

Model Numbering System

Example: SPDT-0A-18A-D-S9

SPDT - 0 A - 18 A - D - S9

TYPE

- SPDT
- TRAN
- SPMT
- MSPDT
- MSPMT
- MTRAN
- Multi-Port Matrix

CONTROL OPTIONS

SPDT / TRAN
 Not specified: Pin Terminal Control
 S9: 9Pins D-Sub Control
 S15: 15Pins D-Sub Control

SPMT
 Not specified: D-Sub Control
 PIN: Pin Terminal Control

CONNECTOR

- 0: SMA
- 1: N
- 2: TNC
- 3: RF PIN
- 4: F
- 5: NC
- 6: CUSTOM

OPTIONS

C: Custom
 - Customer specified requirements

D: TTL Driver
 - Available for all models

N: Narrow Body
 - SPDT only

P: Positive + Common
 - Latching and Normally Open only

S: Self Cutoff
 - Latching only

T: Internal Terminations
 - SPDT/SPMT, SMA models only

ACTUATOR TYPE

- A: Failsafe without Indicator
- B: Failsafe with Indicator
- C: Latching without Indicator
- D: Latching with Indicator
- E: Normally open without Indicator
- F: Normally open with Indicator

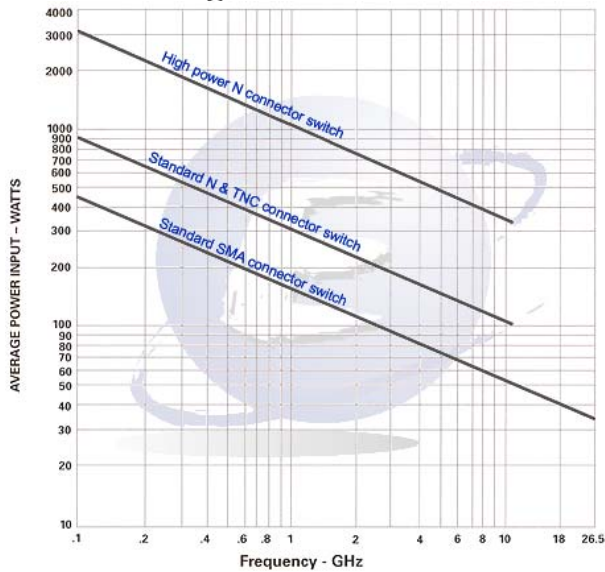
ACTUATOR VOLTAGE

- A: 12VDC
- B: 15VDC
- C: 28VDC
- D: 24VDC
- E: 20VDC
- F: 5VDC

FREQUENCY RANGE

- 03: DC-3GHz
- 08: DC-8GHz
- 12: DC-12GHz
- 18: DC-18GHz
- 22: DC-22GHz
- 26: DC-26.5GHz

Power Handling



Note: Power handling measurements of switches are made with the assumption of VSWR 1.10:1

Mechanical Specification

Switch Type:	Electromechanical, Coaxial
RF Contacts:	Break before Make
Characteristic Impedance:	50Ω (75Ω available for SPDT upon request)
Temperature Range:	-25°C to +65°C Operating (wider range upon request)
Humidity:	Moisture Seal Available
Shock:	MIL-STD-202 Method 213, Condition D (500G Non Operating)
Vibration:	MIL-STD-202 Method 214, Condition D (10G RMS Non Operating)
Operating Life:	1 Million Cycles
MTBF:	MIL-HDBK-217F Fixed, 25°C, <1 Cycle per hour

RF Performance

SPDT Series

	DC-6GHz	6-12GHz	12-18GHz	18-26.5GHz
VSWR (max.)	1.25 : 1	1.40 : 1	1.50 : 1	1.80 : 1
Insertion Loss (max.)	0.20 dB	0.40 dB	0.50 dB	0.70 dB
Isolation (min.)	70 dB	60 dB	60 dB	50 dB

SPMT Series

	DC-6GHz	6-12GHz	12-18GHz	18-26.5GHz
VSWR (max.)	1.25 : 1	1.40 : 1	1.50 : 1	2.00 : 1
Insertion Loss (max.)	0.20 dB	0.40 dB	0.50 dB	0.80 dB
Isolation (min.)	70 dB	60 dB	60 dB	50 dB

TRAN Series

	DC-6GHz	6-12GHz	12-18GHz	18-26.5GHz
VSWR (max.)	1.25 : 1	1.40 : 1	1.50 : 1	2.00 : 1
Insertion Loss (max.)	0.20 dB	0.40 dB	0.50 dB	0.80 dB
Isolation (min.)	70 dB	60 dB	60 dB	50 dB

MULTI-PORT MATRIX Series

	DC-6GHz	6-12GHz	12-18GHz
VSWR (max.)	1.25 : 1	1.50 : 1	1.60 : 1
Insertion Loss (max.)	0.20 dB	0.50 dB	0.60 dB
Isolation (min.)	70 dB	60 dB	50 dB

SWITCHING MATRIX Series

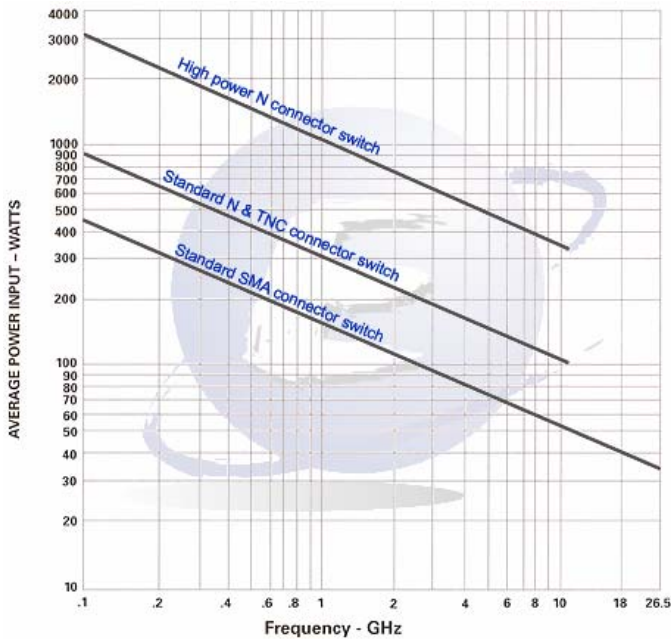
	DC-4GHz	4-8GHz	8-12GHz	12-18GHz
VSWR (max.)	1.25 : 1	1.40 : 1	1.50 : 1	1.80 : 1
Insertion Loss (max.)	0.50 dB	2.00 dB	2.50 dB	3.00 dB
Isolation (min.)	75 dB	70 dB	65 dB	60 dB



The MSPDT series coaxial switches are used to switch a microwave signal from a common input to either of the two outputs. They have an operating temperature range -54°C to $+85^{\circ}\text{C}$. Characteristic impedance of the switches is 50 Ohms. Failsafe and latching switching modes are available, with other options including position of indicator contacts, standard or narrow body size and choices of connectors. See Model Numbering System for details.

Specifications:

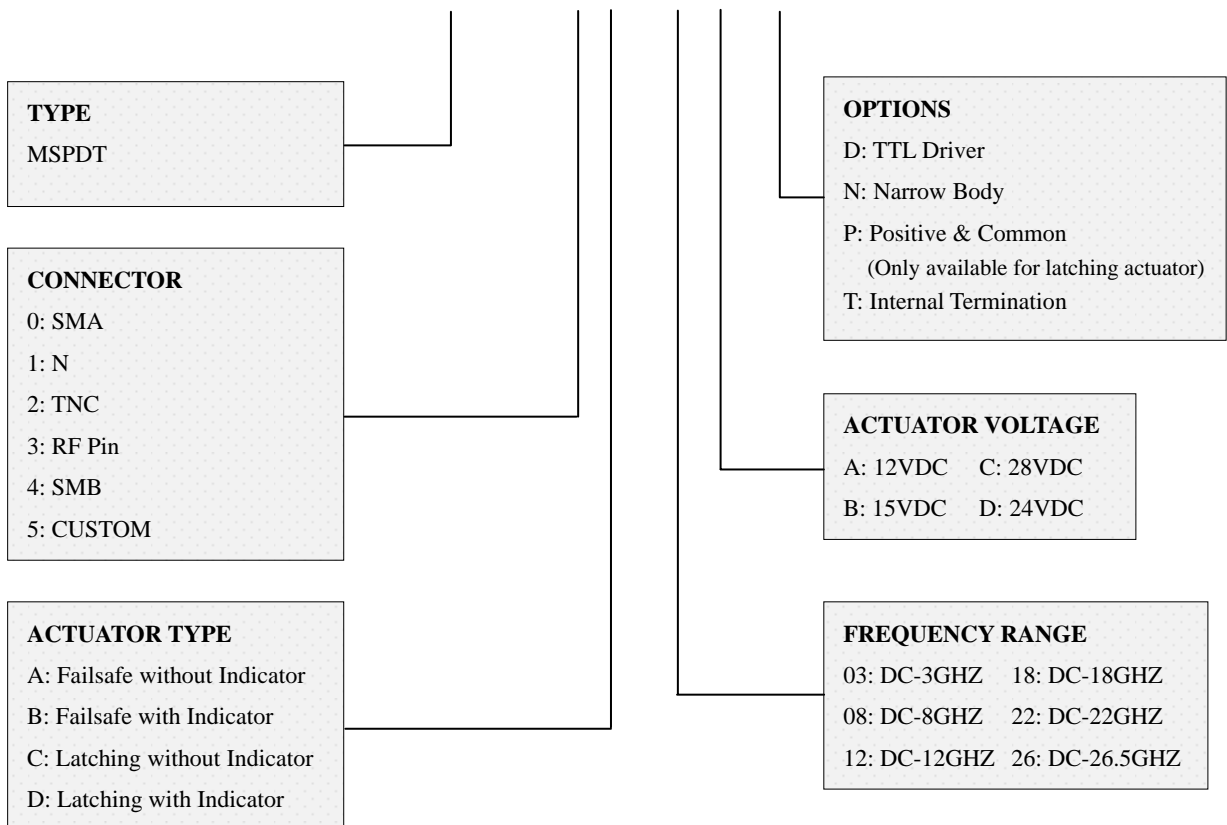
Switch Type:	Electromechanical, Coaxial
RF Contacts:	Break Before Make
Actuator:	Failsafe or Latching, 12/15/24/28 VDC
Switching Time:	20ms (max)
Connectors:	SMA/N/TNC (female)
Temperature Range:	- 54°C to + 85°C
Humidity:	100% Humidity, No Condensation
Shock:	MIL-STD-202 Method 213, Condition D (500G Non Operating)
Vibration:	MIL-STD-202 Method 214, Condition D (10G RMS Non Operating)
Operating Life:	1 Million Cycles (min)
MTBF	7.0 Million Hours (MIL-HDBK-217F Fixed, 25°C , <1 Cycle per Hour)


RF Performance**

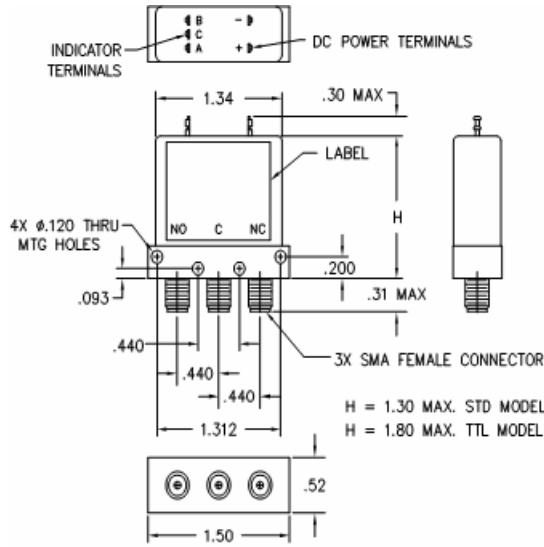
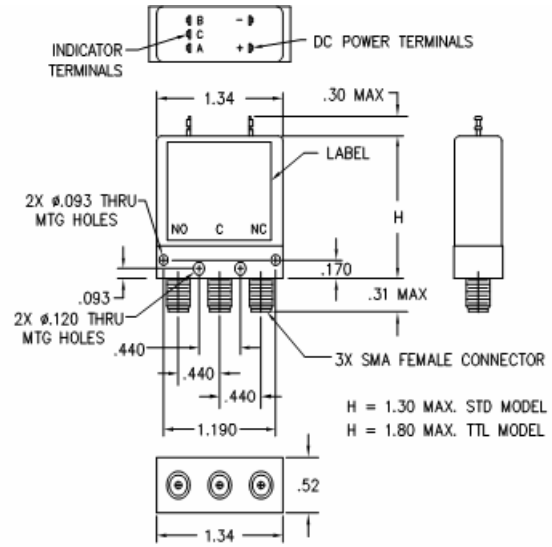
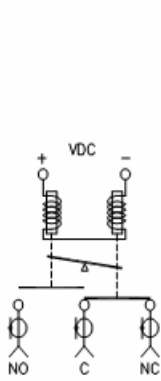
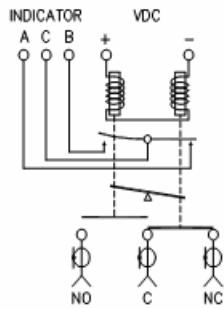
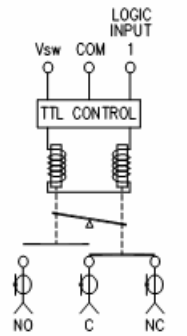
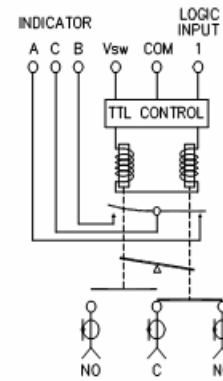
	VSWR (max.)	Insertion Loss (max.)	Isolation (min.)
DC-6GHz	1.25 : 1	0.20 dB	70 dB
6-12GHz	1.40 : 1	0.40 dB	60 dB
12-18GHz	1.50 : 1	0.50 dB	60 dB
18-26.5GHz	1.80 : 1	0.70 dB	50 dB

*Note: The power handling measurements of switches are made with the assumption of VSWR 1.10 : 1

**Note: RF performance data are for SMA standard models.

Power Handling*
Model Numbering System
M S P D T - 3 A - 18 A - I


Specifications subject to change without notice

Standard Body/Narrow Body/Failsafe Drawing (Dimensions in inches and [mm])

Standard Width Body

Optional Narrow Width Body

Failsafe

Failsafe W/ Indicator

Failsafe W/ TTL

Failsafe W/ Indicator and TTL

Standard Body Latching Drawing
