

MG-TCN1-23

LTCC Balun 50Ω 1000~2400MHz 1: 1

MECSINE 兆讯

LTCC Balun

For 1000-2400MHz

MG-TCN1-23

3.2 x 1.6mm [EIA 1206]

All Use For RF & Microwave

Shenzhen Megsine technology co., ltd www.megsine.com sales@megsine.com may contain us for future information
Feb. 03, 2024

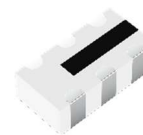
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APPLICATIONS

- 1, RF receivers/transmitters
- 2, Balanced-unbalanced conversion
- 3, Impedance matching



DESCRIPTION

The MG-TCN1-23 is a compact LTCC multilayer RF balun transformer designed for converting single-ended unbalanced signals to differential balanced signals within the frequency range of 1000MHz to 2400MHz. It features 1:1 impedance matching (50Ω to 50Ω), low insertion loss, excellent phase and amplitude balance, miniature SMT package and high reliability. This component is widely applied in wireless communication RF front-end circuits to optimize differential signal transmission and anti-interference performance.

MAXIMUM RATINGS

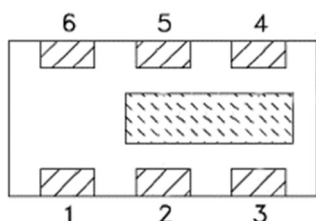
Parameter	Ratings	Units
Operating Temperature	-40 to 85	°C
Storage Temperature	- 40 to 85	°C
RF Power	2	W

ELECTRICAL SPECIFICATIONS

Parameter	Frequency Range (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio	1000 to 24000		1		:1
Unbalance Port VSWR	1000 to 24000			2.0	MHz
Insertion Loss	1000 to 2000			1.0	dB
	2000 to 24000			1.5	dB
Phase Unbalance	1000 to 2000			6	Deg.
	2000 to 2400			10	Deg.
Amplitude Unbalance	1000 to 2000			0.5	dB
	2000 to 2400			0.8	dB

- Ta: +25±5°

PORT CONFIGURATIONS



Terminal Functions	
1/6	Balance Port
2/5	GND
3	NC
4	Unbalanced Port

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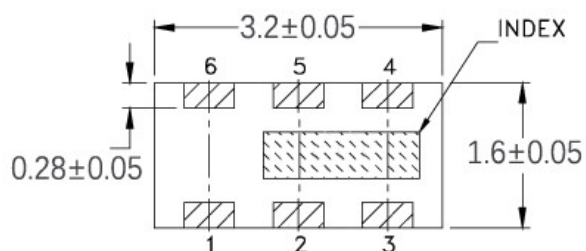
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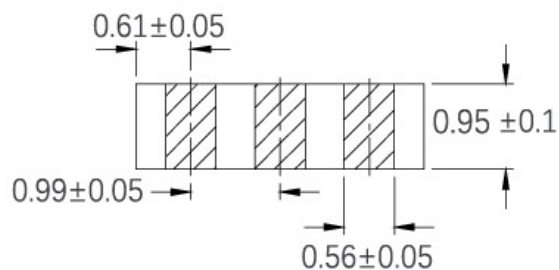
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SHAPS AND DIMENSIONS

Top View

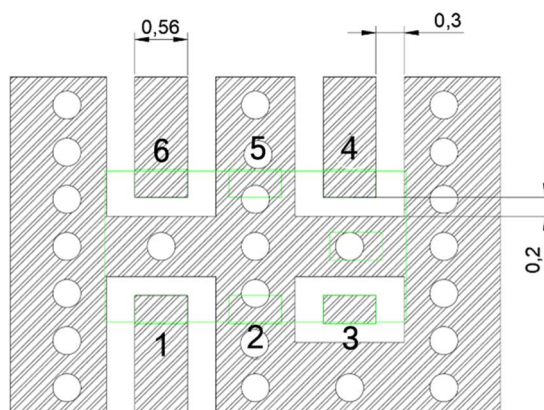


Side View



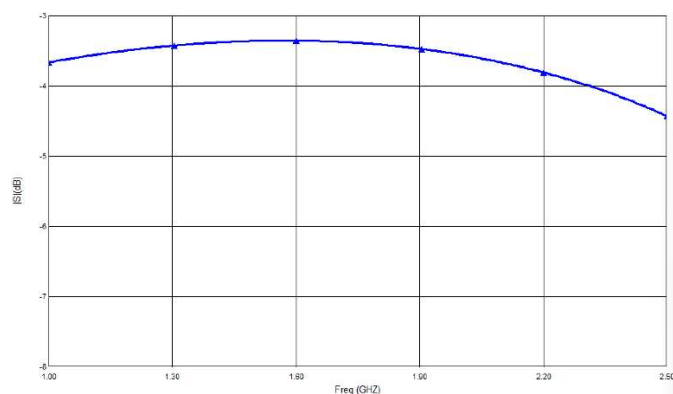
Unit: mm

RECOMMENDED LAND PATTERN AND EVALUATION BOARD

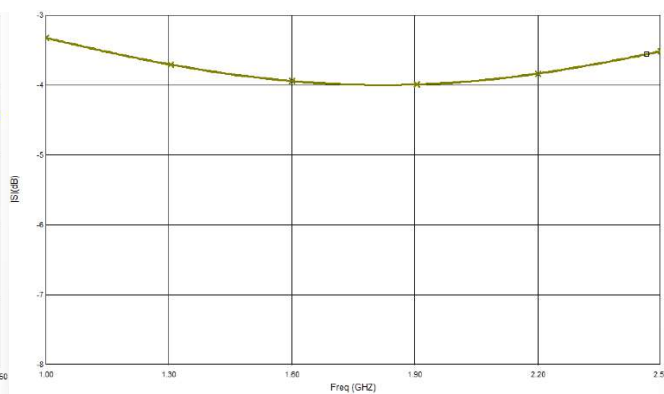


FREQUENCY CHARACTERISTICS

Main Line Loss (Output1)



Main Line Loss (Output2)



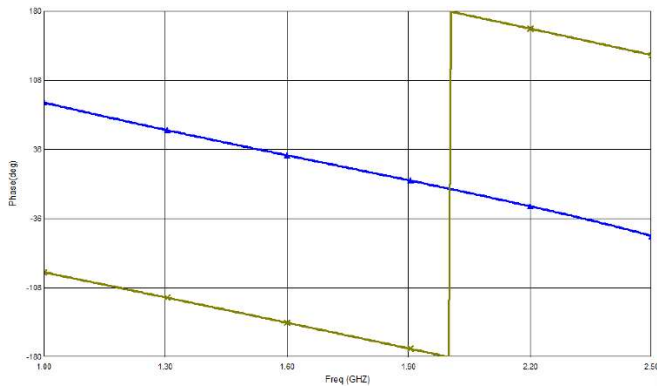
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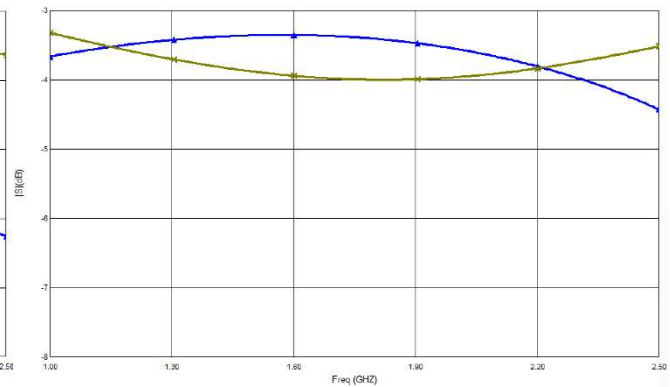
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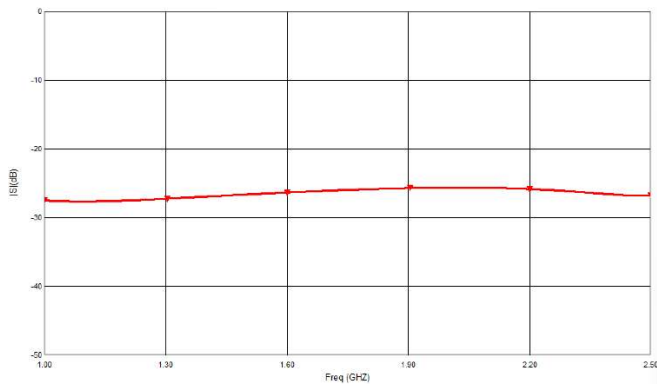
Phase Balance



Amplitude Balance



VSWR(:1)



Device	Package	Reel	Shipping
MG-TCN1-23	3.2x1.6	7''	3000 Reel

Revision	Description	Date
Rev0	Preliminary	2026/4/23

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