

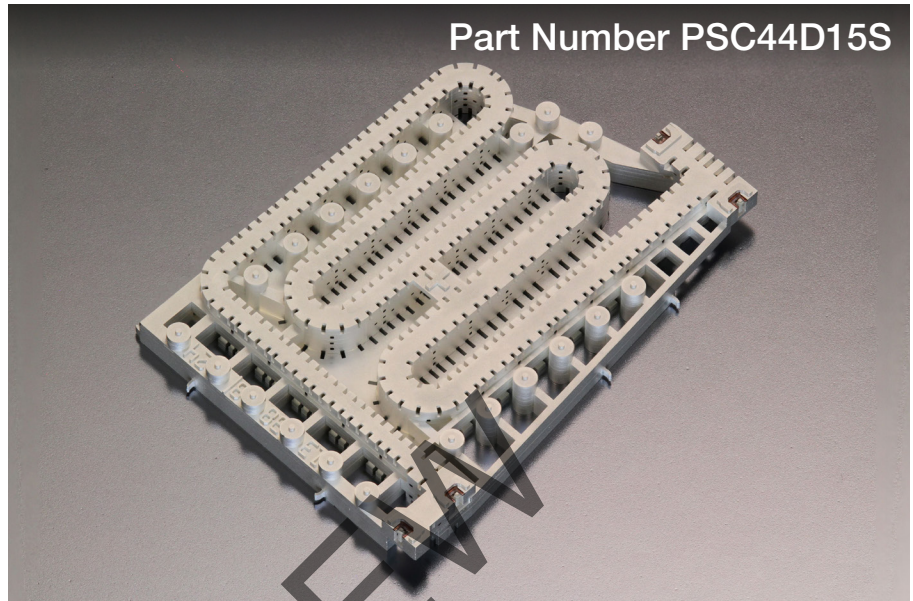


Features and Benefits

- **Compact Size and Weight**
-Greater than 10X reduction over traditional technologies
- **Near Ideal Performance**
-Higher rejection and flatter passbands
- **Precision**
-Low part-to-part variation
- **Ease of Assembly**
-Standard SMT processes
- **Lower System BOM Cost**
-Eliminate extra gain stages and signal cleanup

Applications

- Metrology
- Electronic Warfare
- Imaging
- Test and Measure
- Radar



Surface Mount Broadband Coupler

Surface mount millimeter-wave coupler with unrivaled loss – in an ultra-miniature form factor.

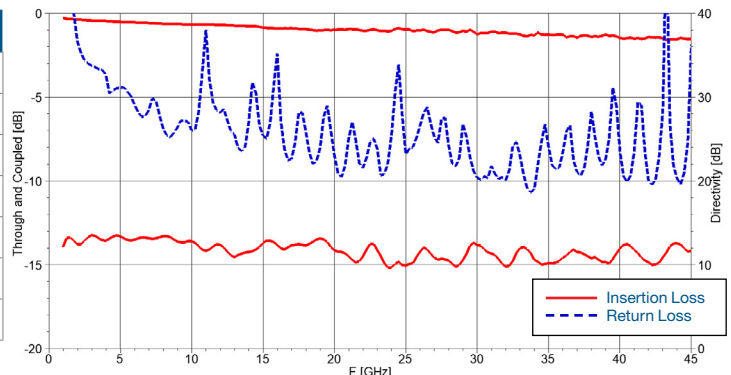
Description

Nuvotronics air-coax technology delivers performance and precision for your millimeter-wave systems. Part Number PSC44D15S is a surface-mount Ultrawideband Coupler with unparalleled flatness and performance.

This PSC44D15S part has a passband of 1 GHz – 44 GHz with a characteristic impedance of 50 Ω. The high power, low loss performance of this part is ideal for space or ground applications. This part is compliant with RoHS standards. Tape and reel packaging is available for bulk orders.

Typical Electrical Performance

Parameter	1-20GHz	20-30GHz	30-44GHz
Return Loss	> 25 dB	> 20 dB	> 20 dB
Insertion Loss	< 1 dB	< 1.2 dB	< 1.5 dB
Coupling, S31	15 dB	15.5 dB	15.7 dB
Coupling, S42	14 dB	13.8 dB	13.8 dB
Isolation, S41	> 30 dB	> 28 dB	> 27 dB
Isolation, S32	> 32 dB	> 28 dB	> 26 dB
Directivity, S42-S41	10 dB	12 dB	12 dB



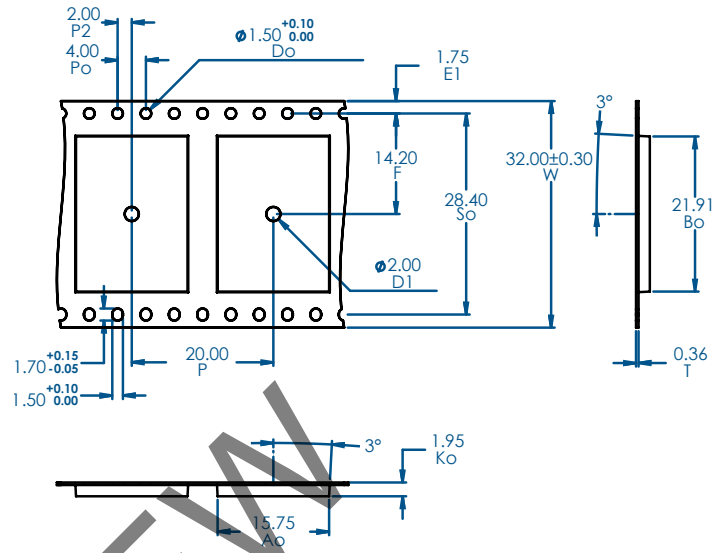
Absolute Maximum Ratings

Power	20W CW
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

Additional Details

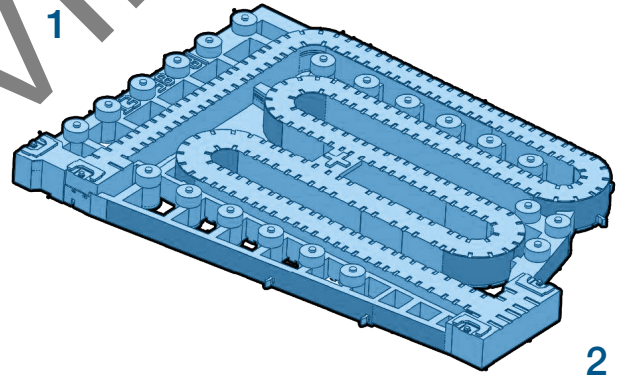
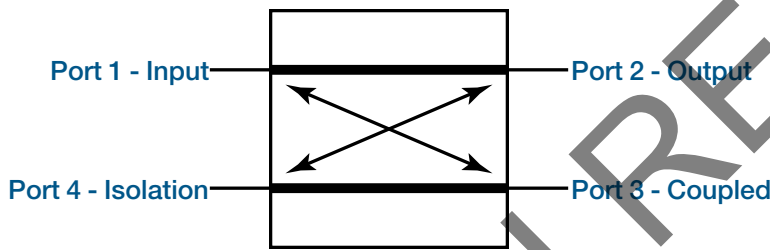
Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
EDS Sensitivity	None
Moisture Sensitivity	MSL3
Ordering Information	1013388
Standard Packaging	Tape and Reel Conforms to EIA-481-E
Alternative Packaging Available	Gel-coated Substrate Carrier Waffle pack
Component Termination Finish	Immersion Silver
Certifications	RoHS compliant

Tape and Reel



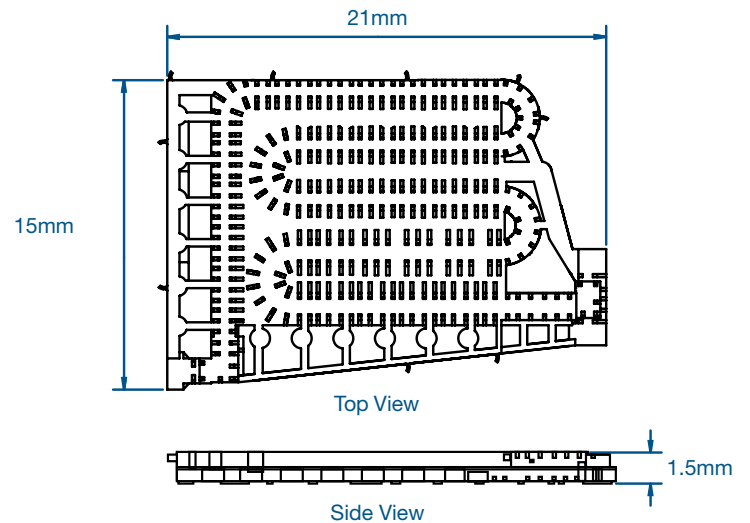
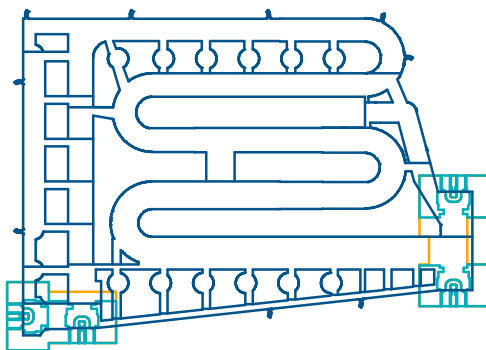
Simplified Block Diagram

Component View



PCB Layout

Mechanical Drawing



Legend: TOP METAL ■ SOLDER MASK ■ PART OUTLINE ■

Drawings available upon request