

Ultra Broadband PIN Diode Switches Covering 0.05 to 110 GHz

Ducommun's ultra broadband PIN diode switch series is offered to extend the RF switching capacity to the frequency range of 0.05 to 110 GHz, where a single AlGaAs MMIC-based switch operates from 0.05 to 67 GHz while three GaAs beam-lead PIN diode/Fin-line technology based waveguide switches cover V (50-75 GHz), E (60-90 GHz) and W (75-110 GHz) bands respectively.

The switches covering the entire range of 0.05 - 67 GHz use 1.85 mm coaxial connectors as I/O interface and offer SPST to SP8T solutions as well as both reflective & absorptive options, while the switches operating in full V, E, and W WG-bands have WR-15, WR-12 and WR-10 waveguide interfaces and offer SPST & SPDT solutions. All the switches are TTL controlled with typical +/- 5 V biasing and provide superior performance with low insertion loss, high isolation and fast switching speed across broad operating frequency ranges. They are ideal for those who want to turn on/off RF signal across a wide frequency range by using a single switch.

Features

- Ultra broadband
- Low insertion/high isolation
- Fast switching
- Complete solid state solution

Applications

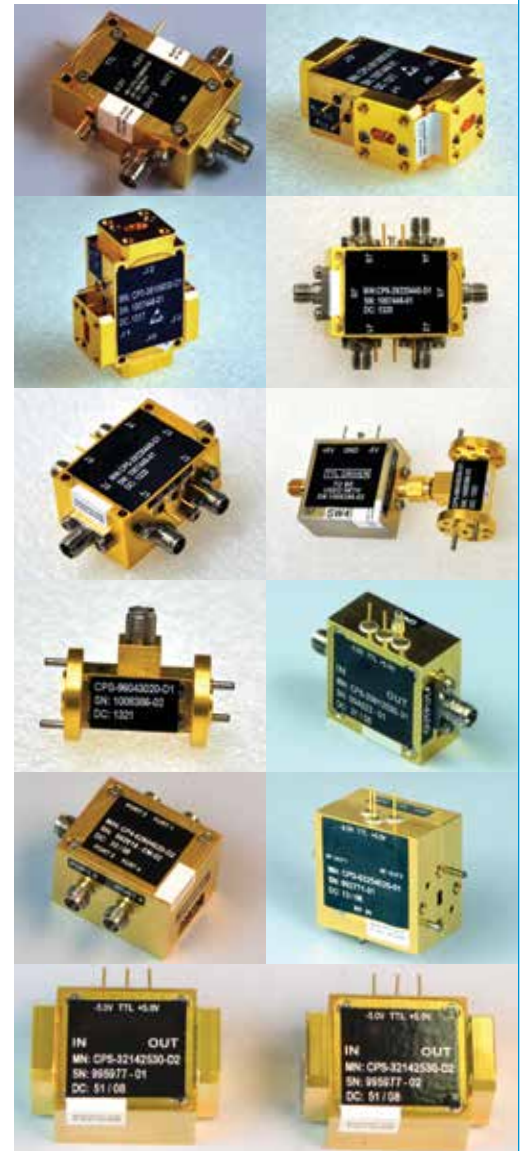
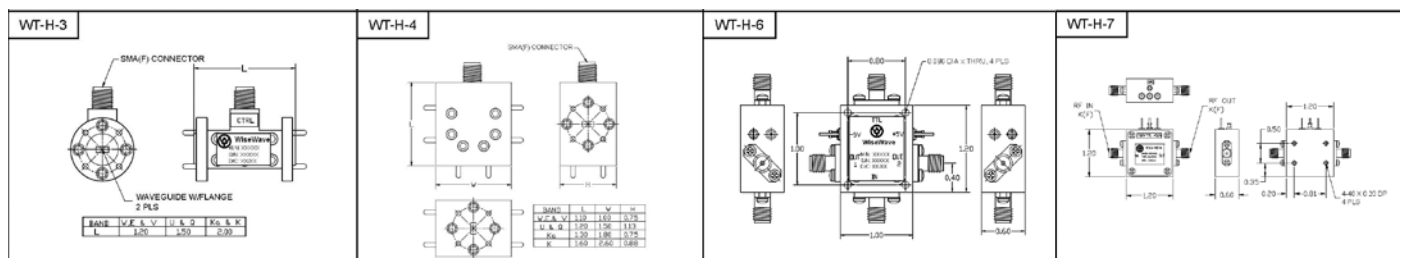
- Telecommunication
- Test instrumentation
- Radar front

About Ducommun

Ducommun is a key supplier of microwave and millimeter wave components and sub-assemblies covering the frequency range of DC to 110 GHz. Ducommun has been making RF products since 1969, first as Dynatech (DMT) and then expanding our product offering with the acquisitions of DBP Microwave and WiseWave Technologies. We have designs for commercial aircraft, military aircraft, defense, industrial, medical, SATCOM, telecommunications and test & measurement applications.

Outlines

Dimensions are in inches



Ultra Broadband PIN Diode Switches

-55 to +85°C

Model Number	Description	Frequency Band/Range (GHz)	Insertion Loss (dB)	Isolation (dB)	Speed (nS)/ Power (W)	I/O VSWR	Control	Outline
CPS-33672030-01	SPST, reflective	0.05 - 67	0.05-30 GHz 1.0 dB (Max) 30-50 GHz 2.0 dB (Max) 50-67 GHz 3.0 dB (Typ)	20 dB (Min) 40 dB (Typ)	100 (Max)/ 1.0 (Max)	2.0 : 1	TTL	WT-H-7
CPS-33673030-A1	SPST, absorptive	0.05 - 67	0.05-30 GHz 2.0 dB (Max) 30-50 GHz 3.0 dB (Max) 50-67 GHz 4.0 dB (Typ)	20 dB (Min) 40 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-7
CPD-33673030-01	SPDT, reflective	0.05 - 67	0.05-30 GHz 2.5 dB (Max) 30-50 GHz 3.5 dB (Max) 50-67 GHz 4.5 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-6
CPD-33674060-A1	SPDT, absorptive	0.05 - 67	0.05-30 GHz 4.0 dB (Max) 30-50 GHz 6.0 dB (Max) 50-67 GHz 7.0 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 40 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-6
CP3-33675030-01	SP3T, reflective	0.05 - 67	0.05-30 GHz 3.0 dB (Max) 30-50 GHz 5.0 dB (Max) 50-67 GHz 7.0 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP3-33676560-A1	SP3T, absorptive	0.05 - 67	0.05-30 GHz 4.0 dB (Max) 30-50 GHz 6.5 dB (Max) 50-67 GHz 8.5 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 50 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP4-33675530-01	SP4T, reflective	0.05 - 67	0.05-30 GHz 3.5 dB (Max) 30-50 GHz 5.5 dB (Max) 50-67 GHz 7.5 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP4-33677060-A1	SP4T, absorptive	0.05 - 67	0.05-30 GHz 4.5 dB (Max) 30-50 GHz 7.0 dB (Max) 50-67 GHz 9.0 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 50 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP5-33676030-01	SP5T, reflective	0.05 - 67	0.05-30 GHz 4.0 dB (Max) 30-50 GHz 6.0 dB (Max) 50-67 GHz 8.0 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP5-33677560-A1	SP5T, absorptive	0.05 - 67	0.05-30 GHz 5.0 dB (Max) 30-50 GHz 7.5 dB (Max) 50-67 GHz 9.5 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 50 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP6-33676030-01	SP6T, reflective	0.05 - 67	0.05-30 GHz 4.5 dB (Max) 30-50 GHz 6.5 dB (Max) 50-67 GHz 8.5 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP6-33677560-A1	SP6T, absorptive	0.05 - 67	0.05-30 GHz 5.5 dB (Max) 30-50 GHz 8.0 dB (Max) 50-67 GHz 10.0 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 50 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP8-33676030-01	SP8T, reflective	0.05 - 67	0.05-30 GHz 5.0 dB (Max) 30-50 GHz 7.0 dB (Max) 50-67 GHz 9.0 dB (Typ)	0.05-40 GHz 30 dB (Min) 40-67 GHz 25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP8-33676030-02	SP8T, reflective	0.05 - 50	0.05-30 GHz 4.0 dB (Max) 30-50 GHz 6.0 dB (Max)	0.05-40 GHz 30 dB (Min) 40-50 GHz 30 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD
CP8-33677560-A1	SP8T, absorptive	0.05 - 67	0.05-30 GHz 6.0 dB (Max) 30-50 GHz 8.5 dB (Max) 50-67 GHz 11.0 dB (Typ)	0.05-40 GHz 60 dB (Min) 40-67 GHz 50 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	TBD

Millimeterwave Full Waveguide Band PIN Diode Switches

-55 to +85°C

Model Number	Description	Frequency Band/Range (GHz)	Insertion Loss (dB)	Isolation (dB)	Speed (nS)/ Power (W)	I/O VSWR	Control	Outline
CPS-63253025-01	SPST, reflective WR-15 Waveguide	V-band 50 - 75	3.0 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-3
CPD-63254025-01	SPDT, reflective WR-15 Waveguide	V-band 50 - 75	4.0 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-4
CPS-75303525-01	SPST, reflective WR-12 Waveguide	E-band 60 - 90	3.5 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-3
CPD-75304525-01	SPDT, reflective WR-12 Waveguide	E-band 60 - 90	4.5 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-4
CPS-93354025-01	SPST, reflective WR-10 Waveguide	W-band 75 - 110	4.0 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-3
CPD-93355025-01	SPDT, reflective WR-10 Waveguide	W-band 75 - 110	5.0 dB (Typ)	25 dB (Typ)	100 (Max)/ 0.5 (Max)	2.0 : 1	TTL	WT-H-4

 For more information, contact our sales team at **310.513.7200** or rfsales@ducommun.com