

LTCC 巴伦变压器 (RF Transformer)

HT-TCN1-23+

Features

- Multilayer LTCC Technology
- Miniatured Size
- Low Insertion Loss reduces power consumption
- Low inband Amplitude and Phase imbalance
- Single ended 50 ohm differential 50 ohm

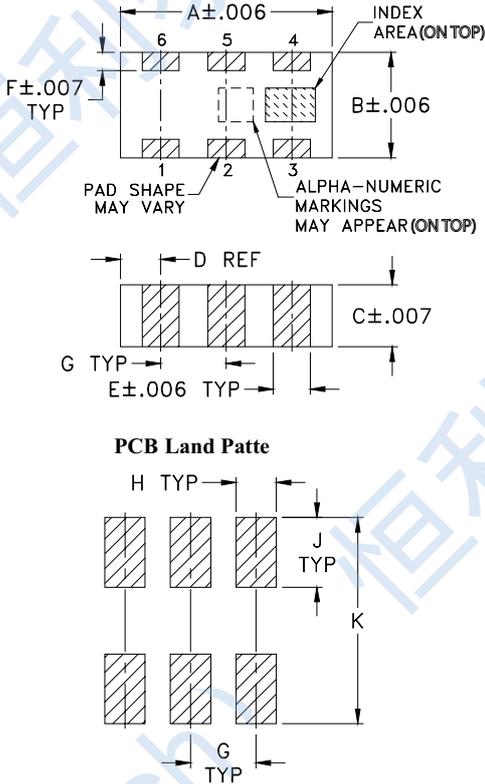
Applications

- DECT
- PCS
- PHS
- PDS
- PDC

Pad Connections

| | |
|---------------|-----|
| PRIMARY DOT | 4 |
| PRIMARY (GND) | 2,5 |
| SECONDARY | 6 |
| SECONDARY DOT | 1 |
| NOT USED | 3 |

Outline Drawing

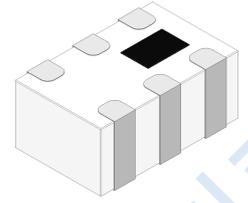
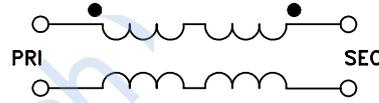


Suggested Layout, Tolerance to be within .002

Outline Dimensions : inch mm

| | | | | | | |
|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | |
| .126 | .063 | .035 | .024 | .022 | .011 | |
| 3.20 | 1.60 | 0.89 | 0.61 | 0.56 | 0.28 | |
| G | H | J | K | | | wt |
| .039 | .024 | .042 | .123 | | | grams |
| 0.99 | 0.61 | 1.07 | 3.12 | | | .020 |

Functional Schematic



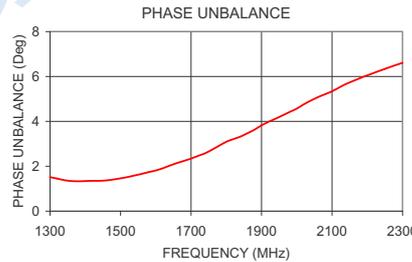
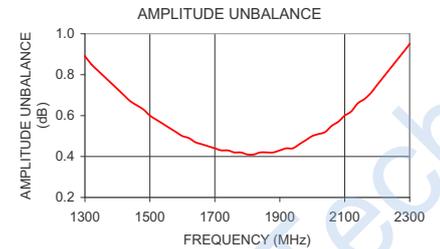
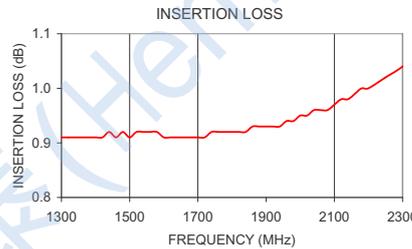
50 Ω 1:1 Ratio
1000MHz to 2300MHz

Electrical Specifications(1,2) at 25°C

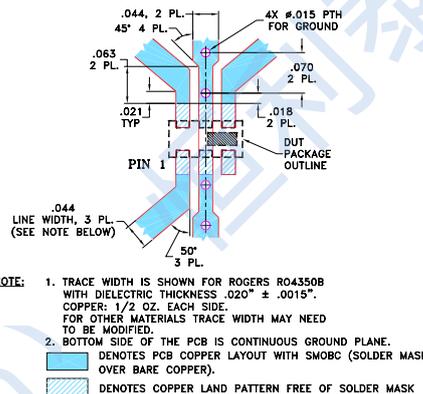
| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Units |
|-------------------------------------|-----------------|------|------|------|--------|
| Impedance Ratio (Secondary/Primary) | | 1 | | | |
| Frequency Range | | 1000 | | 2300 | MHz |
| Insertion Loss ¹ | 1000 - 1300 | — | 1.38 | — | dB |
| | 1300 - 2300 | — | 0.8 | — | dB |
| Amplitude Unbalance | 1000 - 1300 | — | 1.6 | — | dB |
| | 1300 - 2300 | — | 0.7 | — | dB |
| Phase Unbalance ² | 1000 - 1300 | — | 7.0 | — | Degree |
| | 1300 - 2300 | — | 5.0 | — | Degree |

- (1) Insertion Loss is referenced to mid-band loss, 0.8 dB.
(2) Relative to 180°

Typical Performance Data at 25°C



Suggested PCB Layout



Maximum Ratings

| | |
|-----------------------|-----------------|
| Operating Temperature | -55°C to +100°C |
| Storage Temperature | -55°C to +100°C |
| RF Power Input* | 5W at 25°C |

*Permanent damage may occur if any of these limits are exceeded.
From 85°C derate linearly to 2.5W at 100°C.