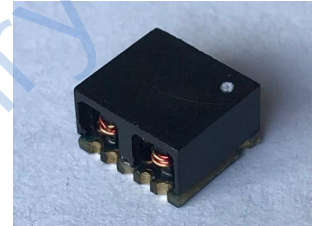


# Power Splitter/Combiner

## HT-SCA-4-10+



4 Way-0° 50Ω 5 to 1000 MHz

### electrical schematic



### Features

- wideband, 5-1000 MHz
- high isolation, 24 dB typ.
- good matching VSWR, 1.20 typ.
- excellent amplitude unbalance, 0.3 dBtyp.

### Applications

- cellular
- UHF/VHF receivers/transmitters

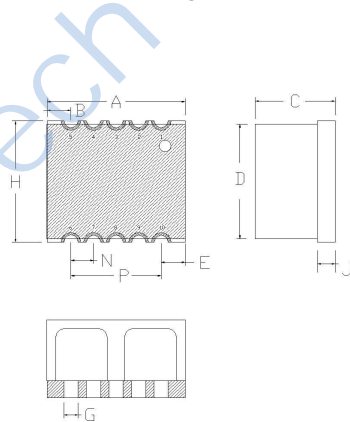
### Transformer Electrical Specifications

| Freq. range (MHz) | Isolation(dB) |     | Insertion Loss (dB) Above 6.3 dB. |     | Phase Unbalance (Degrees) Max. | Amplitude Unbalance(dB) Max. |
|-------------------|---------------|-----|-----------------------------------|-----|--------------------------------|------------------------------|
|                   | min           | max | min                               | max |                                |                              |
| 5~1000            | 24            | 36  | 0.8                               | 1.5 | 6                              | 0.5                          |

### Typical Performance Data( TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

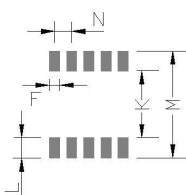
| Freq. (MHz) | Total Loss (dB) |       |       |       | Amp. Unbal. (dB) | Isolation(dB) |       |       | PhaseUnbal. (deg.) | VSWRS |      |      |      |      |
|-------------|-----------------|-------|-------|-------|------------------|---------------|-------|-------|--------------------|-------|------|------|------|------|
|             | S-1             | S-2   | S-3   | S-4   |                  | 1-2           | 1-3   | 2-3   |                    | S     | 1    | 2    | 3    | 4    |
| 5.0         | -6.39           | -6.20 | -6.35 | -6.56 | 0.36             | -28.9         | -35.4 | -35.3 | 0.54               | 1.05  | 1.04 | 1.04 | 1.04 | 1.04 |
| 150.0       | -6.48           | -6.31 | -6.45 | -6.63 | 0.32             | -28.3         | -35.6 | -35.1 | 0.42               | 1.05  | 1.04 | 1.04 | 1.04 | 1.04 |
| 350.0       | -6.64           | -6.43 | -6.56 | -6.75 | 0.32             | -26.2         | -35.2 | -34.4 | 0.82               | 1.14  | 1.13 | 1.13 | 1.13 | 1.13 |
| 400.0       | -6.71           | -6.50 | -6.62 | -6.80 | 0.30             | -25.8         | -35.4 | -34.6 | 0.98               | 1.16  | 1.14 | 1.14 | 1.14 | 1.14 |
| 600.0       | -6.94           | -6.69 | -6.78 | -6.97 | 0.28             | -24.7         | -36.8 | -34.2 | 1.34               | 1.21  | 1.20 | 1.20 | 1.20 | 1.20 |
| 700.0       | -7.07           | -6.81 | -6.89 | -7.09 | 0.28             | -24.2         | -35.8 | -32.8 | 1.42               | 1.20  | 1.20 | 1.20 | 1.20 | 1.20 |
| 800.0       | -7.27           | -6.97 | -7.02 | -7.22 | 0.30             | -24.0         | -33.9 | -31.5 | 1.62               | 1.17  | 1.18 | 1.18 | 1.18 | 1.18 |
| 900.0       | -7.50           | -7.16 | -7.19 | -7.40 | 0.34             | -24.6         | -32.2 | -31.0 | 1.81               | 1.15  | 1.17 | 1.17 | 1.17 | 1.17 |
| 1000.0      | -7.77           | -7.40 | -7.41 | -7.63 | 0.37             | -26.3         | -30.9 | -31.5 | 2.01               | 1.19  | 1.22 | 1.21 | 1.21 | 1.22 |

### Outline Drawing



| Outline Dimensions: Unit (mm) |      |   |      |
|-------------------------------|------|---|------|
| A                             | 7.80 | H | 7.18 |
| B                             | 1.35 | N | 1.27 |
| C                             | 4.50 | M | 8.00 |
| D                             | 7.80 | J | 1.00 |
| E                             | 1.35 | K | 5.00 |
| F                             | 0.76 | L | 1.50 |
| G                             | 0.80 | P | 5.08 |

### PCB Land Pattern



Suggested L layout, Tolerance to be within ±0.05

| Pin Connections |              |
|-----------------|--------------|
| SUM PORT        | 3 (input)    |
| PORT 1          | 6 (output1)  |
| PORT 2          | 7 (output2)  |
| PORT 3          | 9 (output3)  |
| PORT 4          | 10 (output4) |
| GND             | 1,2,4,5,8    |

| Maximum Ratings             |                |
|-----------------------------|----------------|
| Operating Temperature       | -20°C to 85°C  |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 0.5W max.      |
| Internal Dissipation        | 0.375W max.    |

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

