

## 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

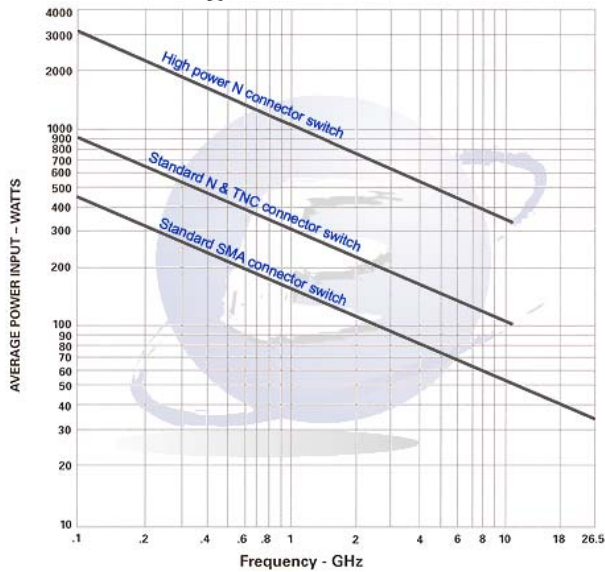
### **ACTUATOR VOLTAGE**

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

# TRANSFER



The Transfer (TRAN) is a four port switch with two independent pairs of RF paths. These pairs are actuated simultaneously. This actuation is similar to that of a double-pole-double-throw switch. Failsafe and latching switching modes are available. Other options include position indicator contacts and choices of connectors. See Model Numbering System for other options.

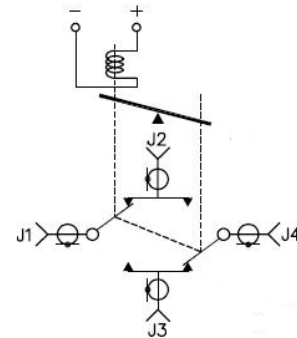
M series TRAN switches with higher temperature range is available for environments where additional shock, vibration, and humidity tolerance is required. Please visit EPX website or contact factory for details.

## Specifications

Actuator:	Failsafe or Latching			
Actuator Voltage:	12±1 VDC	15±1 VDC	24±2 VDC	28±2 VDC
Actuator Current *:	390mA	320mA	220mA	200mA
Switching Time:	15-30ms (max)			
MTBF:	6.8 Million Hours			

\* Note: Actuator Current stated is for TRAN, SMA, Failsafe without Indicator/TTL models only.

## Schematic



VOLTAGE	RF PATH
DE-ENERGIZED	J1-J2, J3-J4
ENERGIZED	J1-J3, J2-J4

## Outline

