

Solid State PIN Control Products

2-18 GHz

3 Watt PIN Switches

- 3 Watt CW
- High Speed
- Low Insertion Loss
- High Isolation
- Small Size
- Hermetically Sealed



Description

These SPST and SP2T switches are hermetically sealed high speed PIN switches that provide high isolation, low VSWR and Insertion Loss. Special attention has been given to high packaging density for military environments.

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 (W)	POWER SUPPLY REQUIREMENTS	
								mA @+5 V	mA @-12 V
S213D	SPST	10	2-4	1.0	1.70	55	3.0	100	50
			4-8	1.2	1.70	60			
			8-12	1.5	1.70	60			
			12-18	2.0	1.70	60			
S213D-04*	SPST	10	2-4	1.0	1.70	55	3.0	100	50
			4-8	1.2	1.70	60			
			8-12	1.5	1.70	60			
			12-18	2.0	1.70	60			
S123BD	SP2T	50	2-4	1.5	1.75	60	1.0	100	50
			4-8	1.7	1.75	60			
			8-12	2.0	1.75	60			
			12-18	2.5	2.00	55			

* Suffix "-04" denotes solder control terminals instead of SMC connectors

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Electrical Specifications

TTL CONTROL LOGIC (Models with Driver)

Logic 0 (-0.3 to 0.8 V, 1.6 mA max. sink @ 0.4 V) = Insertion Loss
 Logic 1 (2.4 to 5.0 V, 40 μ A max. source @ 2.4 V) = Isolation

SWITCHING SPEED

Rise Time = 10% to 90% of detected RF power
 Fall Time = 90% to 10% of detected RF power

SURVIVAL POWER at 25°C (Cold Switching)

3 W CW, 75 W Peak (1 μ s max. pulse width, 1% duty cycle)
 Derate linearly to 50% at +95°C

INPUT VOLTAGES

+5 V \pm 2%
 -5V to -15V

CONNECTORS

RFSMA Female
 Control..... SMC Male
 Power Supply Solder Terminal

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

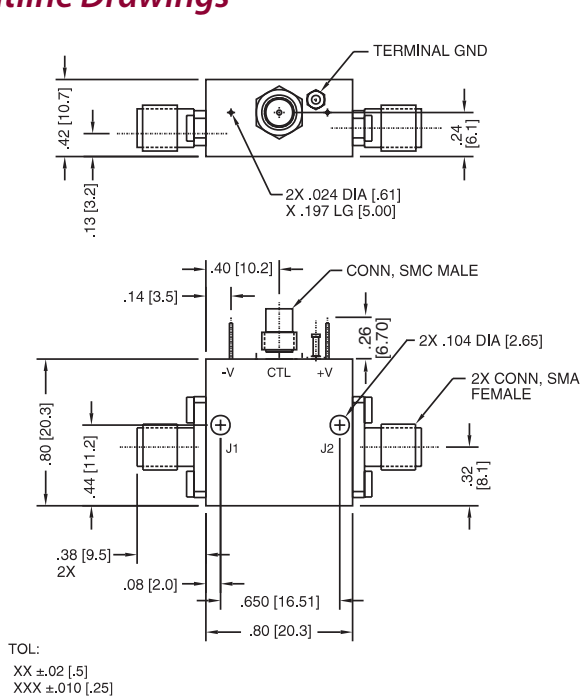
Per MIL-STD-202F, method 204D, condition B
 (.06" double amplitude or 15 G, whichever is less)

THERMAL SHOCK

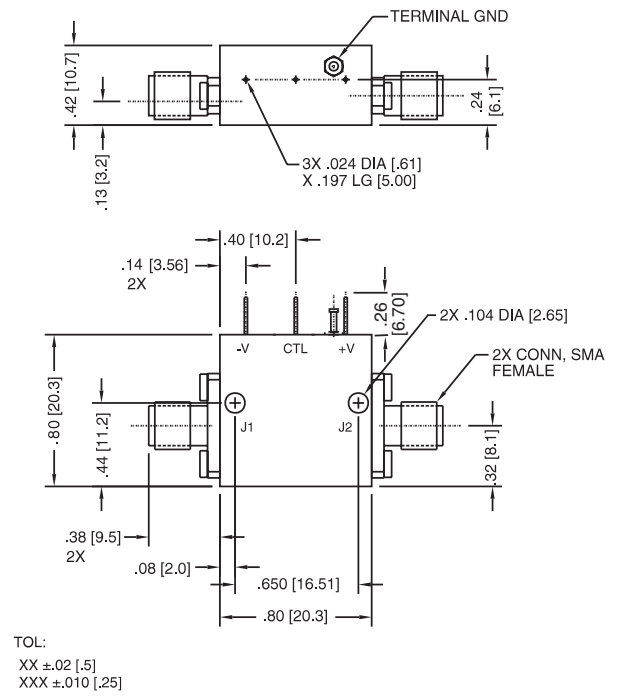
Per MIL-STD-202F, method 107G, condition B (5 cycles)

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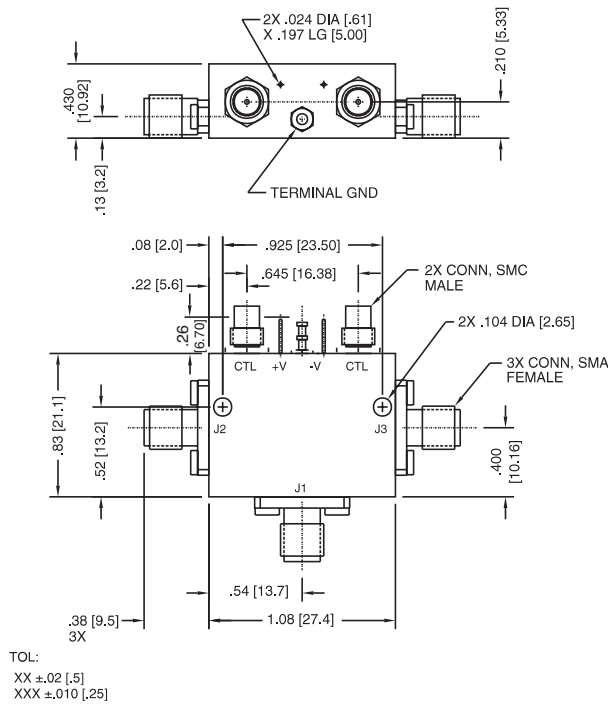
Outline Drawings



S213D



S213D-04



S123BD

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