



**Model: SW-S510-4S**

Description:..... SP4T, Absorptive, PIN-Switch  
 Operating Frequency:..... 2 – 18 GHz  
 Insertion Loss: ..... 3.0 dB Max  
 Isolation (Arm-to-Arm):

2 – 9 GHz	9 –18 GHz
70 dB Min	60 dB Min

VSWR (RF Path “ON” or “OFF”): ..... 1.8:1 Max  
 Rise/Fall time (10% to 90% RF, 90% to 10% RF):... 10 ns Max  
 On/Off time (50% TTL to 90% RF, 50%TTL to 10% RF):..... 40 ns Max  
 Phase Balance (Deviation from Median):..... ±6° max  
 Operating Power:..... CW & AVG..... +27dBm Max \*  
 ..... \* ..... (+24dBm Max into “JX” Port @ Off-State)  
 ..... Peak: ..... 5W @ 1µS PW & 10% Duty-Cycle Max  
 Control Input Characteristics: ..... Std. TTL / Unit-Load / Floating-High  
 Control Logic:..... 4-Controls, Logic “0” = RF Path “ON”  
 Power Supplies:..... +5(±0.25)V @ 120mA Max  
 ..... -12(±0.5)V @ 60mA Max  
 Connectors (RF): ..... SMA (f), Removable  
 Connectors (Supplies/Controls) ..... Solder Pins  
 Impedance: ..... 50 Ω Nominal  
 Quality:..... Best-Commercial-Grade

**Environmental Ratings:**

Temperature:..... {Operating: -55°C to +95°C} & {Storage: -60°C to +110°C}  
 Humidity: ..... MIL-STD-202F, Method 103B, Cond. B (96 hours at 95% R.H.)  
 Shock: ..... MIL-STD-202F, Method 213B, Cond. B (75G, 6mSec)  
 Vibration: ..... MIL-STD-202F, Method 204D, Cond. B (.06” double amplitude, or 15G)  
 Altitude: ..... MIL-STD-202F, Method 105C, Cond. B (50,000 Feet)  
 Temp. Shock: ..... MIL-STD-202F, Method 107D, Cond. A (5 cycles)

**Available Options:**

(Units with listed options here may be subject to some specification tradeoffs from the standard, consult factory)

■ **Supply Voltages**

- A2 [ +5(±0.25)V / -15(±0.5)V ]
- A3 [ +12(±0.5)V / -12(±0.5)V ]
- A4 [ +15(±0.5)V / -15(±0.5)V ]

■ **RF Connectors**

- B1 [ J1 – J4 Ports with SMA(M) ]
- B2 [ All SMA (M) ]
- B3 [ COM Port with SMA(M) ]

■ **Control Function**

- F1 [ Inverse Logic, (“1” = Path “ON”) ]
- F2 [ 2-Bit Binary Controls + Enable ] ; see below for “Outline Drawing” and “Function Table”

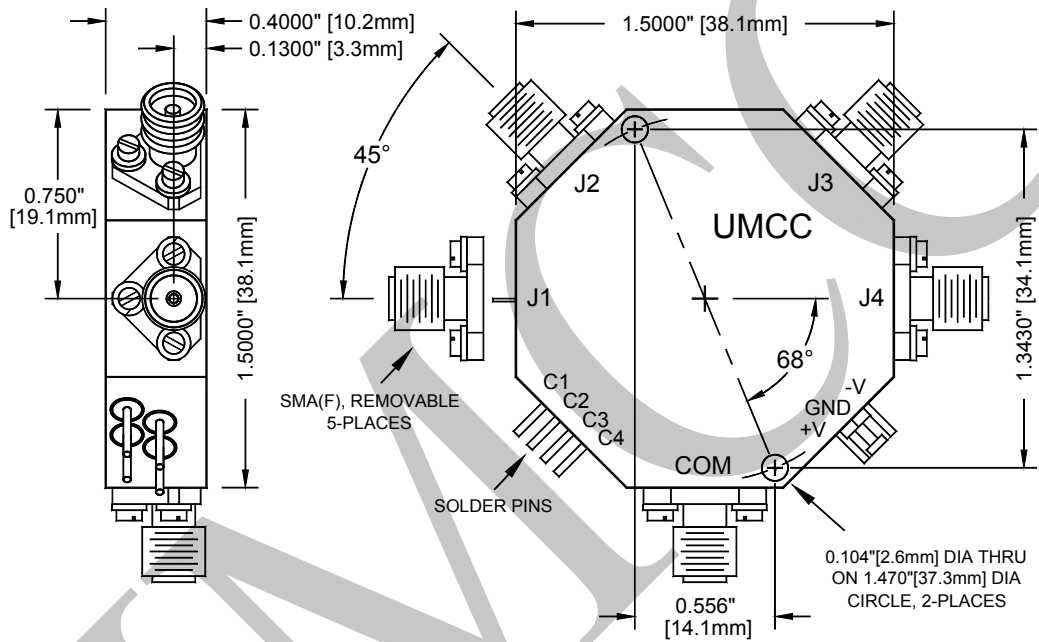
■ **Video Suppression Filter**

- G1 [ VF @ COM Port <> 0.25 dB additional Loss ]
- G2 [ VF @ J1 – J4 Ports <> 0.25 dB additional Loss ]
- G3 [ VF @ All Ports <> 0.5 dB additional Loss ]



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**Outline**

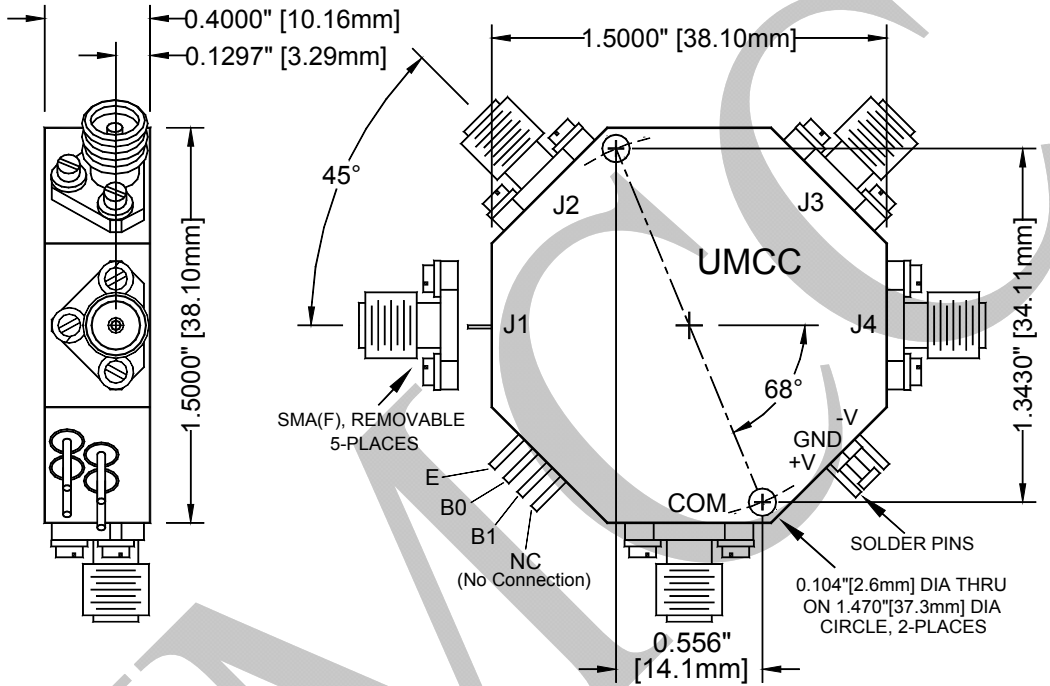


Weight	Tolerances
1.2 oz [34.0g]	±0.015" [±0.38mm]



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**Outline Drawing (SP4T Radial with Option "F2")**



Weight	Tolerances
1.2 oz [34.0g]	±0.015" [±0.38mm]

**Function Table for Option "F2" (2-Bit Binary Control + Enable)**

INPUTS			RF PATH			
E	B1	B0	J1	J2	J3	J4
1	0	0	ON	OFF	OFF	OFF
1	0	1	OFF	ON	OFF	OFF
1	1	0	OFF	OFF	ON	OFF
1	1	1	OFF	OFF	OFF	ON
0	X	X	OFF	OFF	OFF	OFF