



# S5V3

## SWITCH

### SINGLE-POLE, FIVE-THROW ABSORPTIVE

|                              |         |       |
|------------------------------|---------|-------|
| Frequency Range (min)        | 0.1 – 2 | GHz   |
| Insertion Loss (max)         | 2.2     | dB    |
| VSWR (max)                   | 1.6     | ratio |
| Isolation (min)              | 80      | dB    |
| Switching speed (max)        | 250     | nsec  |
| CW RF power, operating (max) | 1       | 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

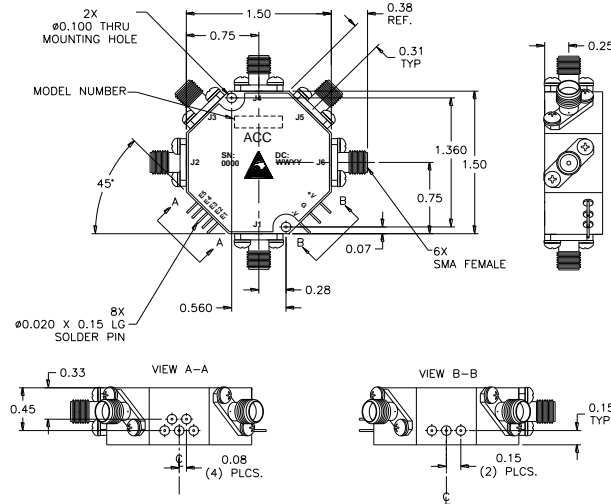
Control: TTL 0 = Low Loss E1 controls J2 – J1  
(Standard) TTL 1 = Isolation E2 controls J3 – J1  
E3 controls J4 – J1  
E4 controls J5 – J1  
E5 controls J6 – J1

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

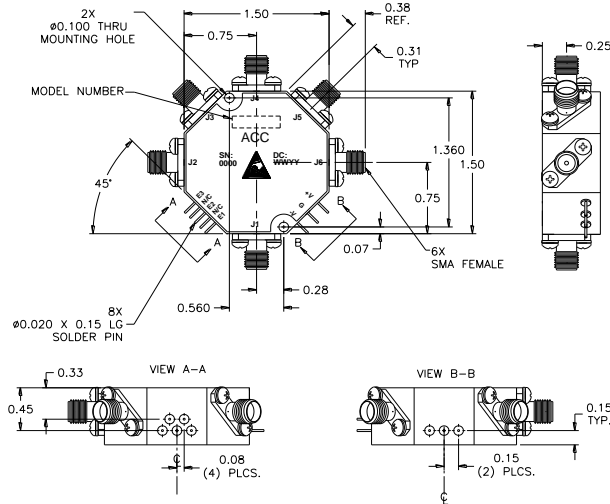
Switching speed is defined as 50%TTL to 90% (t-on) and 50%TTL to 10%RF (t-off).

#### 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.