SJM PREWELL

PBI11C

Transformer / Balun

Features

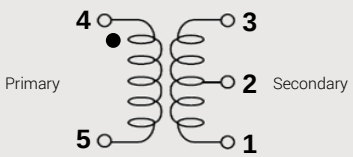
- SMD Base Type
- Impedance Ratio 1:1
- 0.4 to 500 MHz
- Insertion Loss 1.2dB @250MHz
- Low Cost
- RoHS

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

Secondary	1	Primary DOT	4
Secondary CT	2	Primary	5
Secondary DOT	3		



Description

The PBI11C is a RoHS compliant 1:1 RF flux coupled transformer in a low cost. The applications include impedance matching and balanced amplifier. Also the PBI11C 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	0.4– 250	0.8
		250 – 500	2.0
Input Return Loss	dB	0.4– 250	16.4
		250 – 500	7.3
Amplitude Unbalance	dB	0.4– 250	0.1
		250 - 500	0.7
Phase Unbalance	Degrees	0.4– 250	3.6
		250 – 500	8.3

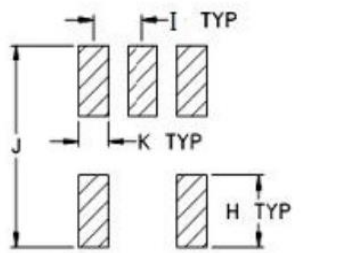
1) Test Conditions : T=25°C, 50ohm System

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)

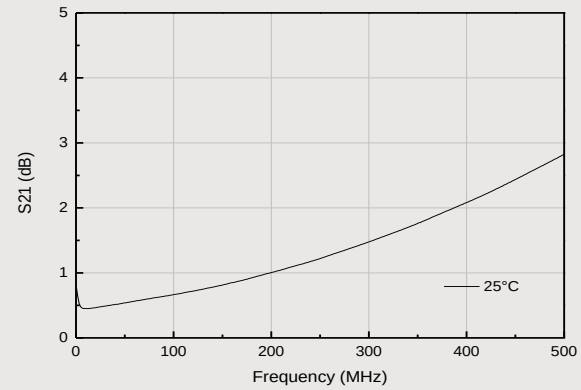


H	I	J	K
1.65	1.27	4.83	0.76

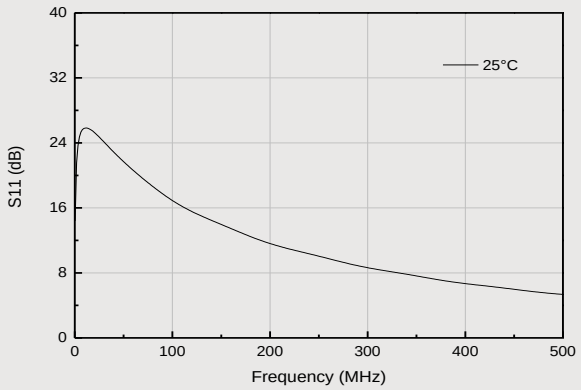
Typical Performance Data

Parameters	Units	Frequency (MHz)				
		10	50	200	400	500
Insertion Loss	dB	0.45	0.54	1.0	2.1	2.82
Input Return Loss	dB	25.8	21.7	11.6	6.7	5.4
Amplitude Unbalance	dB	0.04	0.03	0.18	0.75	1.35
Phase Unbalance	Degrees	0.4	1.7	5.5	8.7	9.8

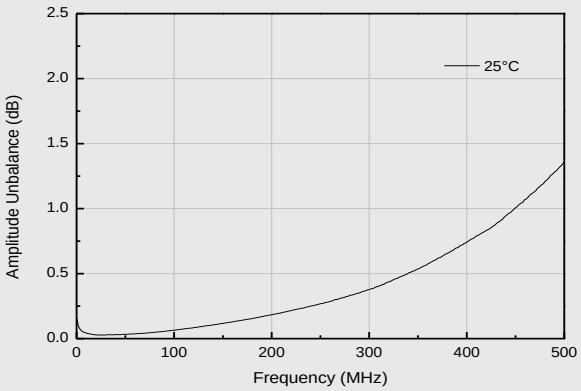
Insertion Loss



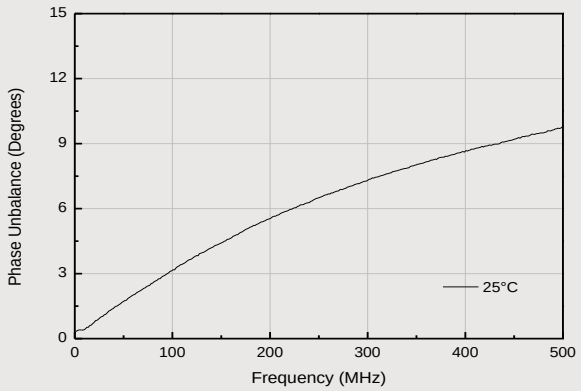
Input Return Loss



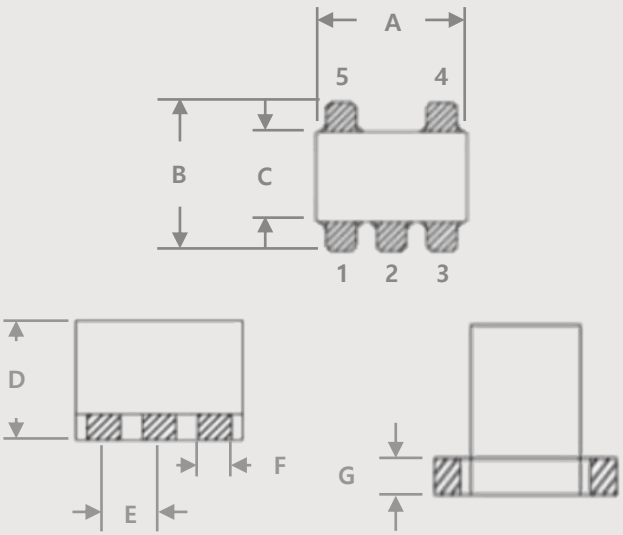
Amplitude Unbalance



Phase Unbalance



Outline Drawing (mm)



	Dimension (mm)		Dimension (mm)
A	3.80±0.20	E	1.27±0.10
B	3.80±0.20	F	0.76±0.10
C	2.30±0.20	G	0.60±0.10
D	Max 3.0		

Evaluation Board Layout

