

SMD Balun-Unbalance Transformer

RFBLN2012090A□T Series

Multi Layer Chip BALUN – 2012 (0805)
For ISM Band 2.4GHz Application

FEATURES

- LTCC (Low Temperature Cofired Ceramics) Technology
- Miniatured Size 2.00 x 1.25 x 0.95 mm³
- Low Insertion Loss reduces power consumption
- Low inband Amplitude and Phase imbalance enable high performance wireless system operation.
- Enable for DC Biasing of PA or Mixer
- Special Balance/ Unbalance impedance is upon requested.

ELECTRICAL CHARACTERISTICS

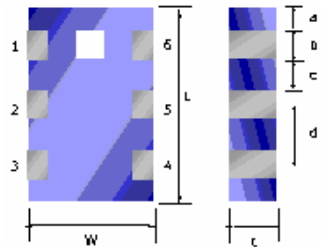
RFBLN2012090AxT Series

Spec \ Part Number	A0T	A1T	A2T
Central Frequency	2450 ± 50 MHz		
Impedance	Unbalanced	50 Ω	
	Balanced	50 Ω	100 Ω 200 Ω
Return Loss	Min. 10 dB		
Inband Amplitude imbalance	Max. 2.0 dB		
Inband Phase imbalance	Max 180 ± 10 degree		
Insertion Loss	1.2 dB	1.0 dB	1.0 dB

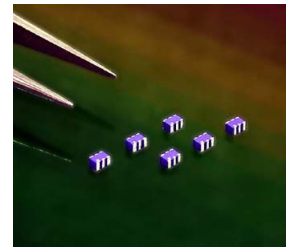
APPLICATIONS

- 2.4GHz ISM band RF applications. Bluetooth, Wireless LAN
- Balance to Unbalance convert.

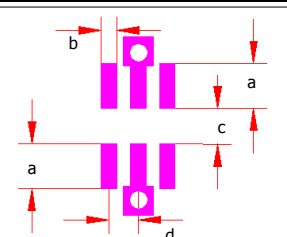
DIMENSION

Figure	Symbol	Dimension
	L	2.00 ± 0.15 mm
	W	1.25 ± 0.15 mm
	T	0.95 ± 0.10 mm
	A	0.20 ± 0.20 mm
	B	0.30 ± 0.20 mm
	C	0.35 ± 0.20 mm
	D	0.65 ± 0.20 mm

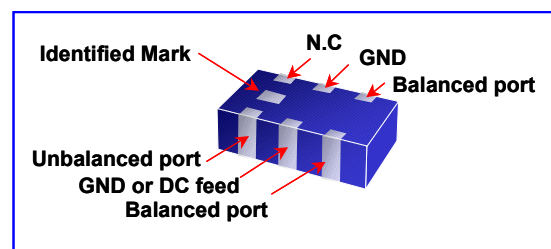
Patent Pending



SOLDER LAND PATTERN

Figure	Symbol	Dimension (mm)
	a	1.00 ± 0.10
	b	0.35 ± 0.10
	c	0.80 ± 0.10
	d	0.65 ± 0.10
Line width to be design to match 50Ω characteristic impedance, depending on PCB material and thickness		

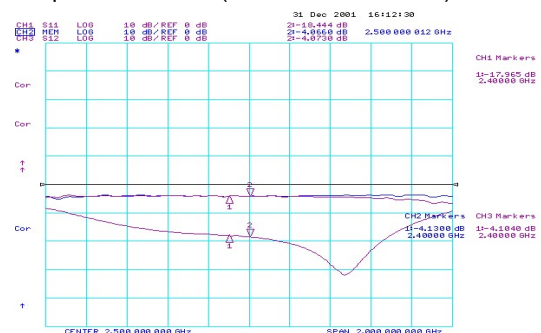
CONSTRUCTION



Outline of 2.4GHz BALUN (2012 size)

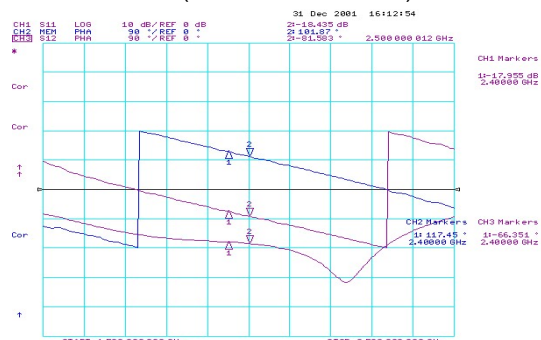
ELECTRICAL PERFORMANCE

(1). Amplitude balance (RFBLN2012090A1T)



Remark: -4.1dB which should include 0.4dB microstrip line loss

(2). Phase balance (RFBLN2012090A1T)



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