

## Solid State PIN Control Products

2-18 GHz

## Value Series PIN Switches



- SPST through SP4T and Transfer
- Integral TTL Drivers
- Hermetically Sealed

**Description**

Narda Value Series PIN switches provide a lower cost alternative to the super slim and performance series. They are ideal for many applications where miniature size and state-of-the-art performance are not required. The circuits are well proven since they are derived from and similar to those used in the Super Slim Series.

**Specifications**

Reflective Switches, SMA (F), 2 to 18 GHz

MODEL	TYPE	SWITCHING TIME MODULATION (ns)	BAND SEGMENTS (GHz)	INSERTION LOSS (dB max.)	VSWR (max.)	ISOLATION (dB min.)	POWER HANDLING (mW)	POWER SUPPLY REQUIREMENTS	
								mA @+5 V	mA @-12 V
SV213DS	SPST	50	2-12 12-18	2.0 2.5	2.0 2.0	50 50	500	50	60
SV123DS	SP2T	50	2-12 12-18	2.5 3.0	2.0 2.0	50 50	200	90	60
SV133DS	SP3T	50	2-12 12-18	2.7 3.1	2.0 2.0	50 50	200	105	75
SV143DS	SP4T	50	2-12 12-18	2.7 3.1	2.0 2.0	50 50	200	105	75
XSV323DS	XFER	50	2-12 12-18	3.0 3.4	2.0 2.0	50 50	200	80	80

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## Specifications

### Absorptive Switches, SMA (F), 2 to 18 GHz

MODEL	TYPE	SWITCHING TIME MODULATION (ns)	BAND SEGMENTS (GHz)	INSERTION LOSS (dB max.)	VSWR (max.)	ISOLATION (dB min.)	POWER HANDLING (mW)	POWER SUPPLY REQUIREMENTS	
								mA @+5 V	mA @-12 V
SV213DTS	SPST	50	2-12 12-18	2.3 2.8	2.0 2.0	60 45	200	40	60
SV123DTS	SP2T	50	2-12 12-18	2.7 3.0	2.0 2.0	60 50	200	60	60
SV133DTS	SP3T	50	2-12 12-18	2.8 3.3	2.0 2.0	60 45	200	105	75
SV143DTS	SP4T	50	2-12 12-18	2.8 3.3	2.0 2.0	60 45	200	105	75

## Electrical Specifications

### TTL CONTROL LOGIC

Logic 0 (0-0.8 V, 1.6 mA max. sink @ 0.4 V) = Insertion Loss  
Logic 1 (2.0-5.5 V, 40  $\mu$ A max. source @ 2.4 V) = Isolation

FOR TRANSFER SWITCH (XSV323DS)

Logic 0: J1-J2 and J3-J4 at Insertion Loss  
Logic 1: J1-J4 and J2-J3 at Insertion Loss

### SWITCHING TIME

T on = 50% TTL to 90% of RF voltage  
T off = 50% TTL to 10% of RF voltage

### SWITCHING RATE

1 MHz max. PRF @50% duty cycle

### DRIVER

Reverse voltage protected

### SURVIVAL POWER at 25°C (Cold Switching)

1.0 W CW, 20 W Peak (1  $\mu$ s max. pulse width, 5% duty cycle)  
Derate linearly to 50% at +95°C

## Environmental Specifications

### TEMPERATURE

Operating -54°C to +95°C  
Storage -65°C to +125°C

### HUMIDITY

Per MIL-STD-202F, method 103B, condition B  
(96 hours at 95% R.H.)

### SHOCK

Per MIL-STD-202F, method 213B, condition B  
(75 G, 6 ms)

### ALTITUDE

Per MIL-STD-202F, method 105C, condition B  
(50,000 feet)

### VIBRATION

Per MIL-STD-202F, method 204D, condition B  
(.06" double amplitude or 15 G, whichever is less)

### THERMAL SHOCK

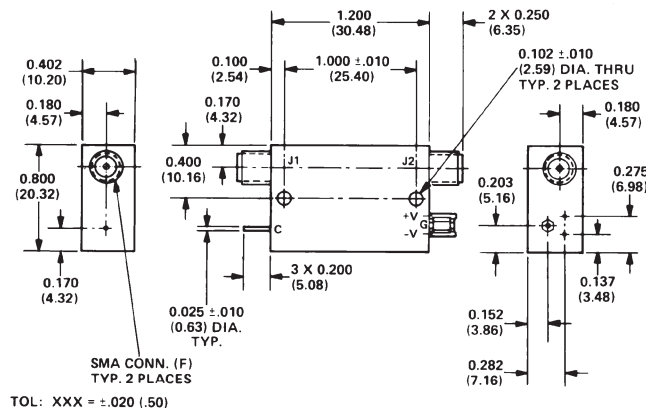
Per MIL-STD-202F, method 107D, condition A (5 cycles)

## Options

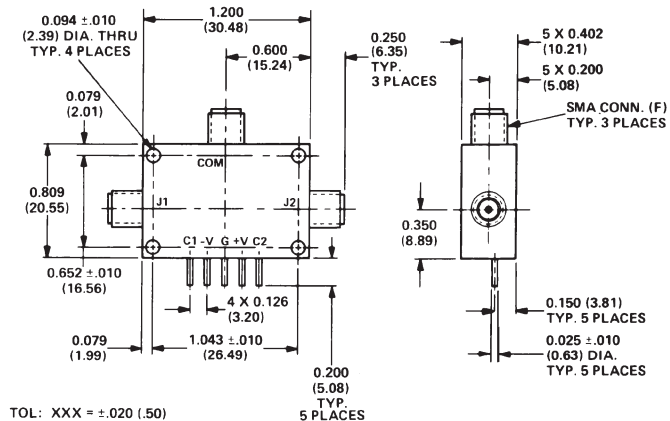
- Very Low Loss Video Leakage
- Inverted TTL Logic Control
- BCD Decoder Driver
- Package Configuration
- Over Voltage Protection

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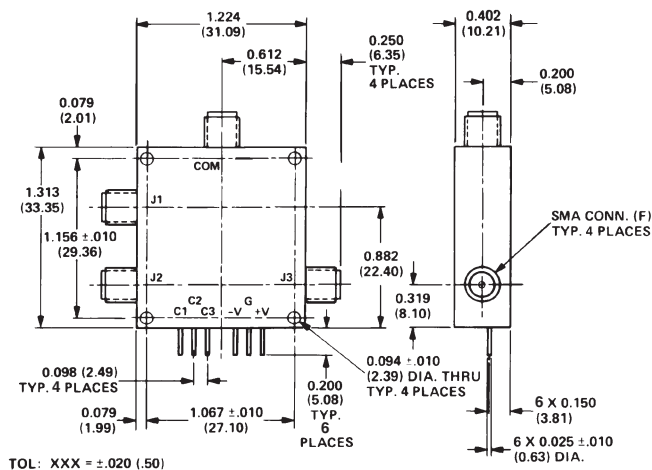
## Outline Drawings



SV213DS, SV213DTS



SV123DS, SV123DTS

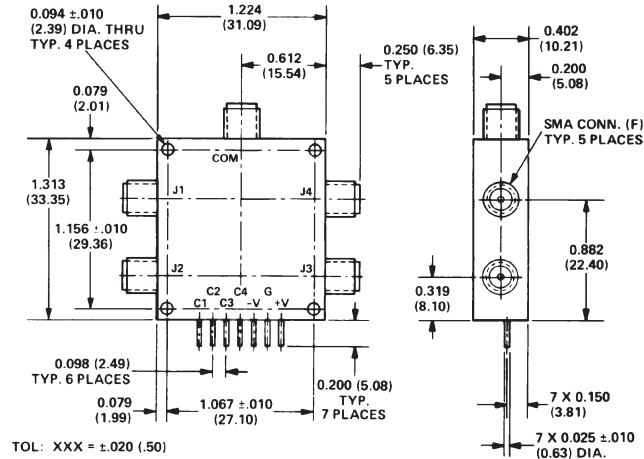


SV133DS, SV133DTS

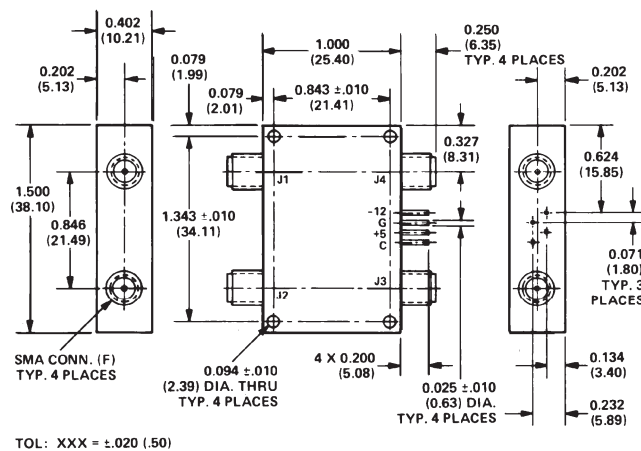
Dimensions in inches (mm in parentheses), unless otherwise specified.

# Solid State PIN Control Products

## Outline Drawings



SV143DS, SV143DTS



XSV323DS

Dimensions in inches (mm in parentheses), unless otherwise specified.