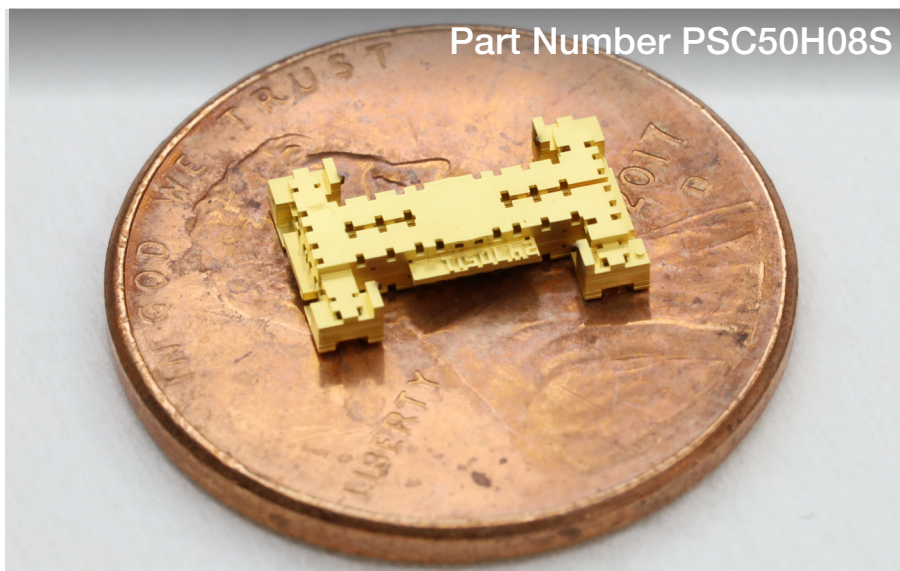


Features and Benefits

- **Small Size and Lightweight**
- **Near Ideal Performance**
 - Low insertion loss
 - Good phase and amplitude balance
- **Precision**
 - Low part-to-part variation
- **Ease of Assembly**
 - Standard SMT Processes
- **Self-shielded**

Applications

- EW
- Radar
- SIGINT
- **Balanced Amplifier**
- **Butler Matrix**



18-50 GHz 90 Degree Hybrid Coupler

Surface mount 90 degree hybrid coupler in a miniature form factor.

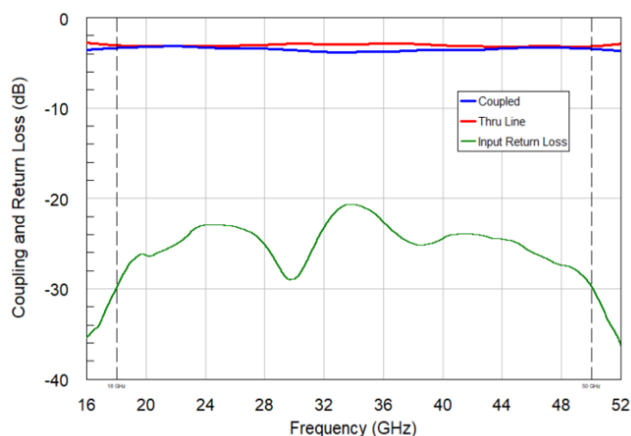
Description

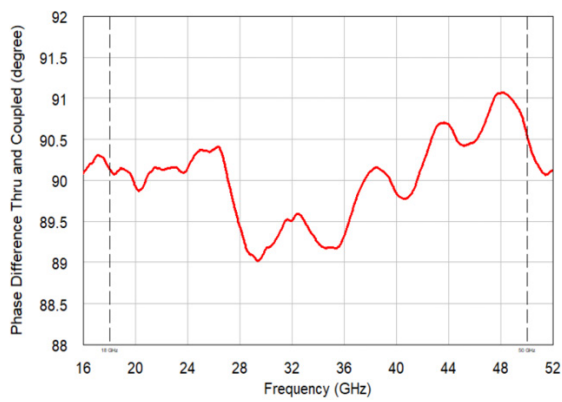
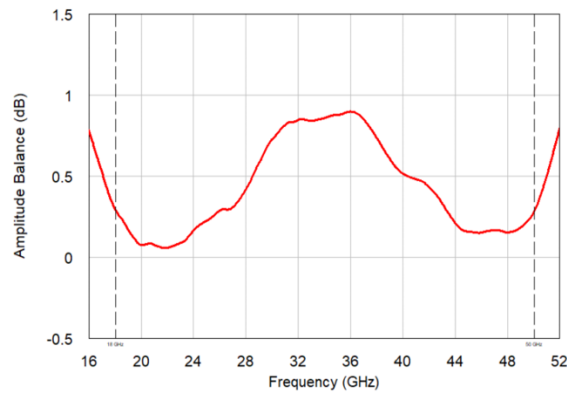
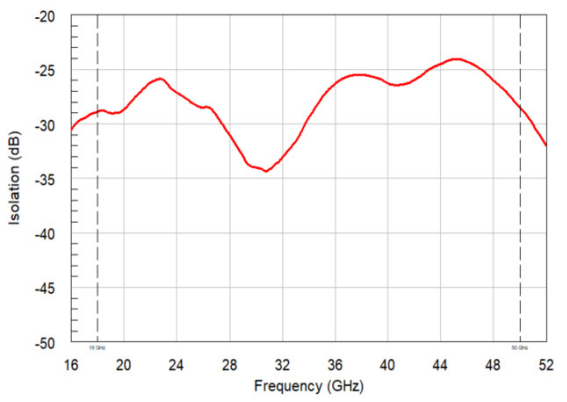
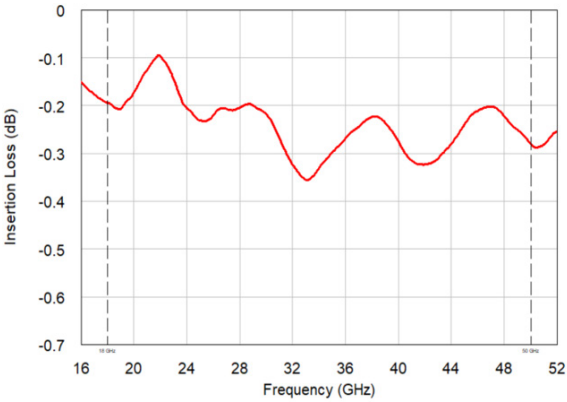
Nuvotronics air-coax technology delivers performance and precision for your millimeter-wave systems. PSC50H08S is a surface-mount 90 degree hybrid coupler covering 18-50 GHz.

The PSC50H08S is self-shielded and uses an air dielectric. The precise PolyStrata® technology results in excellent amplitude and phase balance along with low insertion loss. The device is designed to be surface mounted using conventional SMT processes and is available in tape and reel packaging for bulk orders.

Typical Electrical Performance

Parameter	Frequency Range (GHz)	Min	Typ	Max
Insertion Loss (dB)	18 - 50	-	0.35	0.5
Return Loss (dB)		16	20	-
Isolation (dB)		20	25	-
Amplitude Balance (dB)		-	+/- 0.9	+/- 1.0
Phase Balance (dB)		-	+/- 1.0	+/- 3.0





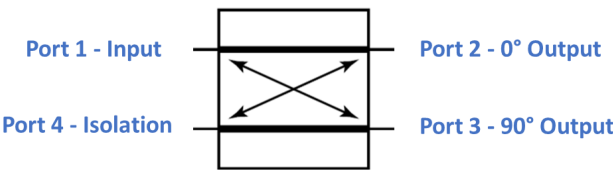
Additional Details

Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
EDS Sensitivity	None
Ordering Information	PSC50H08S
Standard Packaging	PSC50H08SWP (Waffle Pack)
Alternative Packaging Available	Tape and Reel Conforms to EIA-481 latest revision
Component Termination Finish	Immersion Silver, Immersion Gold
Certifications	EAR99

Absolute Maximum Ratings

Power	Minimum 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

Simplified Block Diagram



Mechanical Drawing

