ERZIA
DATASHEET

# SP2T Switch

ERZ-SW2-0200-1000-2.5


## Main Features:

- Frequency Range: 2 to 10 GHz.
- Typical values: I.L: 2 dB, Isolation 80 dB
- RF connectors (I/O): SMA
- Solder filtered pins for DC connection
- Solid State reflective switch
- Gold platted compact aluminum housing
- Hi-reliability and dedicated screening/ environmental tests available under request

## ERZ-SW2-0200-1000-2.5

The ERZ-SW2-0200-1000-2.5 is a wideband SPDT switch with low insertion losses and high isolation. The compact size and modularity makes it ideal for a wide range of applications.

## Typical applications:

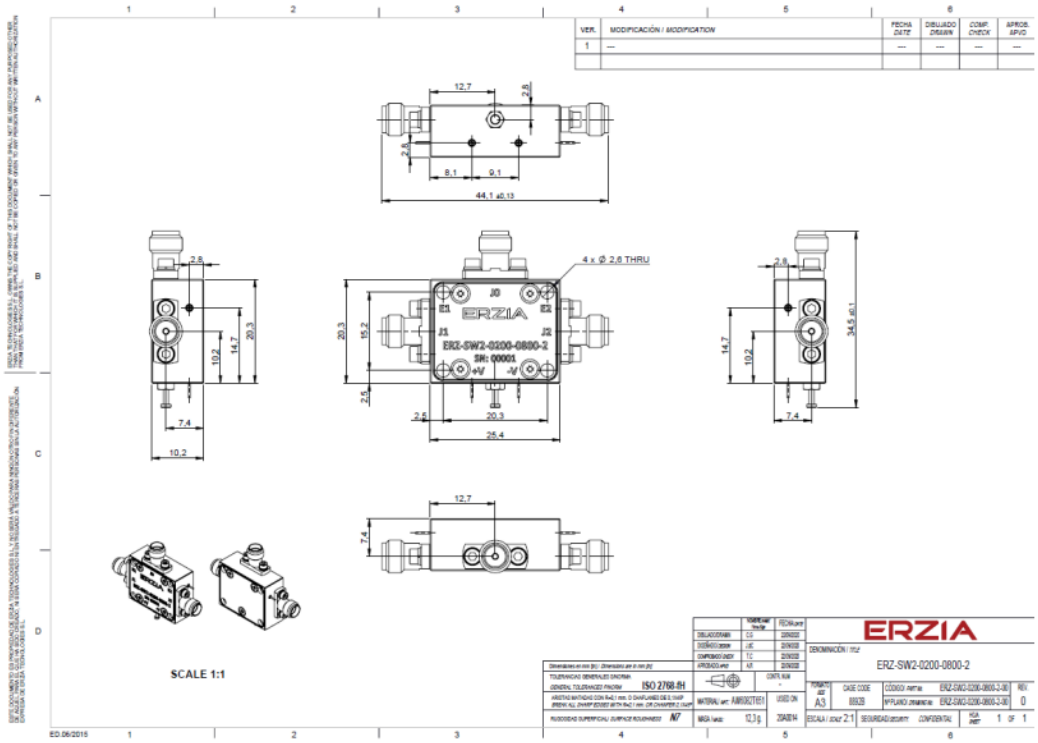
- Industrial / Laboratory
- Satcom / Telecom
- Space / Aerospace / Military

## Performance

| Parameter | Value | | | Units |
|---|---|---|---|---|
| | Min | Typ | Max | |
| Frequency | 2 | - | 10 | GHz |
| Insertion Loss | - | 1.5 | 2 | dB |
| Isolation | 70 | 80 | - | dB |
| Switching Time | - | 25 | - | ns |
| VSWR input | - | 1.3:1 | 1.5:1 | - |
| VSWR output | - | 1.3:1 | 1.5:1 | - |
| DC Voltage | -5 | - | 5 | VDC |
| Control Voltage (TTL) | 0 | - | 5 | VDC |
| RF Connectors | SMA Female IN/OUT | | | - |

Specifications at a case temperature of 25°C unless otherwise indicated

## Mechanics and Control Table




| Connector | Signal | Details |
|---|---|---|
| E1, E2 | Control | **Non-Inverting**<br>Logic 0 (low) (0 to 0.8V): Insertion loss<br>Logic 1 (high) (2.4 to 4.7V): Isolation<br>**Inverting**<br>Logic 0 (low) (0 to 0.8V): Isolation<br>Logic 1 (high) (2.4 to 4.7V): Insertion loss<br><br>**Non-Inverting Control Input**<br>E1: Low E2: High -> Signal Path J0 – J1<br>E1: High E2: Low -> Signal Path J0 - J2 |
| J0 | RF input | SMA Female |
| J1 | RF input/output | SMA Female |
| J2 | RF input/output | SMA Female |
| +V | Positive power supply | 5V |
| -V | Negative power supply | -5V |
| GND | Ground | Ground |

## Absolute Maximum Ratings

| Condition | Value |
|---|---|
| DC Voltage | 15 V |
| Maximum Input Power (CW) | 23 dBm |
| Operation temperature (at case) | -45 to 85 °C |
| Storage temperature | -55 to 125 °C |

- Stress above these ratings may cause permanent damage to the device.
- It is final user responsibility to maintain the amplifier within the specified ranges.

## Environmental Specifications (By Design)

| | | |
|---|---|---|
| Operating Temperature: | -45 to +85 °C | (MIL-STD-810F, method 520.2) |
| Storage Temperature: | -55 to 125 °C | (MIL-STD-810F, method 520.2) |
| Vibration: | 8g rms | (MIL-STD-810F, method 514.5) |
| Shock: | 20g,11ms,saw-tooth | (MIL-STD-810F, method 516.5) |
| Acceleration: | 15g | (MIL-STD-810F, method 513.5) |

## RoHS & REACH Compliance

This part is compliant with EU 2011/65/UE RoHS (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) and REACH (Registration, Evaluation, Authorization and restriction of Chemical substances) directives.

## Documentation and Test Reports

All modules are at least delivered with: Electrical Test Report, Certificate of Conformance, Certificate of Acceptance and Origin. Optionally, units can be environmentally tested (temperature, vibration…).

## Option (HS): Heat Sink

A heat sink (HS) can be provided to allow the operation of Power Amplifiers. Please note that most power amplifiers need heat sink or appropriate heat dissipation strategy.

## Space / Military Usage

Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

## Customization and Extended Performances

ERZIA can fully design or adapt one of the existing RF amplifiers designs according to your specifications. Please contact us for additional information.

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20240228_rev1.2