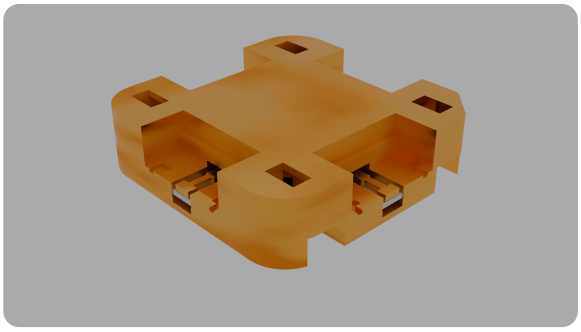
PSTLC04W Datasheet
Ultra-Broadband, Cross-Over Interconnect Bridge

General Description

The PSTLC04W is a 3.9 x 3.9 x 1.0 mm single-path cross-over, interconnect bridge. It has superior performance of typical 0.3dB IL and better than 16dB return loss over a frequency range of DC–72GHz. The isolation is >70dB over the frequency range. These devices were designed for high-density, multi-channel receivers to manage line routing with high isolation.



Applications

- EW
- Test and Measurement
- Satellite Communications
- Telecommunications
- RADAR

Benefits

- Small Size
- Wide operational range: DC–72GHz
- Low loss, high isolation
- CTE matched to IMA substrates

Features	
Frequency Range	DC–72 GHz
Insertion Loss	<0.5 dB
Channel Isolation	>70 dB
Package	3.9 x 3.9 x 1.0 mm, GSG Wirebond Launch

Performance Specifications

Table 1: RF Performance*

Parameter	Freq. Range (GHz)	Min.	Typ.	Max.	Unit
Insertion Loss	DC–72	–	0.3	0.5	dB
Return Loss	DC–72	16	20	–	dB
Channel Isolation	DC–72	70	75	–	dB

**Note: Min/Max performance based on operating temperature range.*

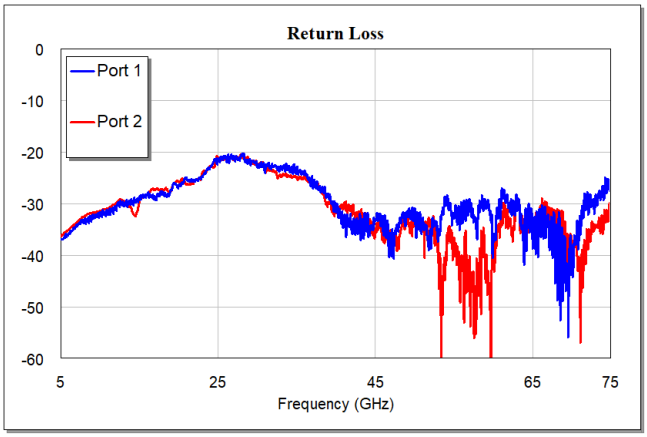
Table 2: Absolute Maximum Ratings

CW Power	10 W
Operating Temp.	-55°C to 125°C
Solder Reflow	260°C max. for 10 seconds, 3 cycles
Epoxy Attach	150°C max. for 90 minutes
Mechanical Vibration MIL-STD-883 M2026.4 (Cond. 1K)	45.0 Grms
Mechanical Shock MIL-STD-883 M2002.4 (Cond. B)	1500 G

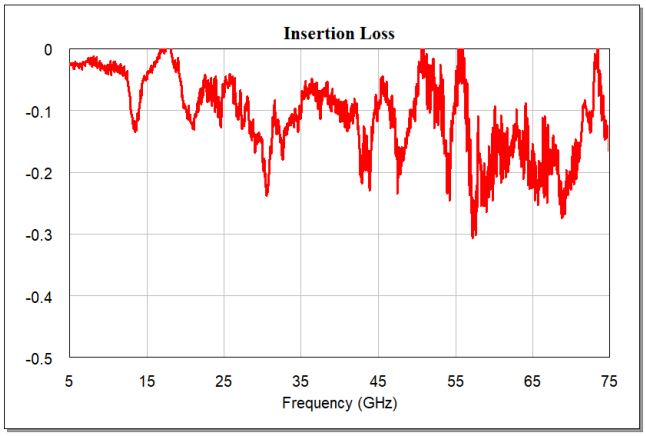
Typical Performance

Figure 1: RF performance

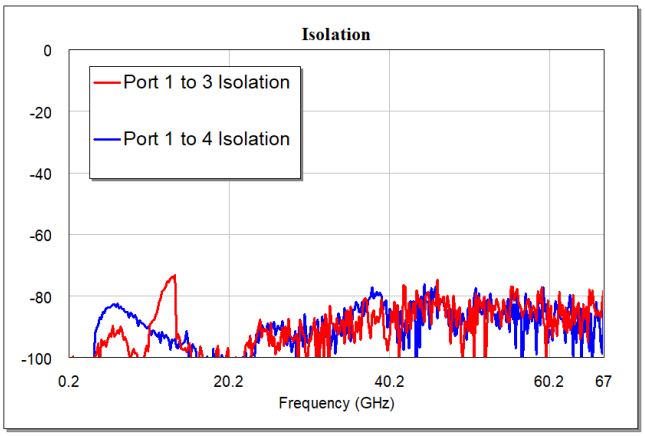
(a) Return Loss



(b) Insertion Loss



(c) Isolation

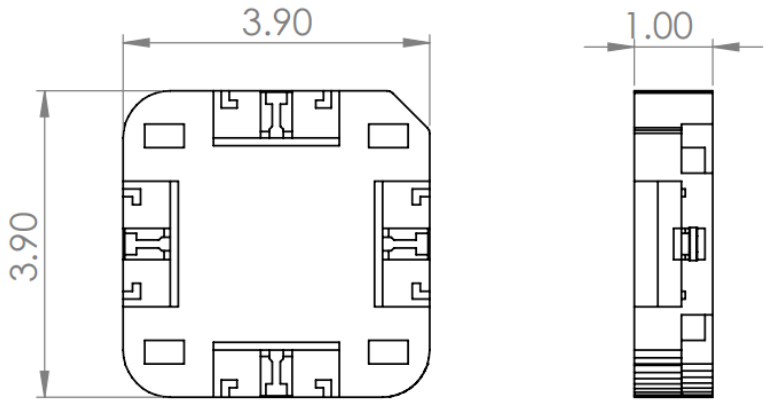


Plots above are measured, in fixture data.

Mechanical Information

Figure 2: 2D Mechanical Drawing

Dimensions in mm



Note: Manufacturing tethers extend past the indicated dimensions of the part. See STEP model for details.

Additional Information

Table 3: Handling and Ordering Information

Storage	IAW IPC-4553A
ESD Sensitivity	None
Ordering Information	PSTLC04W
Standard Packaging	Gel Pack
Alternative Packaging	Tape & Reel
Component Termination Finish	Immersion Gold

- Application notes on Wirebond integration are available at: https://www.nuvotronics.com/resources/