br>(W) | NO. OF<br>SECTION<br>S |
|---------------------|---------------------|--------------------------------|----------------------|----------------------|------------------|-----------------------------|-----------------------|------------------------|
| (Loss>33dB)<br>Min. | (Loss>20dB)<br>Min. | (Loss 3dB)<br>Typ.             | (Loss<1.3dB)<br>Max. | (Loss<2.1dB)<br>Max. | Stopband<br>Typ. | Frequency<br>(MHz)<br>1.5:1 |                       |                        |
| 430                 | 550                 | 740                            | 900-2200             | 780-2800             | 20:1             | 740-3200                    | 7                     | 7                      |

1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

## Typical Performance Data at 25° C

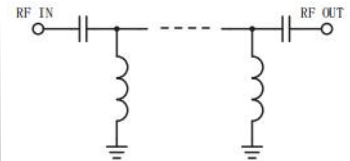
| Frequency<br>(MHz) | Return Loss<br>(dB) | Insertion Loss<br>(dB) | VSWR<br>(:1) |
|--------------------|---------------------|------------------------|--------------|
| 1                  | 0.04                | 84.12                  | 394.81       |
| 100                | 0.20                | 48.83                  | 86.78        |
| 430                | 0.49                | 36.31                  | 35.35        |
| 550                | 0.77                | 30.92                  | 22.51        |
| 740                | 24.21               | 2.84                   | 1.13         |
| 780                | 21.06               | 2.11                   | 1.19         |
| 900                | 27.17               | 1.29                   | 1.09         |
| 1900               | 14.74               | 0.84                   | 1.45         |
| 2200               | 16.31               | 0.80                   | 1.36         |
| 2800               | 34.91               | 0.78                   | 1.04         |
| 3200               | 20.19               | 0.89                   | 1.22         |
| 4000               | 11.26               | 1.38                   | 1.75         |

## JY-HFCN-740+



50 Ω 780 to 2800 MHz

## electrical schematic



## Pin Connections

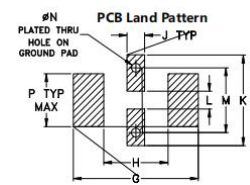
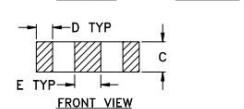
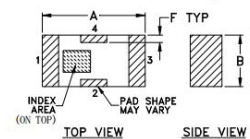
|        |     |
|--------|-----|
| RF IN  | 1   |
| RF OUT | 3   |
| GROUND | 2,4 |

## Maximum Ratings

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 7W at 25°C     |

\* Passband rating, derate linearly to 3.5W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

## Outline Drawing

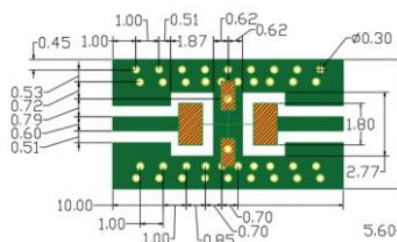


Suggested Layout  
Tolerance to be within ±0.02

## Outline Dimensions: Unit (mm)

|   |      |   |      |    |       |
|---|------|---|------|----|-------|
| A | 3.20 | B | 1.60 | C  | 0.95  |
| D | 0.51 | E | 0.81 | F  | 0.23  |
| G | 4.29 | H | 2.21 | J  | 0.61  |
| K | 3.10 | L | 0.61 | M  | 2.21  |
| N | 0.30 | P | 1.8  | wt | 0.02g |

## Suggested PCB Layout



- ES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350 WITH THICKNESS .508" ± .0015".  
COPPER: 1/2 OZ. EACH SIDE.  
FOR OTHER MATERIALS TRACE WIDTH & GAP 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 SOLDER MASK

