

Features

- Low-Temperature Co-fired Ceramic (LTCC)
- Compact size
- Frequency Range: 1500-3100 MHz
- RoHS compliant*

Applications

- GPS

Sustainability

- Small size reduces material use
- Eco-logistics-friendly packing
- Energy-saving low-power design
- ISO 14001, low-impact energy
- Responsibly sourced and produced

Product Overview

LTCC (Low-Temperature Co-fired Ceramic) technology integrates multiple passive elements into a single monolithic structure, enabling slim, compact, and reliable microelectronic solutions.

This balun model offers balanced-to-unbalanced signal conversion and impedance transformation for RF circuit applications. It supports an operating temperature range from -40 °C to +85 °C, making it suitable for a wide range of wireless communication and positioning front-end designs.

Electrical Specifications

Item	Specifications
Frequency Range	1500 ~ 3100 MHz
Insertion Loss	1.0 dB max. (0.80 dB typ.) at 25 °C 1.2 dB max. at -40 °C ~ +85 °C
Phase Difference	180 ° ± 10 ° (±5 ° typ.)
Amplitude Difference	2.0 dB max. (1.5 dB typ.)
VSWR	2.0 max. (1.7 typ.)
Unbalanced Port Impedance	50 Ω
Balanced Port Impedance	100 Ω
Power Capacity	3.0 W max.
ESD Classification (HBM)	Pass 1 kV on all pins
ESD Classification (MM)	Pass 200 V

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General Specifications

Operating Temperature: -40 to +85 °C
 Storage Temperature -40 to +85 °C
 Moisture Sensitivity Level..... 1
 Weight 6.5 mg

Materials

Base Material Ceramic
 Terminal Ag/Cu/Ni/Sn
 Packaging 2,000 pcs. per 7-inch reel

How to Order

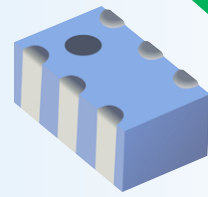
F BN 2009 N 230 D 6

LTCC RF _____
 Balun _____
 Size _____
 Non-automotive Grade _____
 Central Frequency _____
 DIP _____
 Number of Pins _____

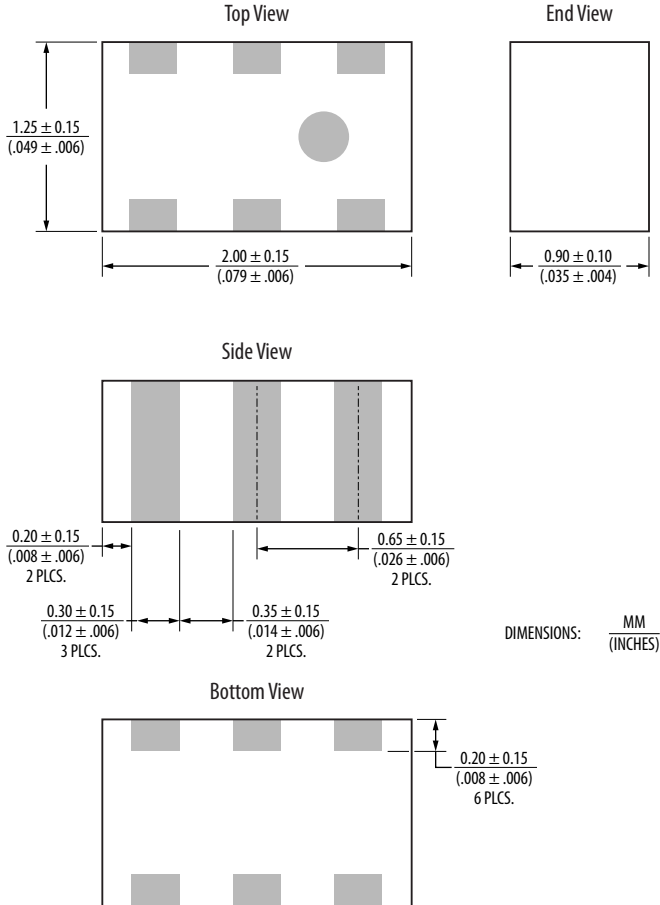
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

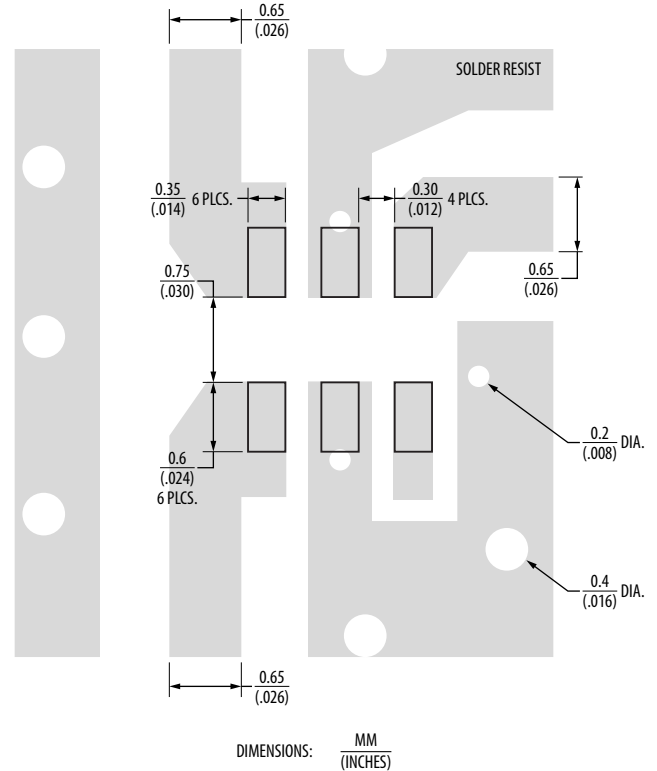
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Product Dimensions



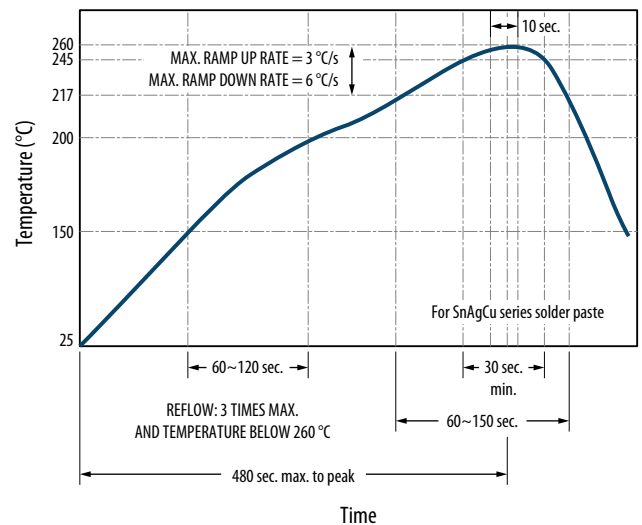
Recommended Land Pattern



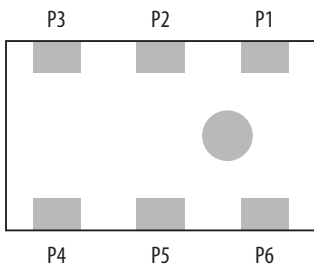
Note:

Line width to be designed to match 50 ohm characteristic impedance, depending on PCB material and thickness.

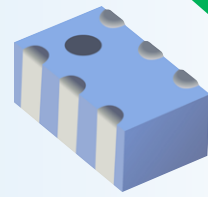
Soldering Profile



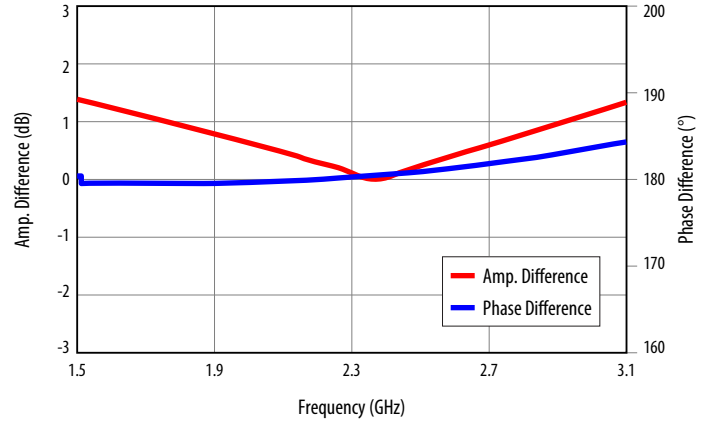
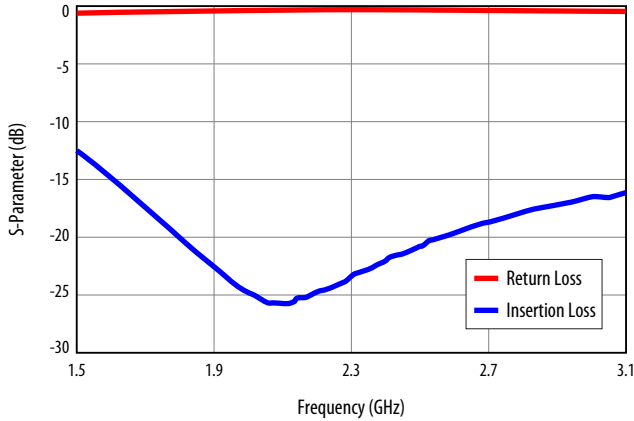
Construction



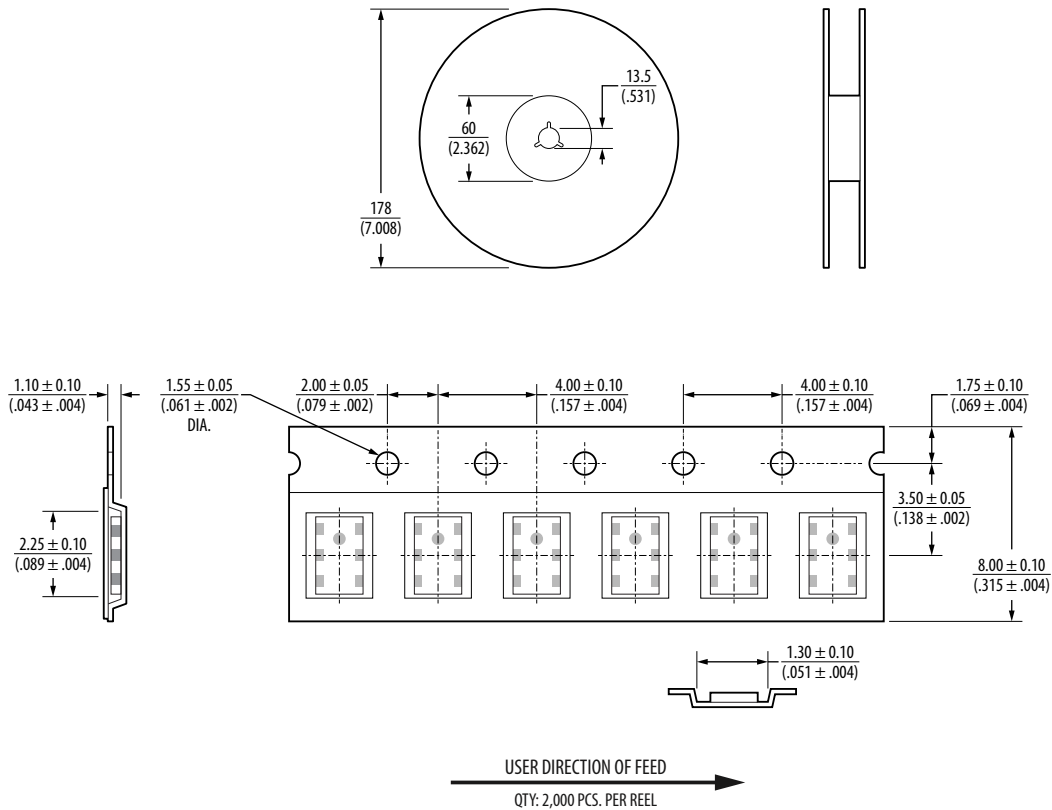
PIN	Connection
P1	Unbalanced Port
P2	GND
P3	Balanced Port
P4	Balanced Port
P5	GND
P6	NC



RF Characteristics vs. Frequency



Packaging Information



REV. 07/26

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