



GaAs SPST Switch DC - 3 GHz

SW-214

V2.00

Features

- Fast Switching Speed, 6 ns Typical
- Ultra Low DC Power Consumption
- Terminated

Guaranteed Specifications* (From -55°C to +85°C)

| Frequency Range | DC-3 GHz | | |
|-----------------|------------|-------|--------|
| Insertion Loss | DC-3 GHz | 1.3 | dB Max |
| | DC-2 GHz | 1.2 | dB Max |
| | DC-1 GHz | 0.9 | dB Max |
| | DC-0.5 GHz | 0.9 | dB Max |
| VSWR | DC-3 GHz | 2.0:1 | Max |
| | DC-2 GHz | 1.7:1 | Max |
| | DC-1 GHz | 1.3:1 | Max |
| | DC-0.5 GHz | 1.3:1 | Max |
| Isolation | DC-3 GHz | 25 | dB Min |
| | DC-2 GHz | 38 | dB Min |
| | DC-1 GHz | 45 | dB Min |
| | DC-0.5 GHz | 50 | dB Min |

Operating Characteristics

| | | | |
|---|-----------------|-----------------|-------------------------------------|
| Impedance | 50 Ohms Nominal | | |
| Switching Characteristics† | | | |
| ‡RISE, ‡FALL | | | 3 ns Typ |
| ‡ON, ‡OFF (50% CTL to 90/10%RF) | | | 6 ns Typ |
| Transients (In-Band) | | | 30 mV Typ |
| Input Power for 1 dB Compression | | | |
| Control Voltages (Vdc) | 0/-5 | 0/-8 | |
| 0.5-3 GHz | +27 | +33 | dBm Typ |
| 0.05 GHz | +21 | +26 | dBm Typ |
| Intermodulation Intercept Point (for two-tone input power up to +13 dBm) | | | |
| Intercept Points | IP ₂ | IP ₃ | |
| 0.5-3 GHz | +68 | +46 | dBm Typ |
| 0.05 GHz | +62 | +40 | dBm Typ |
| Control Voltages (Complementary Logic) | | | |
| V _{IN} Low | | | 0 to -0.2V @ 20 µA Max |
| V _{IN} Hi | | | -5V @ 50 µA Typ to -8V @ 300 µA Max |
| Environmental | | | |
| MIL-STD-883 screening available. | | | |

* All specifications apply with 50 ohm impedance connected to all RF ports with 0 and -5 VDC control voltages.

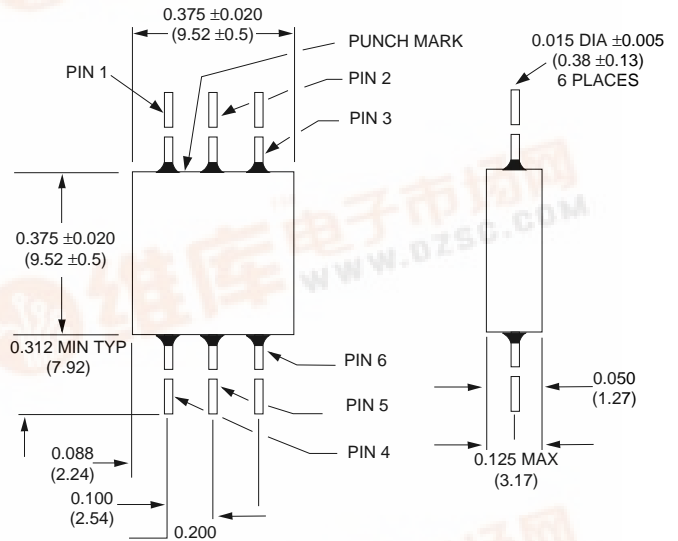
† Faster switching speed can be achieved with enhanced driver waveform.

Ordering Information

| Model No. | Package |
|-----------|--------------|
| SW-214 | PIN Flatpack |

Specifications Subject to Change Without Notice.

FP-13



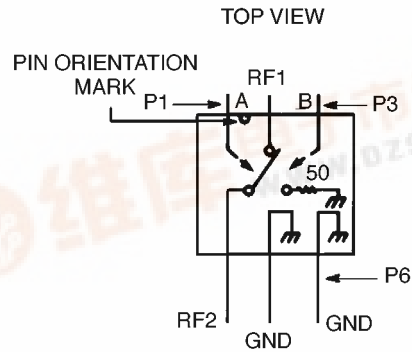
Dimensions in () are in mm.

Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)

.xx = ±0.02 (.x = ±0.5)

WEIGHT (APPROX.): 0.03 OUNCES 0.8 GRAMS

Pin Configuration



Truth Table

| Control Input | | Condition of Switch |
|---------------|-----|---------------------|
| A | B | RF1 to RF2 |
| Hi | Low | ON |
| Low | Hi | OFF |

Typical Performance

