

# SP4T Pin Diode Switches 0.5-18 GHz



The Mercury Systems PIN diode SP4T switch family spans the frequency range of 0.5 – 18 GHz. It offers high performance and an integrated high speed driver controlled by TTL or CMOS signals. This switch will maintain high performance as a drop in device for system or subsystem requirements. The Mercury Systems family of high performance switches is available in military or non military versions, hermetic and non-hermetic.

## Applications

EW systems  
Communications systems  
Antenna/Filter Selectors

## Features

Broadband units  
Environmentally sealed  
-55° C to +95° C operation  
Shock/vibration/acceleration capable

## SP4T Specifications

Band	Frequency GHz	Reflective			Absorptive			Switching Speed (nS MAX)
		Insertion Loss (dB MAX)	VSWR (MAX)	Isolation (dB MIN)	Insertion Loss (dB MAX)	VSWR (MAX)	Isolation (dB MIN)	
1	0.5 - 2	1.6	1.6	80	1.7	1.6	80	100
2	2 - 6	1.6	1.7	70	1.7	1.7	75	100
3	6 - 18	3.2	2.0	60	3.4	2.0	65	100
4	2 - 18	3.3	2.0	60	3.5	2.0	65	100
5	0.5 - 18	3.4	2.0	60	3.6	2.0	65	100

## Power Supply Option

Code ± 5%	A	B	C	Current (mA MAX)
+V	+5V	+5V	+12 to +15V	100
-V	-5V	-12 to -15V	-12 to -15V	50

## Control Logic Option

Control Logic	Switch State	
	Normal N	Inverting I
TTL 0	Ins. Loss	Isolation
TTL 1	Isolation	Ins. Loss

## Specifications

Switching Speed measured from 50% control to 10/90% RF  
 Max. RF Power (Operational/Survival) 0.5W / 1W  
 Storage Temperature -65° to +150°C  
 Finish Gray Epoxy Paint per MIL-C-22750  
 Weight 2.5 oz. Max  
 Control E1 Controls J1-J5  
 E2 Controls J2-J5  
 E3 Controls J3-J5  
 E3 Controls J4-J5

## Ordering Information

### SA4NA4

Absorptive - SA  
 Reflective - SR  
 Frequency band, 1-5  
 SP4T, 4  
 Power Supply Option, A-C  
 Control Logic Option, N-I

# Outline Drawing

