



Absorptive 1-6GHz Coaxial SP2T Switch

Features

- Ultra Wide Band Operation 1-6GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
 - Military & Aerospace
 - Fiber Optics
- RF Microwave & VSAT
Test Instrument

| Parameters | Min | Typ. | Max | Units |
|--|--------------------------------|-------|-----|----------|
| Frequency Range | 1-6 | | | GHz |
| Insertion Loss | | | 2.0 | dB |
| Insertion Loss Temperature Coefficient | | 0.003 | | dB/ °C |
| Isolation | 50 | | | dB |
| Input VSWR | | | 2.0 | : 1 |
| Output VSWR | | | 2.0 | : 1 |
| DC Power Dissipation | | 0.5 | | W |
| 0.1dB Compression Point (P0.1dB) | | 30 | | dBm |
| IIP3 | | 55 | | dBm |
| Switching Speed | 200 | | | ns |
| Weight | 0.71 | | | ounces |
| Impedance | 50 | | | Ω |
| Bias Current (+5V / -5V) | 80/50 | | | mA |
| Input / Output Connectors | SMA-Female | | | |
| Finishing | Gold Plating | | | |
| Material | Aluminum | | | |
| Sealing | Hermetically Sealed (Optional) | | | |



Absolute Maximum Ratings

| | |
|---------------------|---------------------|
| Biasing | +5V ± 10%/-5V ± 10% |
| TTL Control Voltage | 0~0.8V/2.8~5V |

Ordering Information

| Part No. | ECCN | Description |
|-----------------|-------|-------------------------------|
| DBSA0201000600A | EAR99 | SP2T 1- 6GHz PIN Diode Switch |

Environmental Specifications

| | |
|-------------------------|--|
| Operational Temperature | -45°C~+85°C |
| Storage Temperature | -55°C~+125°C |
| Altitude | 30,000 ft. (Epoxy Sealed Controlled environment) |
| | 60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional) |
| Vibration | 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis |
| Humidity | 100% RH at 35c, 95%RH at 40°C |
| Shock | 20G for 11msec half sine wave, 3 axis both directions |

Outline Drawing:

All Dimensions in mm (inches)

The drawing shows a top view of the component with the following dimensions and labels:

- Top edge dimensions: 3 [0.12], 4 [0.16], 4 [0.16], 2 [0.08], 9 [0.35], 12 [0.47]
- Left edge dimensions: 17 [0.67], 14 [0.55]
- Bottom edge dimensions: 6.5 [0.26], 8.5 [0.33]
- Internal dimensions: 2.8 [0.11], 24 [0.94], 21 [0.83]
- Pin dimensions: 4-Ø 2.2 [0.09] THRU
- Component labels: J0, J2, RFECHO, F:1-6GHz, SN:XXXXXXXXXX, +5V, -5V, C1 GND C2

Truth Table

| Control | Input TTL | Signal Path State |
|---------|-----------|-------------------|
| C1 | C2 | |
| 0 | 0 | NC |
| 0 | 1 | J0-J1 |
| 1 | 0 | J0-J2 |
| 1 | 1 | OFF |

Control Pin Customization available upon request