

Description:

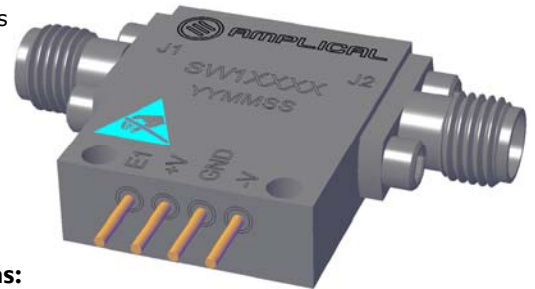
Amplical's SW1A001 SPST ultra-broadband coaxial absorptive PIN diode switch features low insertion loss, low vswr, high isolation and fast switching speed. An internal 50Ω termination is provided on the J2 port when switched in the isolation (off) state. RF ports incorporate DC blocks. An on-board TTL-compatible driver provides convenient logic control. The switch operates from +5V DC and a negative DC supply ranging from -12V to -20V. The compact design incorporates SMA female connectors. Two ø0.096 through holes are provided for convenient chassis mounting.

Specifications:

| Parameter | Specification |
|---|--|
| Frequency Range | 100 MHz to 20 GHz minimum |
| Insertion Loss | 2.8 dB maximum |
| VSWR (J1 and J2 on; J2 off) | 2.0:1 maximum (50Ω) |
| Isolation (port-to-port and input-to-output) | 65 dB minimum (above insertion loss) |
| Switching Speed: T _{ON} (50%TTL to 90%RF) | 75 nsec maximum |
| Switching Speed: T _{OFF} (50%TTL to 10%RF) | 45 nsec maximum |
| Switching Speed: T _{RISE} (10%RF to 90%RF) | 25 nsec maximum |
| Switching Speed: T _{FALL} (90%RF to 10%RF) | 15 nsec maximum |
| RF Power, Operating | +27 dBm maximum |
| OIP3 | +45 dBm minimum |
| OIP2 | +75 dBm minimum |
| Control Logic (EI) | TTL 0: Insertion Loss; TTL 1: Isolation |
| DC Supplies | +5.0 ± 0.3V @ 40mA maximum -12.0 to -20.0V @ 40mA maximum |
| RF Connectors | SMA Female per MIL-PRF-39012 |
| DC and Logic Control Ports | ø0.030" x 0.20" long solder pin |
| Operating Temperature | -55°C to +85°C |
| Storage Temperature | -65°C to +125°C |
| Enclosure Finish | Albaloy |
| Lead Finish | Gold Plate per MIL-G-45204 |
| Weight | 25 grams maximum |
| Mechanical | See Figure 1 |

Applications:

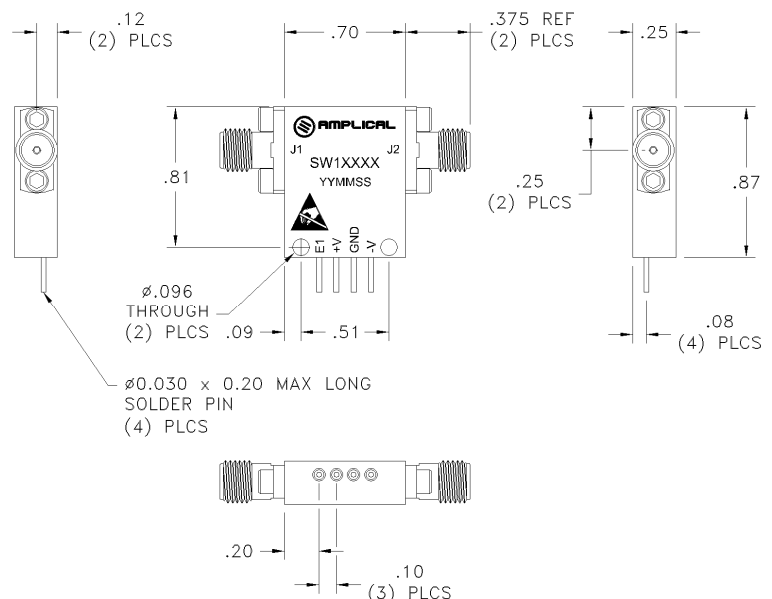
- Communications Systems
- Electronic Simulators
- Bypass/Selector Switch
- Test Equipment
- Radar Systems
- EW Systems
- Modulator



Custom Options:

- Hermetic Seal
- Alternate DC operating voltage supplies
- MIL / Hi-Rel Screening
- Band-specific performance optimization
- Unit-to-unit phase and amplitude matching
- Reverse control logic

Figure 1 Mechanical Outline:



Outline drawing notes:

1. Drawing not to scale
2. Dimensions in inches
3. Tolerance: x.xx = ±0.020, x.xxx = ±0.010

Customization:

Amplical offers complete customization of any electrical or mechanical parameter for any product. All models are available with hermetic seal and complete MIL screening. Contact the factory to discuss your specific requirements

About Amplical Corporation:

Amplical is a leading supplier of high quality RF and Microwave components. Utilizing state of the art design and manufacturing techniques, Amplical focuses on producing high performance amplifiers, switches, modulators, attenuators, phase shifters and limiters at affordable prices. Amplical serves the defense, aerospace, communications, test and instrumentation markets.

Disclaimer:

Specifications subject to change without notice. Contact the factory prior to placing an order to assure you have the most up to date product specification.