



# S5X1

## SWITCH

### SINGLE-POLE, FIVE-THROW ABSORPTIVE

<b>Frequency Range (min)</b>	8 – 10	GHz
<b>Insertion Loss (max)</b>	2.4	dB
<b>VSWR (max)</b>	1.7	ratio
<b>Isolation (min)</b>	70	dB
<b>Switching speed (max)</b>	100	nsec
<b>CW RF power, operating (max)</b>	0.5	W

**NOTES:**

DC Bias: +5V +/-0.5V @ 200mA max  
(Standard) -15V +/-3V @ 50mA max

DC Bias: +5V +/-0.5V @ 250mA max  
(-5 option) -5V +/-0.5V @ 60mA max

DC Bias: +15V +/-3V @ 200mA max  
(-12 option) -15V +/-3V @ 50mA max

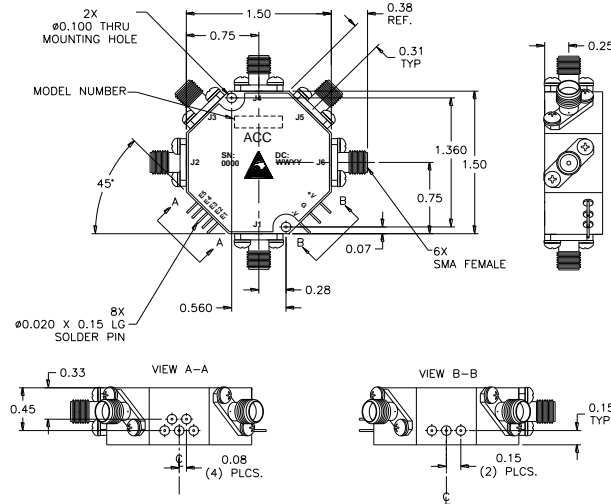
Control: TTL 0 = Low Loss E1 controls J2 – J1  
(Standard) TTL 1 = Isolation E2 controls J3 – J1  
E3 controls J4 – J1  
E4 controls J5 – J1  
E5 controls J6 – J1

Absorptive switch: Internal 50Ω terminations at J2, J3, J4, J5 and J6 (in isolation mode).

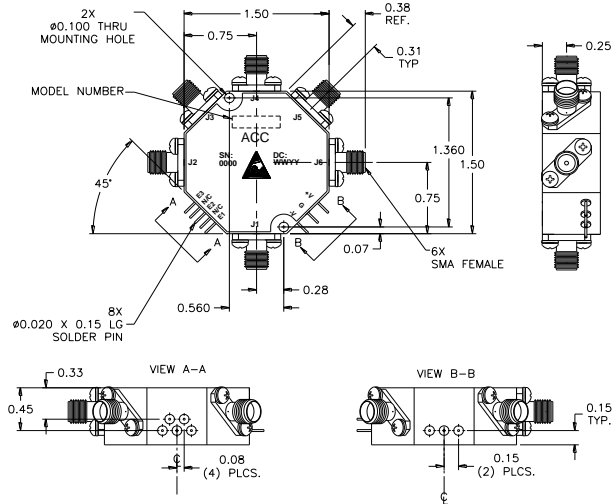
Switching speed is defined as 50%TTL to 90% (t-on) and 50%TTL to 10%RF (t-off).

**ENVIRONMENTAL SPECIFICATIONS:**

MIL-E-5400, MIL-STD-202, MIL-E-16400  
Operating Temp: -55°C to +85°C  
Storage Temp: -65°C to +125°C  
Humidity: MIL-STD-202F, M103, Cond B  
Shock: MIL-STD-202F, M213, Cond B  
Altitude: MIL-STD-202F, M105, Cond B  
Vibration : MIL-STD-202F, M204, Cond B  
Thermal Shock: MIL-STD-202F, M107, Cond A  
Temperature Cycle: MIL-STD-202F, M105C, Cond D



**OUTLINE CASE STYLE S5**



**OUTLINE CASE STYLE S5-3**

**PART NUMBER ORDERING INFORMATION:**

- Add "-RC" suffix: RoHS-compliant
- Add "-5" suffix: +/-5V DC supplies
- Add "-5-RC" suffix: +/-5V DC supplies, RoHS-compliant
- Add "-12" suffix: +/-12V to 18V DC supplies
- Add "-12-RC" suffix: +/-12V to 18V DC supplies, RoHS-compliant
- Add "-3": Three-bit logic control
- Add "-3-RC": Three-bit logic control, RoHS-compliant
- Add "-3-5" suffix: Three-bit logic control, +/-5V DC supplies
- Add "-3-5-RC" suffix: Three-bit logic control, +/-5V DC supplies, RoHS-compliant
- Add "-3-12" suffix: Three-bit logic control, +/-12V to 18V DC supplies ECL logic input
- Add "-3-12-RC" suffix: Three-bit logic control, +/-12V to 18V DC supplies, RoHS-compliant
- Add "-H" suffix: Hermetic seal (does not apply to RoHS-compliant models)

**MECHANICAL SPECIFICATIONS:**

Case Style: S5 Outline (Standard logic)  
S5-3 Outline (Three-bit logic)  
Finish: Gold plate per MIL-G-45204  
Connectors: SMA Female per MIL-C-39012  
Bias & Control Pins: Ø0.02" x 0.15" long  
Weight: 60g max  
Mounting: Ø0.10" through holes (2) places

Three-bit control:  
(-3 option)

E3	E2	E1	Low loss path
0	0	0	J2 – J1
0	0	1	J3 – J1
0	1	0	J4 – J1
0	1	1	J5 – J1
1	0	0	J6 – J1
1	0	1	All off
1	1	0	All off
1	1	1	All off

**SCREENING:**

Internal Visual per MIL-STD-883, Method 2017  
Temperature Cycle: -65°C to +100°C, 10 cycles

Hermetically-sealed switches are fine and gross leak checked per MIL-STD-883, Method 1014.