

Features

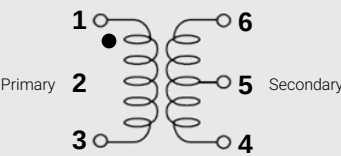
- SMD Base Type
- Impedance Ratio 1:4
- 5 to 450 MHz
- Insertion Loss 1.2dB @250MHz
- Low Cost
- RoHS

Applications

- Impedance Matching
- Balanced Amplifier
- Base station /Repeater/ Mobile /Automotive / Military
 - FDD-LTE, TD-LTE, TDS-CDMA, CDMA, WCDMA, WiMAX, PCS, GSM, GPS, GPRS, TETRA
- IoT / Broadcasting / WLAN
 - FM, DMB, DVB, ISM

Functional Diagram

Primary DOT	1	Secondary	4
Not used	2	Secondary CT	5
Primary	3	Secondary DOT	6



Description

The PBI41S is a RoHS compliant 1:4 RF flux coupled transformer in a low cost. The applications include impedance matching and balanced amplifier. Also the PBI41S consists of single to differential mode. The transformer is surface mounted package and designed for high temperature soldering reflow.

Specifications

Parameters	Units	Freq.	Typ.
Insertion Loss	dB	5 – 250	1.0
		250 - 450	1.3
Input Return Loss	dB	5 – 250	19.5
		250 - 450	14.8
Amplitude Unbalance	dB	5 – 250	0.01
		250 - 450	0.30
Phase Unbalance	Degrees	5 – 250	0.38
		250 - 450	2.80

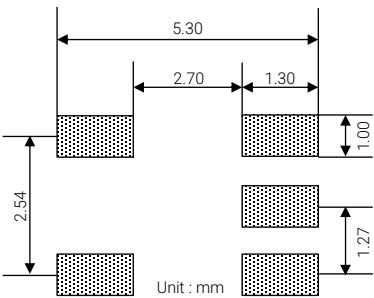
1) Test Conditions: T=25°C, 50ohm System

Absolute Maximum Ratings

Parameter	Rating	Units
RF Power	500	mW
DC Current	30	mA
Operating Temperature	-40 to 85	°C
Storage Temperature	-55 to 125	°C

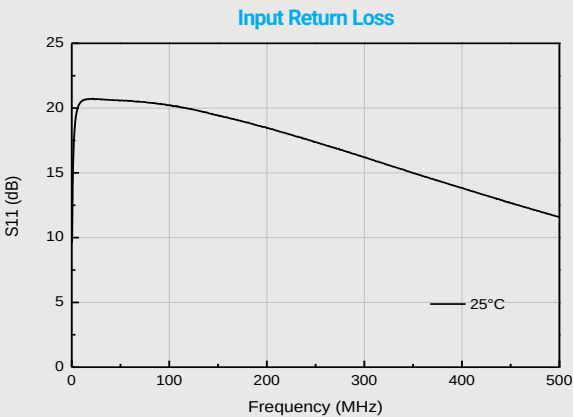
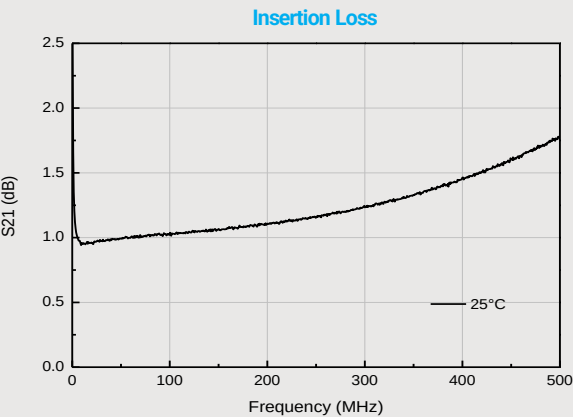
1) Stresses above the maximum values listed have may cause permanent damage to the device.

PCB Footprint (mm)

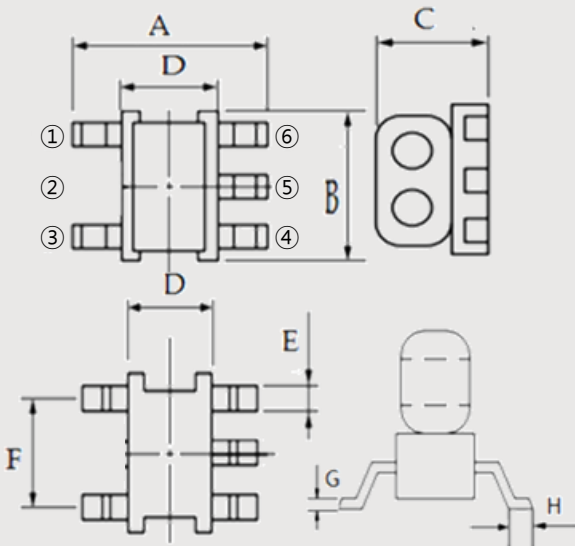


Typical Performance Data

Parameters	Units	Frequency (MHz)					
		10	50	150	250	350	450
Insertion Loss	dB	0.96	0.95	1.07	1.17	1.36	1.65
Input Return Loss	dB	20.5	20.8	19.4	17.1	14.8	12.5
Amplitude Unbalance	dB	0.03	0.03	0.00	0.11	0.27	0.50
Phase Unbalance	Degrees	0.08	0.03	0.24	0.86	2.27	4.86

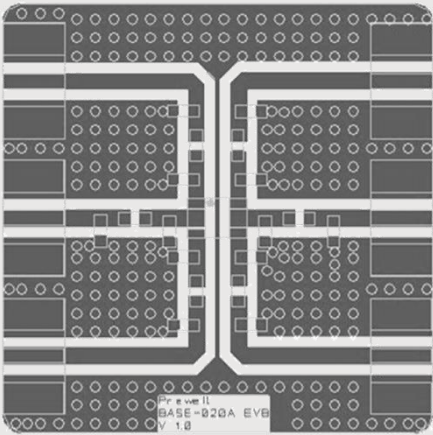


Outline Drawing (mm)



	Dimension (mm)			Dimension (mm)	
A	4.80 ± 0.20		E	0.55 ± 0.05	
B	3.80 ± 0.20		F	2.54 ± 0.05	
C	3.20 ± 0.20		G	0.25 ± 0.05	
D	2.60 ± 0.20		H	0.60 ± 0.05	

Evaluation Board Layout



Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

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