

2-18 GHz

## VALUE SERIES PIN SWITCHES

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

### DESCRIPTION

The new Narda value series of 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

Frequency Range is 2–18 GHz. Performance is shown in Band Segments.

#### REFLECTIVE SWITCHES

MODEL NO.	TYPE	SWITCHING TIME nsec	BAND SEGMENT GHz	INSERTION LOSS dB (max)	VSWR (Max)	ISOLATION dB (min)	POWER HANDLING mW	POWER SUPPLY REQUIREMENTS		OUTLINE DRAWING
								mA @+5V	mA @-12V	
SV213DS	SPST	50	2-12 12-18	2.0 2.5	2.0:1 2.0:1	50 50	200	50	60	1
SV123DS	SP2T	50	2-12 12-18	2.5 3.0	2.0:1 2.0:1	50 50	200	90	60	2
SV133DS	SP3T	50	2-12 12-18	2.7 3.1	2.0:1 2.0:1	50 50	200	105	75	3
SV143DS	SP4T	50	2-12 12-18	2.7 3.1	2.0:1 2.0:1	50 50	200	105	75	4
XSV323DS	XFER	50	2-12 12-18	3.0 3.4	2.0:1 2.0:1	50 50	200	80	80	5

## Control Products

### SPECIFICATIONS

Frequency Range is 2-18 GHz. Performance is shown in band segments.

#### ABSORPTIVE SWITCHES

MODEL NO.	TYPE	SWITCHING TIME nsec	BAND SEGMENT GHz	INSERTION LOSS dB (max)	VSWR (Max)	ISOLATION dB (min)	POWER HANDLING mW	POWER SUPPLY REQUIREMENTS		OUTLINE DRAWING
								mA @+5V	mA @-12V	
SV213DTS	SPST	50	2-12 12-18	2.3 2.8	2.0:1 2.0:1	60 45	200	40	60	1
SV123DTS	SPDT	50	2-12 12-18	2.7 3.0	2.0:1 2.0:1	60 50	200	60	60	2
SV133DTS	SP3T	50	2-12 12-18	2.8 3.3	2.0:1 2.0:1	60 45	200	105	75	3
SV143DTS	SP4T	50	2-12 12-18	2.8 3.3	2.0:1 2.0:1	60 45	200	105	75	4

### ELECTRICAL SPECIFICATIONS

**FREQUENCY RANGE** . . . . . 2-18 GHz

#### TTL CONTROL LOGIC

Logic 0 (0-0.8V, 1.6 mA max sink @ 0.4V) = Insertion Loss

Logic 1 (2.0-5.5V, 40µA max Source @ 2.4V) = 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

All Models . . . . . 1 MHz max PRF @50% duty cycle

**DRIVER** . . . . . Reverse voltage protected

#### SURVIVAL POWER (25°C)

1.0w CW, 20w Peak

(1µsec 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 (75G, 6 msec)

#### 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 15G, whichever is less).

#### THERMAL SHOCK

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

### OPTIONS

Very Low Loss Video Leakage

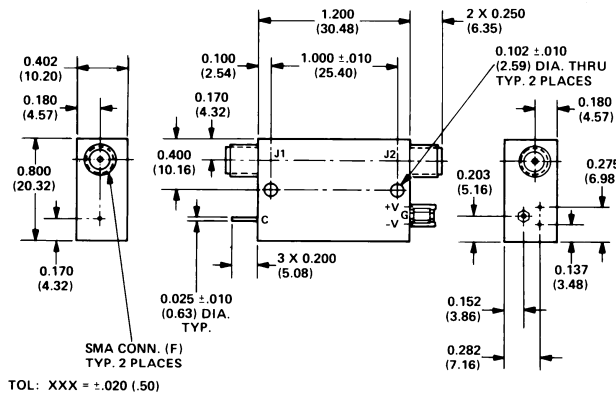
Inverted TTL Logic Control

BCD Decoder Driver

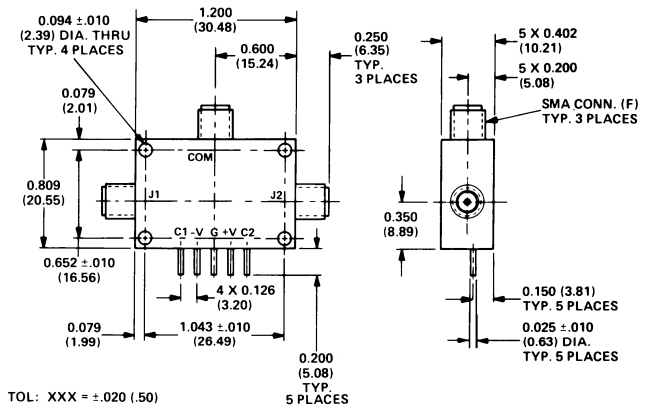
Package Configuration

Over Voltage Protection

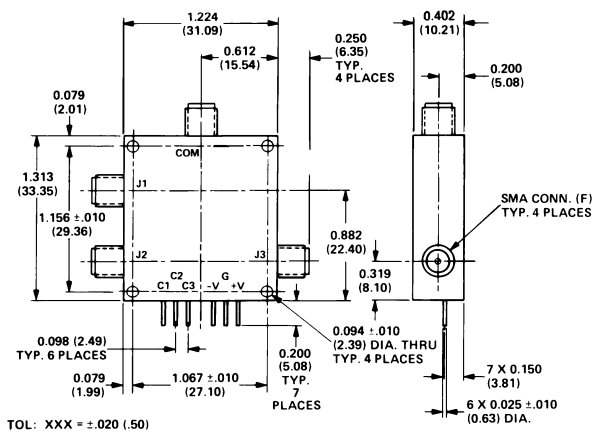
**OUTLINE DRAWINGS**



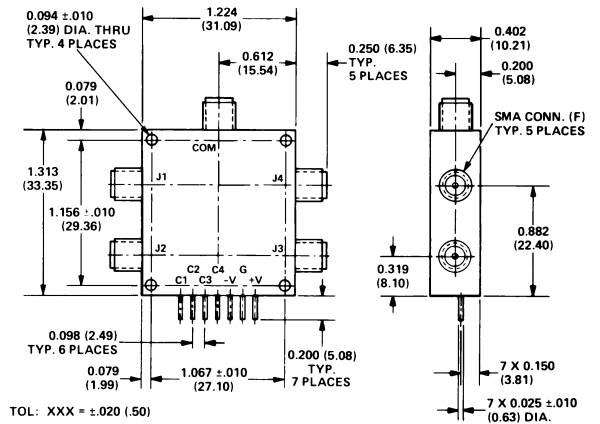
**1 SV213DS, SV213DTS**



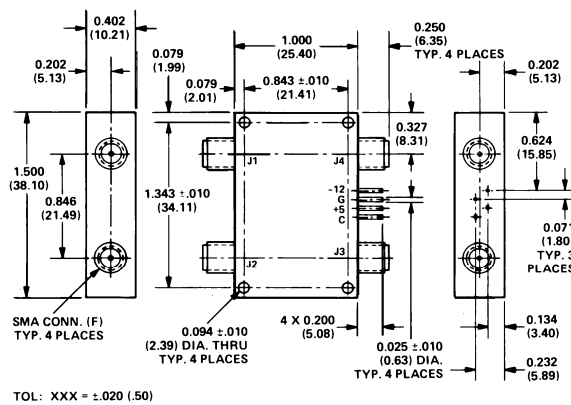
**2 SV123DS, SV123DTS**



**3 SV133DS, SV133DTS**



**4 SV143DS, SV143DTS**



**5 XSV323DS**

Dimensions in parentheses are in millimeters and for reference only.