

### 50Ω 1 to 500 MHz

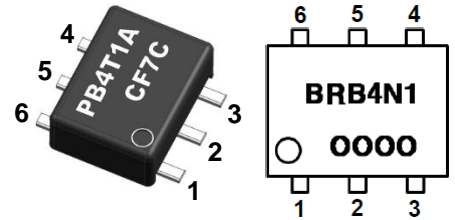
#### Features

- Good Insertion Loss, 1.15dB. typ
- Surface Mount
- 4:1 Impedance Ratio
- RoHS- compliant 4:1 transformer
- Low Cost

#### Applications

- Impedance Matching
- Baluns
- Broadband

#### Functional Diagram



#### Description

The PB4T1A (BRB4N1) is a RoHS compliant 4:1 RF flux coupled transformer in a low cost, surface mount packaging and broadband. The Applications include impedance matching and balanced amplifier. Also the PB4T1A (BRB4N1) is consist of single to differential mode. Transformer is surface mount packaging and is designed high temperature soldering reflow.

Function	Pin No.	Function	Pin No.
Primary DOT	1	Secondary DOT	4
Not used	2	Secondary CT	5
Primary	3	Secondary	6

#### Absolute Maximum Ratings

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

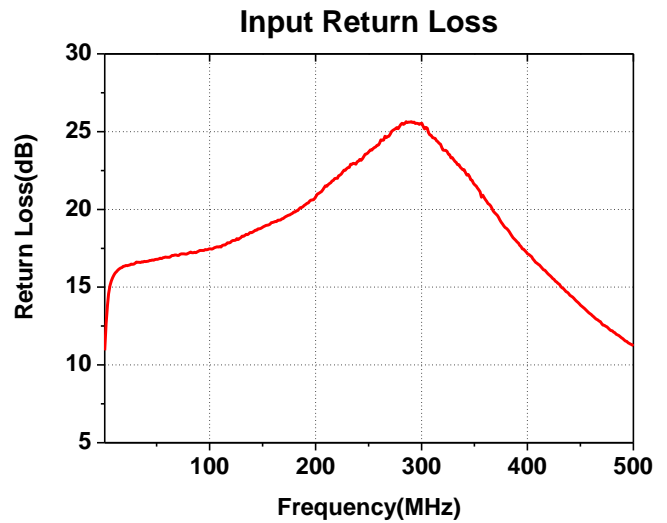
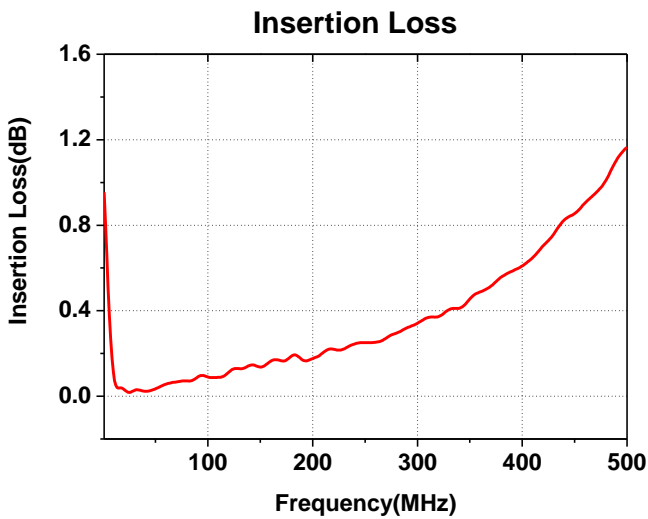
#### Specifications

Parameters	Units	Freq.	Min.	Typ.	Max.
Frequency	MHz	1 – 500	—	—	—
Insertion Loss	dB	1 – 250	—	0.5	—
		250 – 400		0.6	
		400 – 500		1.1	
Amplitude Unbalance	dB	1 – 250	—	0.2	—
		250 – 400		0.5	
		400 – 500		0.8	
Phase Unbalance	Degrees	1 – 50	—	0.2	—
		50 – 250		2.3	
		250 – 400		4	
		400 – 500		8	

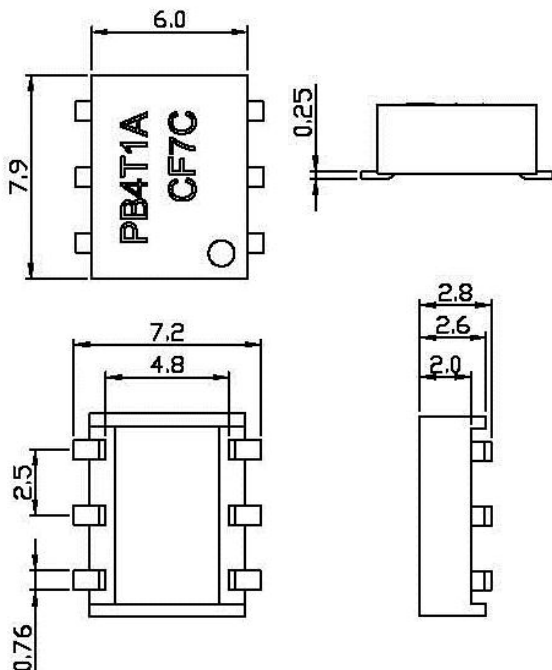
Test Conditions : T=25°C, 50ohm System, Measurement of the differential in phase between the two differential outputs. (measured from ±180°)

**Typical Performance Data**

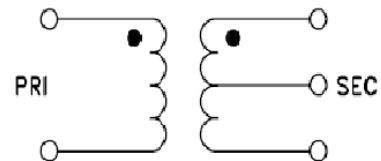
Frequency	MHz	10	50	250	400	500
Insertion Loss	dB	0.09	0.01	0.22	0.59	1.14
Input Return Loss	dB	15.7	16.7	23.5	17.1	11.1
Amplitude Unbalance	dB	0.01	0	0.15	0.47	0.83
Phase Unbalance	Degrees	0.2	0.2	2.3	5.4	8.7



**Outline Drawing (mm)**



**Schematic**



**PCB Footprint (mm)**

