SJM PREWELL

PD09A

Power Divider

Features

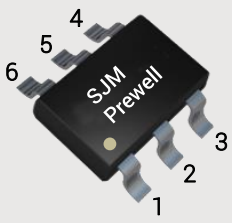
- 700 to 1000 MHz
- Insertion loss 0.88dB @ 800MHz
- Isolation -26.5dB @ 800MHz
- Lead-free / Green / RoHS compliant SOT-26 Package

Applications

- 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

RF IN	5	OUT 1	1
GND	2,4,6	OUT 2	3



Description

The PD09A is a high performance Divider in a high quality SOT-26 package & surface-mounted package. The device features low insertion loss and high isolation. The device has a good input/output matching and exceptional amplitude/phase balance. The product is targeted for using as wireless infrastructure applications. All devices are 100% RF and DC tested.

Specifications

Parameter	Units	Frequency (MHz)			
		700	800	900	1000
Insertion Loss	dB	0.83	0.88	0.99	1.17
Isolation	dB	-18.0	-26.5	-20.1	-14.4
Input Return Loss	dB	-25	-36	-20	-14
Output Return Loss	dB	-18	-19	-21	-23
Amplitude Balance	dB	0.00	0.00	0.01	0.02
Phase Balance	Deg.	0.03	0.12	0.01	0.11

1) Test Conditions : T=25°C, 50ohm System, Insertion Loss is less 3dB split.

Absolute Maximum Ratings

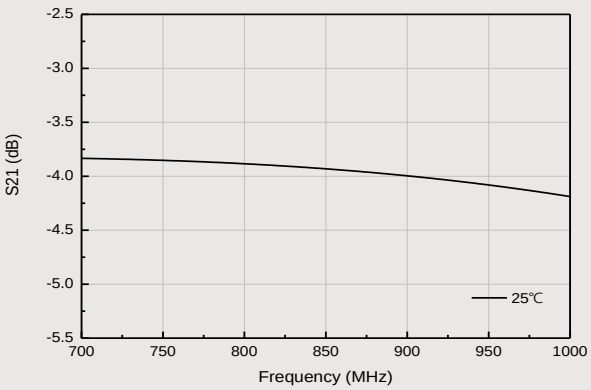
Parameter	Rating	Unit
RF Power Input	30	dBm
Storage Temperature	-55 to 150	°C
Ambient Operating Temperature	-40 to 85	°C

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

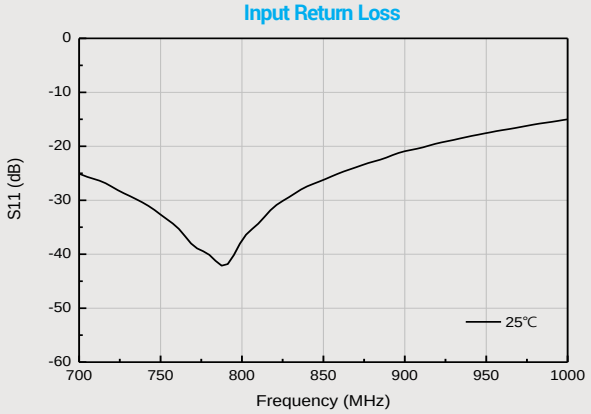
Typical RF Performance

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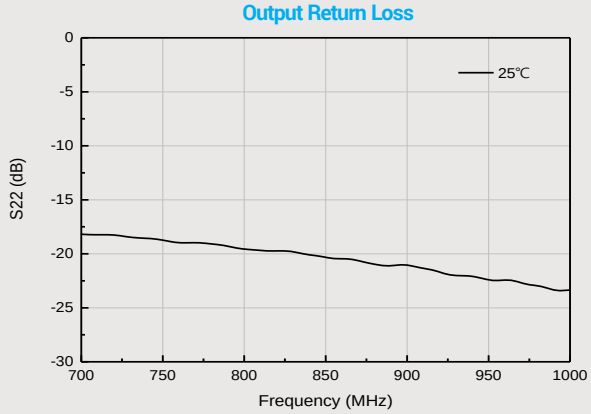
Insertion Loss



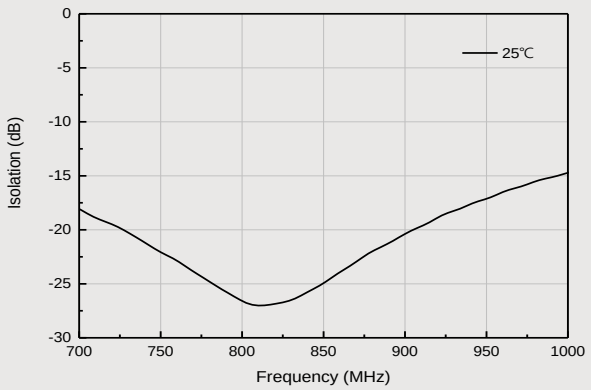
Input Return Loss



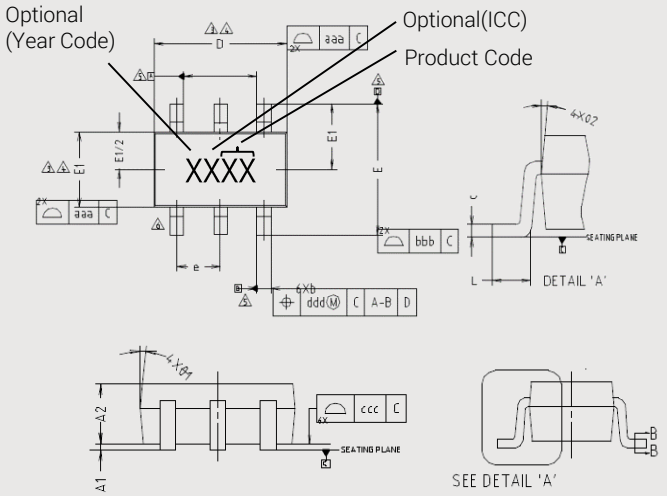
Output Return Loss



Isolation

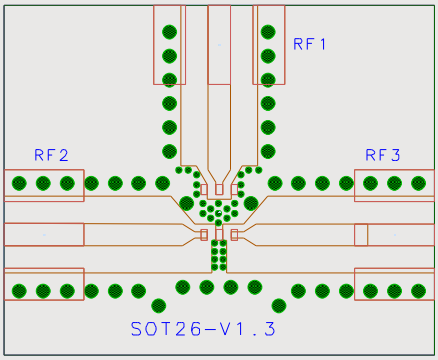


Lead-free /RoHS Compliant / Green SOT-26 Package Outline



SYMBOL	MILLIMETERS			NOTE	SYMBLO	TOLERANCE OF FORM AND POSITION	NOTE
	MINIMUM	NOMIANL	MAXIMUM				
A1	0.000	0.050	0.100		aaa	0.15	
A2	1.000	1.100	1.200		bbb	0.20	
b	-	0.100	0.450		ccc	0.10	
c	0.110	0.150	0.190		ddd	0.10	
D	2.800	2.900	3.000	3.4			
E	2.600	2.800	3.000				
E1	1.500	1.600	1.700	3.4			
e	0.930	0.950	0.970				
L	0.400	-	-				
θ1	5° REF.						
θ2	5° REF.						

Evaluation Board Layout (27 x 22)



Mounting Instructions

1 Use a large ground pad area with many plated through-holes as shown.
2 We recommend 1 oz copper minimum.
3 Measurement for our data sheet was made on 0.8mm thick FR-4 Board.
4 RF trace width depends on the board material and construction.
5 Add as much copper as possible to inner and outer layers near the part to ensure optimal thermal performance.