



2025 Product Catalog

Filters

Multiplexers

mmWave Packages

Couplers/Combiners

Antennas

Baluns

The Future is Shipping Now

Unlock the Future of RF with PolyStrata®

Whether you need stand-alone passive components or highly integrated assemblies combining multiple MMICs, PolyStrata technology delivers unmatched performance for millimeter-wave and ultra-broadband applications. Our advanced 3D manufacturing enables low loss, high isolation, and exceptional power handling—all in a compact, surface-mount package that redefines what’s possible in RF design.

What is it?

Our patented PolyStrata® architecture provides an unprecedented platform for mmWave performance, integration and miniaturization. Offering 10x to 100x improvement in Size, Weight, and Power (SWaP), Nuvotronics is the industry leader in mmWave technologies for space, electronic warfare and commercial markets.

Highest Performing SMT component on the market

Broadband performance DC - 300 GHz

High isolation between adjacent coax signal lines (>80 dB)

Low loss 3D signal routing and multi-layer stacking

Micron level tolerances produce very repeatable hardware

Active and passive component integration

Inherent thermal power dissipation



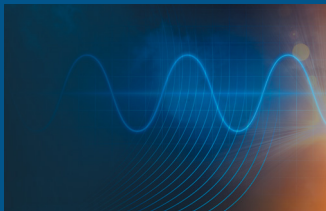
Applications



Satellite Communications



Electronic Warfare



Test and Measurement



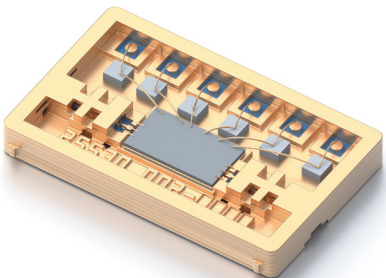
Telecom

Product Offerings



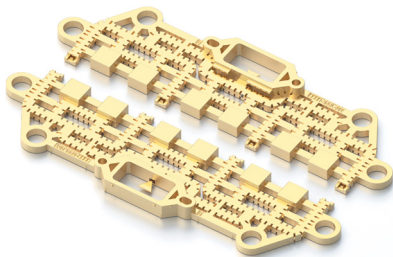
Filters

- Air-core components eliminate dielectric loss
 - Better RF performance with similar size and cost when compared to other planar solutions
- Repeatable, panel-scale manufacturing
 - Low part-to-part variation
- Ease of assembly
- Standard SMT processes



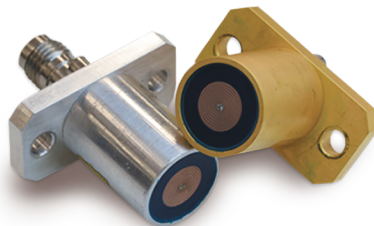
mmWave Package

- Solid copper package body results in optimal thermal performance
- MMIC interfaces minimize loss and wire bond length
- Compatible with automated Au wire bonding
- PCB interface compatible with standard SMT processes
- High isolation between components
- High performance - 0.5 dB loss up to 95 GHz



Couplers/Combiners

- Excellent amplitude and phase balance
- Low loss
- High isolation between channels
- Small size and weight



Wideband Antennas

- Spirals available with right or left polarization
- Available with 2.40/2.92/1.85 mm connector options
- 18 – 60 GHz coverage (can go to over 100 GHz)
- 0.5” diameter package, excluding mounting flange
- Sinuous antennas also available



Custom and Integrated Solutions

Can’t find exactly what you are looking for?
Contact sales@nuvotronics.com to customize your solution.

Filters

SATCOM FILTER	Part Number	Frequency (GHz)	Insertion Loss	Application
	PSF19B02S	17.7-20.2	< 2 dB	Commercial Space
	PSF19B03S	17.7-21.2	0.9 dB	Commercial Space
	PSF19B02V3S	17.7-20.2	0.8 dB	Commercial Space
	PSF28B02S	27.5-30	1 dB	Commercial Space
	PSF29B02S	27.5-30	0.7 dB	Commercial Space
	PSF29B03V2S	27.5-31	< 0.5 dB	Defense Space
	PSF29B03S	27.5-31	1.2 dB	Defense Space
	PSF40B05S	37.5-42.5	1.1 dB	Commercial Space
	PSF49B05S	47.2-52.4	1.2 dB	Commercial Space
	PSF49B05V2S	47.2-52.4	< 0.5 dB	Commercial Space
	PSF28B01S	27.5-28.5	2.5 dB	SatCom Upconverter
	PSF29B01S	28-29	2.5 dB	SatCom Upconverter
	PSF30B01S	29-30	2.5 dB	SatCom Upconverter
	PSF31B01S	30-31	2.5 dB	SatCom Upconverter

WIDEBAND	Part Number	Frequency (GHz)	Insertion Loss	Application
	PSF29B22S	18-40	0.4 dB	Electronic Warfare
	PSF34B32S	18-50	0.3 dB	Electronic Warfare

LOWPASS FILTER	Part Number	Frequency (GHz)	Insertion Loss	Product	Application
	PSFL06S	6	< 1 dB	Lowpass Filter	EW, SigInt, Satcom, Radar
	PSFL12S	12	< 0.75 dB	Lowpass Filter	EW, SigInt, Satcom, Radar
	PSFL18S	18	< 1.5 dB	Lowpass Filter	EW, SigInt, Satcom, Radar
	PSFL40S	40	< 1.5 dB	Lowpass Filter	EW, SigInt, Satcom, Radar

μMUX MULTIPLEXER	Part Number	Frequency (GHz)	Insertion Loss	Product	Application
	PSM0218B5S	0-2-4-8-12-18	< 2 dB	Quintplexer	EW, SigInt
	PSM0640B4S	0-6-10.5-18-40	< 1.5 dB	Quintplexer	EW, SigInt
	PSM0206B3S	0-2-3.5-6	< 1.5 dB	Triplexer	EW, SigInt
	PSD1840B2S	0-18-40	< 1.25 dB	Diplexer	EW, SigInt
	PSD1840B2SV2	0-18-40	< 1 dB	Diplexer	EW, SigInt

Interconnect: Transmission Lines and Crossovers

CROSSTOVERS	Part Number	Description	Launch	Frequency Range (GHz)	Insertion Loss	Isolation (*Shielded)	Application
	PSTLC04W	Dual-Path Crossover	Wire-bond	DC-70	0.2 dB	-80 dB*	Defense, T&M, Satcom
	PSTLC02S	Single-Path Crossover	SMT	DC-50	0.2 dB	-40 dB	Defense, T&M, Satcom
	PSTLC02SV2	Dual-Path Crossover	SMT	DC-50	0.2 dB	-75 dB*	Defense, T&M, Satcom
	PSTLC04S	Dual-Path Crossover	SMT	DC-50	0.2 dB	-45 dB	Defense, T&M, Satcom

Couplers & Combiners

COUPLERS	Part Number	Description	Frequency (GHz)	Insertion Loss	Output Power (CW)	Application
	PSC18H17S	90 Degree Hybrid Coupler	2-18	0.75 dB	20W	Electronic Warfare
	PSC18H07S	90 Degree Hybrid Coupler	6-18	0.3 dB	20W	Electronic Warfare
	PSC50H08S	90 Degree Hybrid Coupler	18-50	0.35 dB	20W	Electronic Warfare

COMBINERS	Part Number	Description	Frequency (GHz)	Insertion Loss	Output Power (CW)	Application
	PSX12Q12W	4-way combiner	6-18	0.4 dB	80W	Electronic Warfare
	PSX29Q22W	4-way combiner	18-40	0.4 dB	80W	Electronic Warfare
	PSX29Q03W	4-way combiner	27.5-31	0.4 dB	80W	Commercial & Defense Space
	PSX50Q05W	4-way combiner	47.2-52.4	0.5 dB	80W	Commercial Space

mmWave Packages

STANDARD PACKAGES	Part Number	Lid #	Single Sided Transition Performance			Max Die Size			Package Size			DC Pins
			Max Frequency (GHz)	Insertion Loss (AB)	Return Loss (dB)	X (mm)	Y (mm)	Z (mm)	X (mm)	Y (mm)	Z (mm)	
	PSP1028104	1028940-007	95 GHz	0.65 dB	12 dB	5.71	5.55	0.1	9	9	0.7	16
	PSP1028105	1028940-006	95 GHz	0.65 dB	12 dB	4.71	4.55	0.1	8	8	0.7	14
	PSP1028106	1028940-005	95 GHz	0.65 dB	12 dB	3.71	3.55	0.1	7	7	0.7	12
	PSP1028107↑	1028940-004	95 GHz	0.65 dB	12 dB	2.71	2.55	0.1	6	6	0.7	12
	PSP1028108↑	1028940-003	95 GHz	0.65 dB	12 dB	1.71	1.55	0.1	5	5	0.7	8
	PSP1028109↑	1028940-005	50 GHz	0.3 dB	12 dB	5	5	0.1	7	7	0.4	12
	PSP1028110	1028940-004	50 GHz	0.3 dB	12 dB	4	4	0.1	6	6	0.4	10
	PSP1028111↑	1028940-003	50 GHz	0.3 dB	12 dB	3	3	0.1	5	5	0.4	8
	PSP1028112↑	1028940-002	50 GHz	0.3 dB	12 dB	2	2	0.1	4	4	0.4	6
	PSP1028113	1028940-001	50 GHz	0.3 dB	12 dB	1	1	0.1	3	3	0.4	4

↑ Samples Available

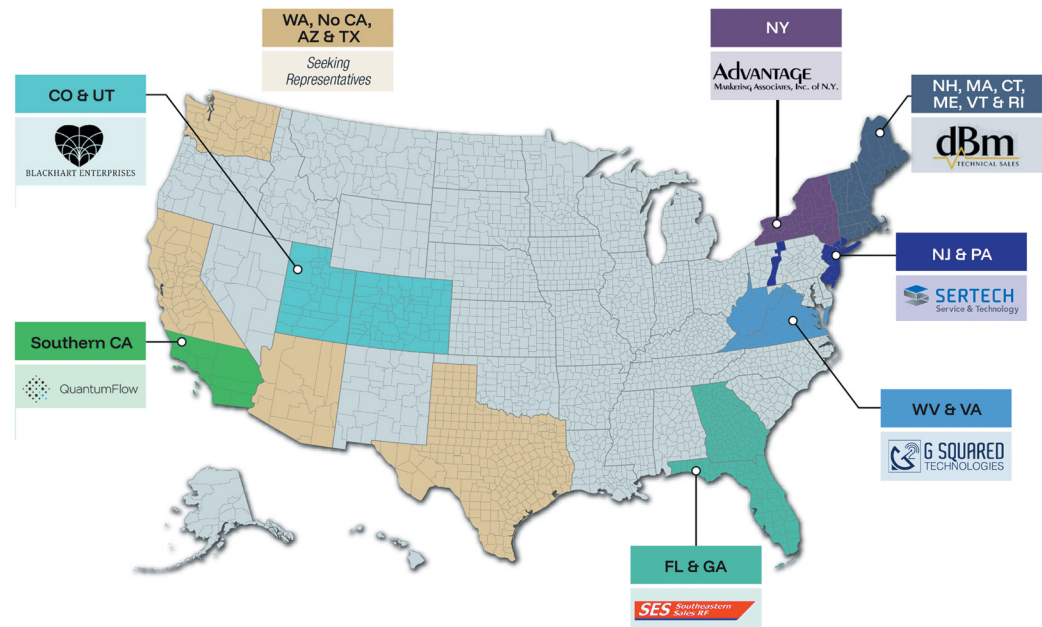
Device Specific mmWave Packages

DEVICE SPECIFIC PACKAGES	Part Number	Matching Device	Manufacturer	Package Size			Lid #
				X	Y	Z	
	PSP1025530_002	ALP302	Northrop Grumman	6.34	3.869	1.513	1025503
	PSP1029439	TGA2962	Qorvo	5.5	6	1.425	1028940-009

Wideband Antennas

ANTENNAS	Part Number	Description	Frequency (GHz)	Band	Application
	PSA1850C-4	4-arm sinuous antenna	18-50	Mid/High Band	Electronic Warfare
	PSA1850C	2-arm spiral antenna	18-50	Mid/High Band	Electronic Warfare

Where to Buy



Sales Representatives



Advantage Marketing Associates
New York



Blackhart Enterprises
Colorado, Utah



dBm Technical Sales
New Hampshire, Massachusetts, Rhode Island, Vermont, Maine, Connecticut (excluding Fairfield County, CT)



G-Squared Technology
Maryland, Virginia, West Virginia, District of Columbia



QuantumFlow
Southern California



Sertech Service & Technology
Eastern Pennsylvania (Potter, Cameron, Clearfield, Cambria and Somerset Counties), New Jersey, Metro New York (Rockland and Westchester Counties, New York, and Fairfield County), Connecticut



Southeasters Sales RF
Georgia, Florida



Terawave
South Korea

Global Distributor



RFMW
As an authorized Nuvotronics distributor, RFMW has developed customer relationships globally; this gives customers access to the best engineers and their solutions for any given application.



About Us

Nuvotronics developed the patented PolyStrata® technology and created the world's first 3D air-dielectric RF platform. Delivering unprecedented performance in minimal form factors, we provide high-performance components and hardware solutions suitable for demanding space, airborne, and terrestrial applications. Our high-volume production capability makes us a great choice for both commercial and defense applications.

Nuvotronics Main Facility – Durham, NC

- Component/Integrated RF Design
- Automated test capability to 110 GHz
- Over 60,000 square feet of manufacturing space
- Capable for ITAR and Classified work
- DoD Category 1A Trusted IC Supplier – Post Processing and Packaging / Assembly Services





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