

DATA SHEET

PD22-73, PD22-73LF: Two-Way Power Splitter 2.1–2.3 GHz

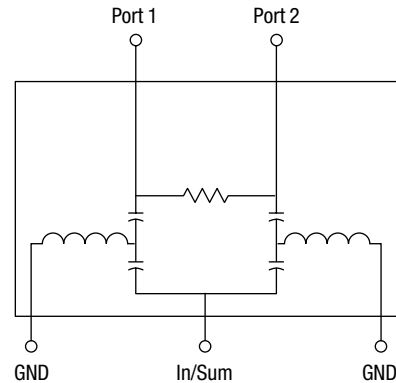
Features

- Low cost
- Low profile
- Small SOT-6 package
- Available on tape and reel
- Available lead (Pb)-free and RoHS-compliant MSL-1 @ 260 °C per JEDEC J-STD-020

Description

The PD22-73 is a 50 Ω, in-phase combiner/splitter tuned for the 2.1–2.3 GHz band. The monolithic circuitry is 100% passive and offers low loss, high isolation and exceptional phase/amplitude balance. It is available in the SOT-6 surface mount package.

Block Diagram



NEW Skyworks offers lead (Pb)-free, RoHS (Restriction of Hazardous Substances)-compliant packaging.

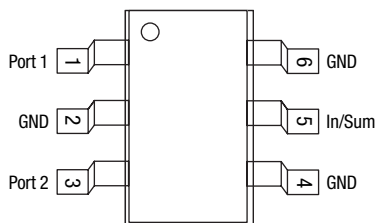


Electrical Specifications at 25°C, 50 Ω System

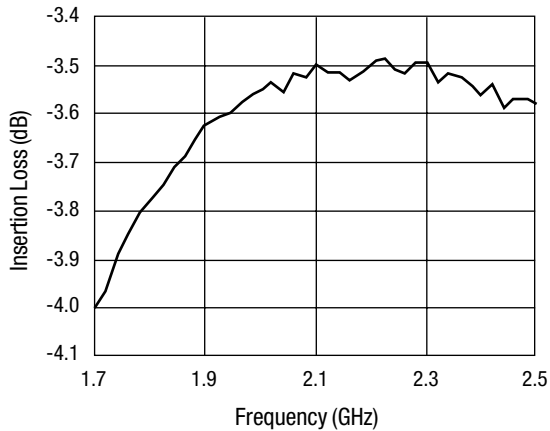
Parameter	Frequency	Min.	Typ.	Max.	Unit
Frequency		2.1		2.3	GHz
Insertion loss less 3 dB split			0.55	0.7	dB
Isolation ⁽¹⁾		15	18		dB
Input VSWR			1.5:1	2.0:1	
Output VSWR			1.1:1	1.3:1	
Amplitude balance			±0.1	±0.2	dB
Phase balance			±1	±3	Deg.

1. Isolation can be increased to 23 dB with an external 5.6 nH inductor from in/sum port to ground.

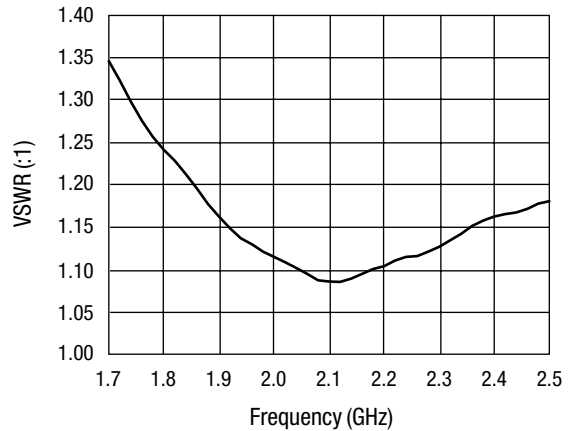
Pin Out



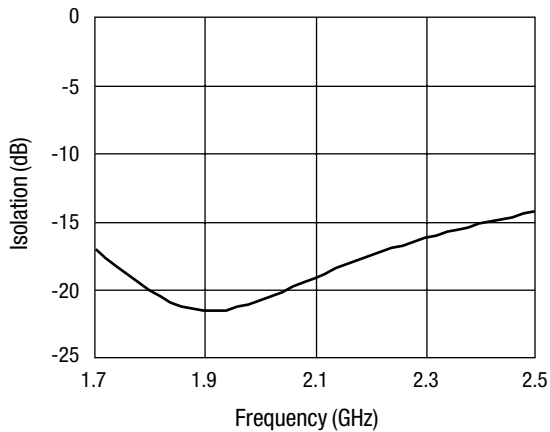
Typical Performance Data



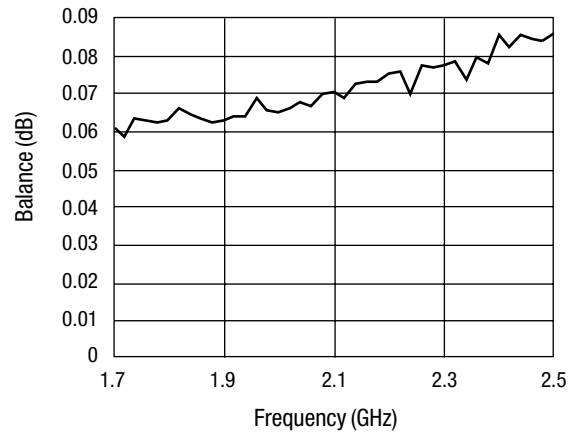
Insertion Loss vs. Frequency



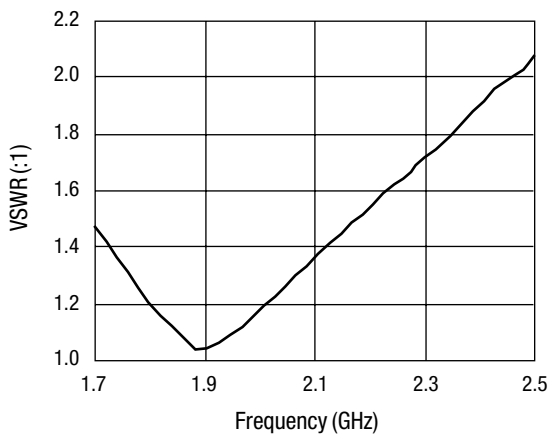
Output VSWR vs. Frequency



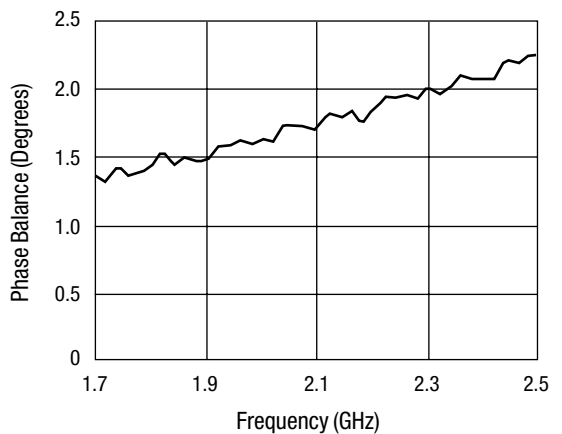
Isolation vs. Frequency



Amplitude Balance vs. Frequency

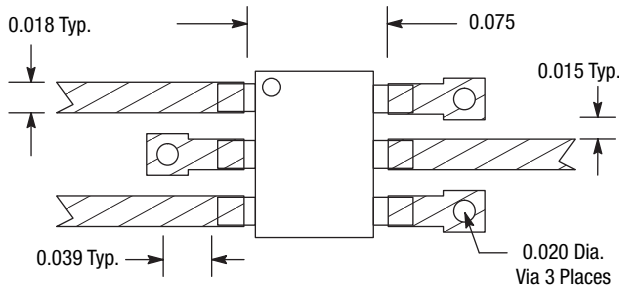


Input VSWR vs. Frequency



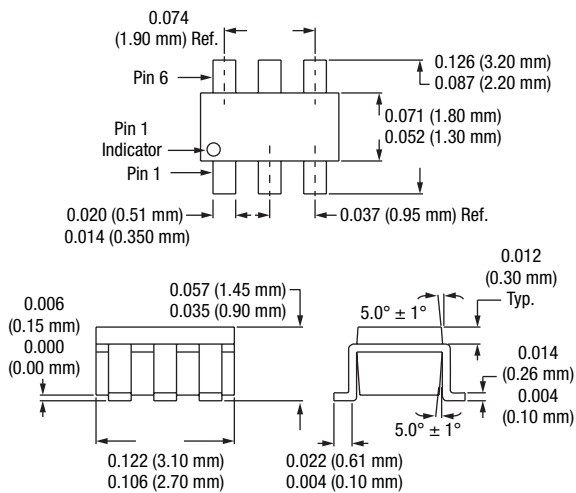
Phase Balance vs. Frequency

Recommended Board Layout



Material is 10 mil FR4.

SOT-6



Absolute Maximum Ratings

Characteristic	Value
Input power ⁽¹⁾	1.5 W CW
Input power ⁽²⁾	0.75 W CW
Operating temperature	-40 °C to +85 °C
Storage temperature	-65 °C to +150 °C

1. When used as a power divider with a 2.0:1 maximum VSWR on all ports.
 2. When used as a power combiner with a 2.0:1 maximum VSWR on all ports.
 Performance is guaranteed only under the conditions listed in the specifications table and is not guaranteed under the full range(s) described by the Absolute Maximum specifications. Exceeding any of the absolute maximum/minimum specifications may result in permanent damage to the device and will void the warranty.

CAUTION: Although this device is designed to be as robust as possible, ESD (Electrostatic Discharge) can damage this device. This device must be protected at all times from ESD. Static charges may easily produce potentials of several kilovolts on the human body or equipment, which can discharge without detection. Industry-standard ESD precautions must be employed at all times.

Recommended Solder Reflow Profiles

Refer to the [“Recommended Solder Reflow Profile”](#) Application Note.

Tape and Reel Information

Refer to the [“Discrete Devices and IC Switch/Attenuators Tape and Reel Package Orientation”](#) Application Note.

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