

DESCRIPTION

The HSWM series of broadband high power switches covers the waveguide bands from 18 - 80 GHz. They utilize a low loss microstrip structure using GaAs MMICs which also offer high RF power handling as compared to our standard finline-based switches. Superior performance in a compact size is featured in these designs.

Switches are available in SPST and SPDT configurations in most frequency bands and SPNT switches are available as custom products. Power handling at 35 GHz is 1 watt nominal up to several watts. Both waveguide and coax versions are available.

Many options of on/off ratio values are offered with low loss versions and isolations up to 60 dB. Switches have integral TTL drivers standard and ECL drivers available as an option.



Applications

- Attenuators
- AM Modulators
- General RF Switching
- Receiver Protection
- Integrated Systems

Features

- SPNT options
- Driver Options
- High Power Handling
- Low Loss
- High Isolation

Specifications @ 35°C T_{CASE}; Specifications subject to change w/o notice.

| Part Number | Frequency (GHz) | SPXT | RF Power ₄ (max) | WG / Flange ₂ (WR# / UG#) | Bandwidth | Insertion Loss dB ₁ | Isolation dB ₁ | Switching Speed (ns) | |
|---------------|-----------------|------|-----------------------------|--------------------------------------|-----------|--------------------------------|---------------------------|----------------------|--------|
| | | | | | | | | 10-90% | 90-10% |
| HSWM4201 | 18.0 – 26.5 | SPST | 1 W | 42 595/U | Full | 1.5 | 30 | 3 | 3 |
| HSWM4201/2.9 | 18.0 – 26.5 | SPST | 1 W | 2.9mm coax | Full | 1.5 | 30 | 3 | 3 |
| HSWM24201 | 18.0 – 26.5 | SPDT | 1 W | 42 595/U | Full | 1.5 | 30 | 3 | 3 |
| HSWM24201/2.9 | 18.0 – 26.5 | SPDT | 1 W | 2.9 mm coax | Full | 1.5 | 30 | 3 | 3 |
| HSWM2801 | 26.5 – 40.0 | SPST | 1 W | 28 599/U | Full | 1.8 | 28 | 3 | 3 |
| HSWM2801/2.9 | 26.5 – 40.0 | SPST | 1 W | 2.9 mm coax | Full | 2.2 | 28 | 3 | 3 |
| HSWM22801 | 26.5 – 40.0 | SPDT | 1 W | 28 599/U | Full | 2.0 | 28 | 3 | 3 |
| HSWM22801/2.9 | 26.5 – 40.0 | SPDT | 1 W | 2.9 mm coax | Full | 2.4 | 28 | 3 | 3 |
| HSWM2201 | 33.0—45.0 | SPST | 1 W | 22 599/U | Full | 2.4 | 27 | 3 | 3 |
| HSWM2201/2.4 | 33.0—45.0 | SPST | 1 W | 2.4 mm coax | Full | 2.4 | 27 | 3 | 3 |
| HSWM22201 | 33.0 – 45.0 | SPDT | 1 W | 22 599/U | Full | 2.4 | 27 | 3 | 3 |
| HSWM22201/2.4 | 33.0 – 45.0 | SPDT | 1 W | 2.4 mm coax | Full | 2.4 | 27 | 3 | 3 |

Notes

1. Other on/off ratios, drivers, and switching speed options < 2ns available.
2. Other flange options available.
3. Operating temperature 0 to +50°C.
4. Higher power handling available in some models.
5. Specifications shown are for reflective switches. Contact factory for available non-reflective switch configurations.



Series HSWM High Power Switches

Revised October 2010

General Specifications

| | |
|--------------------------|--|
| Power Handling | Spec compliant to 1 watt Operates to 2 watts without damage |
| VSWR | 2.0:1 (typical, low loss condition) |
| Bias | +5.0 VDC @ 10 mA, - 5.0 VDC @ 2 mA |
| Driver Delay, TTL Driver | 10 ns typical |

Requesting quotes

When requesting a quote for HSWM High Power PIN Switches, please specify required frequency range, isolation level and any other required specifications. The part number guide below can also be used as a reference for requesting quotes.

HSWM 2 28 01 / 383 - XXX

