

## Features:

- Broadband: DC - 40 GHz
- Extended Life: 2 million cycles
- Excellent Repeatability
- Low Insertion Loss
- Available in 3, 4, 5 or 6 Positions

Note: See series SP3T-SP6T Option T for 50Ω terminations

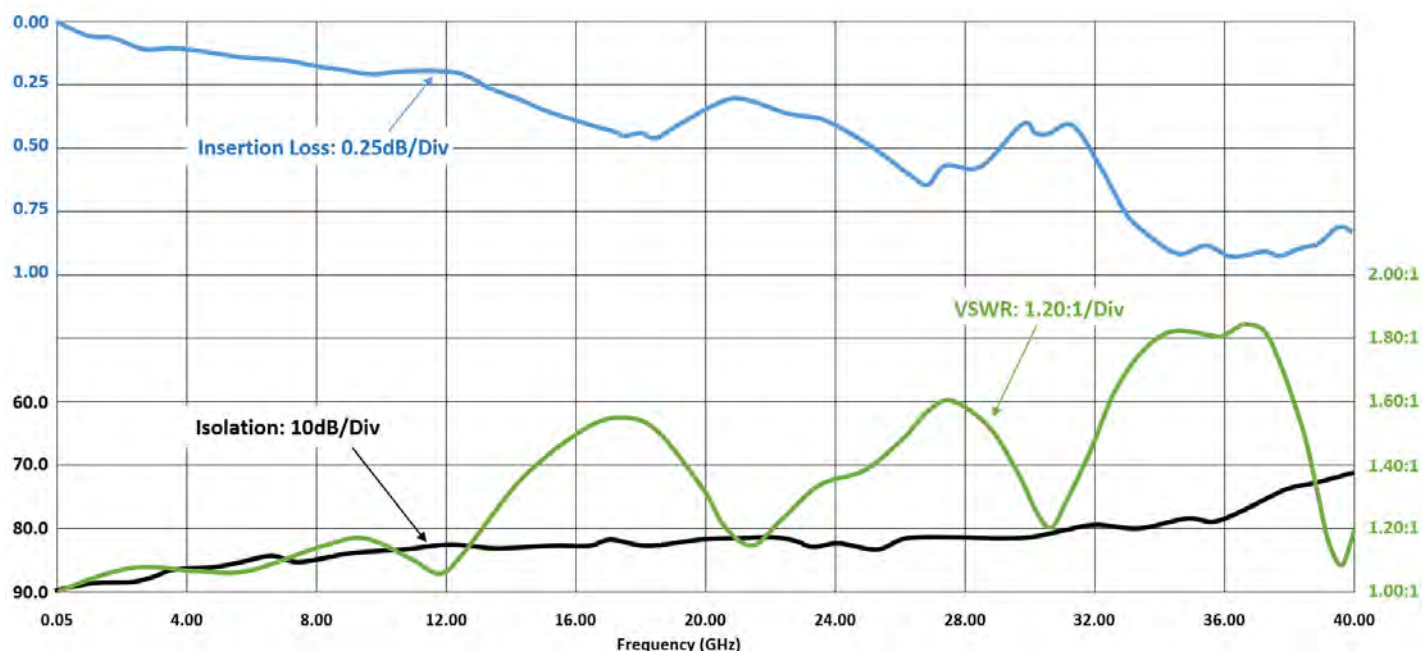


## RF Specification:

| Frequency, (GHz)   | DC-12             | 12-26  | 26-32  | 32-40  |
|--------------------|-------------------|--------|--------|--------|
| Ins. Loss dB (max) | 0.30              | 0.60   | 0.80   | 1.00   |
| Isolation dB (min) | 80                | 80     | 80     | 70     |
| VSWR (max)         | 1.25:1            | 1.60:1 | 1.70:1 | 1.90:1 |
| Switching Time     | 20 mS (max)       |        |        |        |
| Switching Action   | Break-Before-Make |        |        |        |
| Impedance          | 50 Ω              |        |        |        |

## Description:

Broadband frequency coverage and high reliability makes these switches ideal for all testing applications. Selected position remains active with constant voltage, all positions are open when voltage is removed. Good low to medium power handling. **Applications:** lab testing to production ATE requirements. **Markets:** defense, telecom, aerospace, enterprise and 5G.



## Specifications

|              |                                                         |
|--------------|---------------------------------------------------------|
| Oper Temp    | -25° C to +70° C                                        |
| Oper Temp    | -54° C to +85° C (M version)                            |
| Storage Temp | -55° C to +100° C                                       |
| Humidity     | Moisture resistant or immersion sealing available       |
| Shock        | MIL-STD-202 Method 213, Condition D, 500G (non oper)    |
| Vibration    | MIL-STD-202 Method 214, Condition D, 10G RMS (non oper) |
| Cycle Life   | 2M cycles (may vary based on selected options)          |

## Voltages and Current

|                      |       |       |       |       |
|----------------------|-------|-------|-------|-------|
| Nominal Voltage, Vdc | 12    | 15    | 24    | 28    |
| Voltage Range, Vdc   | 11-13 | 14-16 | 22-26 | 26-30 |
| Current (mA)*        | 250   | 200   | 150   | 140   |

\* at nominal voltage and +20°C

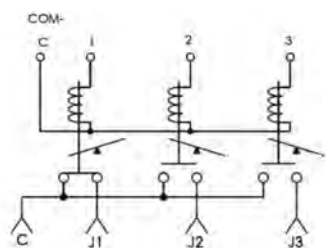
## Popular Models

|               |                                                        |
|---------------|--------------------------------------------------------|
| SP3T-9E-40A   | SP3T, K connector, Normally Open, DC-40GHz, 12VDC      |
| SP3T-9E-40A-D | SP3T, K connector, Normally Open, DC-40GHz, 12VDC, TTL |
| SP4T-9E-40A   | SP4T, K connector, Normally Open, DC-40GHz, 12VDC      |
| SP4T-9E-40A-D | SP4T, K connector, Normally Open, DC-40GHz, 12VDC, TTL |
| SP6T-9E-40A   | SP6T, K connector, Normally Open, DC-40GHz, 12VDC      |
| SP6T-9E-40A-D | SP6T, K connector, Normally Open, DC-40GHz, 12VDC, TTL |

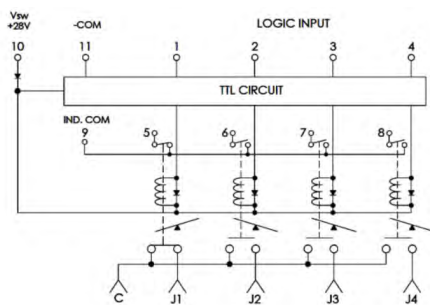
- See backside for a full list of available features and options
- Contact us for high power and custom designs



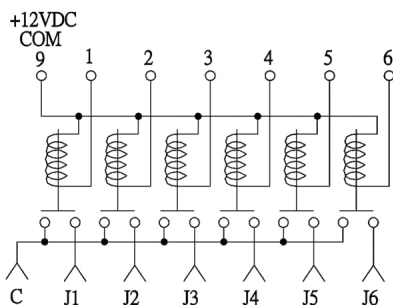
## Schematics



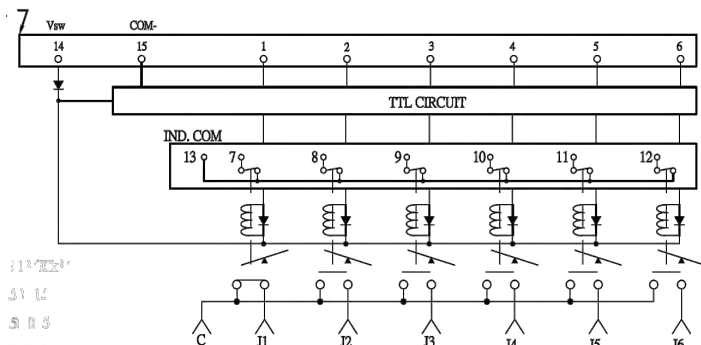
(SP3T) Position #1 Energized



(SP4T w/ TTL & Indicators) Position #1 Energized

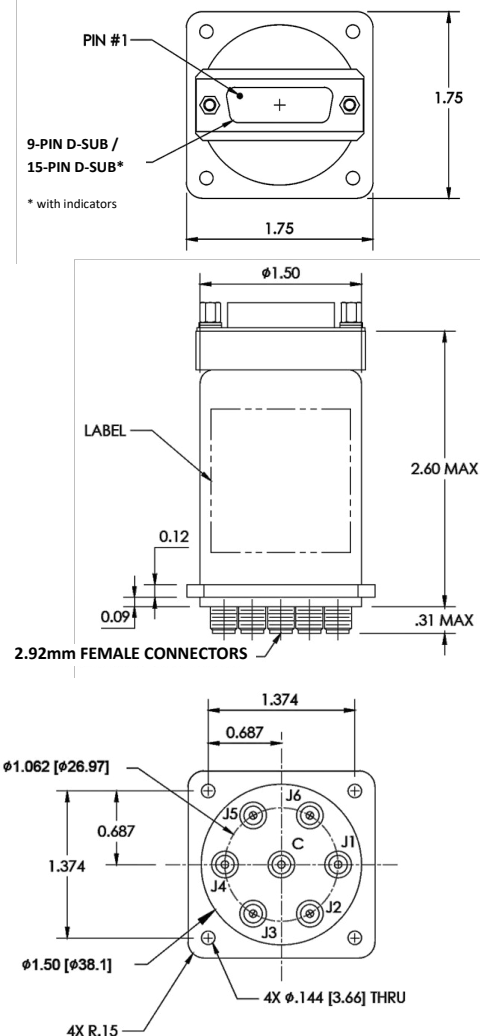


(SP6T) +Common, All Positions Open



(SP6T w/TTL & Indicators) Position #1 Energized

## Outline



## Model Numbering System

Example: SP3T-9E-40A-D

(SP3T, K Connector, Normally Open without indicator, DC-40GHz, 12VDC, TTL Driver, D-Sub Control)

| No. of Outputs |
|----------------|
| 3 : SP3T       |
| 4 : SP4T       |
| 5 : SP5T       |
| 6 : SP6T       |

| Connector Type |
|----------------|
| 0: SMA         |
| 1: N           |
| 2: TNC         |
| 3: RF PIN      |
| 4: F (75Ω)     |
| 5: SC          |
| 6: SMB         |
| 7: 7/16 DIN    |
| 8: BNC         |
| 9: K (2.92mm)  |
| 10: Mini DIN   |

| Actuator Type                       |
|-------------------------------------|
| E : Normally Open without Indicator |
| F : Normally Open with Indicator    |

| Frequency Range |
|-----------------|
| 03 : DC-3GHz    |
| 08 : DC-8GHz    |
| 12 : DC-12GHz   |
| 18 : DC-18GHz   |
| 22 : DC-22GHz   |
| 26 : DC-26.5GHz |
| 33 : DC-33.5GHz |
| 40 : DC-40GHz   |

| Actuator Voltage |
|------------------|
| A : 12VDC        |
| B : 15VDC        |
| C : 28VDC        |
| D : 24VDC        |
| E : 20VDC        |
| F : 5VDC         |
| G : 18VDC        |

| Control Options            |
|----------------------------|
| Default : D-Sub Control    |
| PIN : Pin Terminal Control |

| Options                     |
|-----------------------------|
| H : High Power              |
| D : TTL Drivers with Diodes |
| P : Positive + Common       |
| I : Suppression Diodes      |
| E : Decoder                 |
| Y : Moisture Seal           |
| C : Custom                  |



RoHS



\* D-Sub connectors are standard for SPMT, no designation on model number needed

