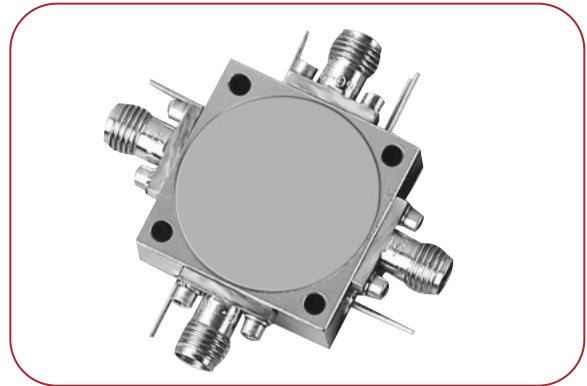


SINGLE-POLE THREE-THROW SWITCHES

FEATURES

- Multioctave bands 0.2 to 18 GHz
- Current or TTL control
- Low insertion loss
- High isolation
- Fast and high speed models
- Drop-in models available



| Frequency Range (GHz) | Model Number | Insertion Loss (dB, Max.) | Isolation (dB, Min.) | VSWR (Max.) | Type | Rise/Fall Time (ns, Typ.) | On/Off Time (ns, Typ.) | On/Off Time (ns, Max.) | DC Power Positive (mA, Max.) | DC Power Negative (mA, Min.) |
|--|-----------------|---------------------------|----------------------|-------------|------------|---------------------------|------------------------|------------------------|------------------------------|------------------------------|
| STANDARD, MULTIOCTAVE BAND MODELS | | | | | | | | | | |
| 0.2–2 | SW3-002020RN1NF | 1.6 | 70 | 1.6:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-002020AN1NF | 2 | 75 | 1.6:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| 0.5–2 | SW3-005020RN1NF | 1.5 | 80 | 1.6:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-005020AN1NF | 1.9 | 75 | 1.6:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| 2–8 | SW3-020080RN1NF | 1.9 | 80 | 1.7:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-020080AN1NF | 2.1 | 70 | 1.7:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| 4–12 | SW3-040120RN1NF | 2.4 | 90 | 1.7:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-040120AN1NF | 2.5 | 65 | 1.7:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| 2–18 | SW3-020180RN1NF | 3 | 80 | 2:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-020180AN1NF | 3.2 | 60 | 2:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| 1–18 | SW3-010180RN1NF | 3.1 | 70 | 2:1 | Reflective | 20/20 | 150 | 180 | 85 | 85 |
| | SW3-010180AN1NF | 3.4 | 60 | 2:1 | Absorptive | 20/20 | 150 | 180 | 85 | 85 |
| OPTIMIZED PERFORMANCE MODEL | | | | | | | | | | |
| 1–1.1 | SW3-010011AN1NF | 1 | 40 | 1.2:1 | Absorptive | 500 | 700 | 1000 | 300 | 100 |

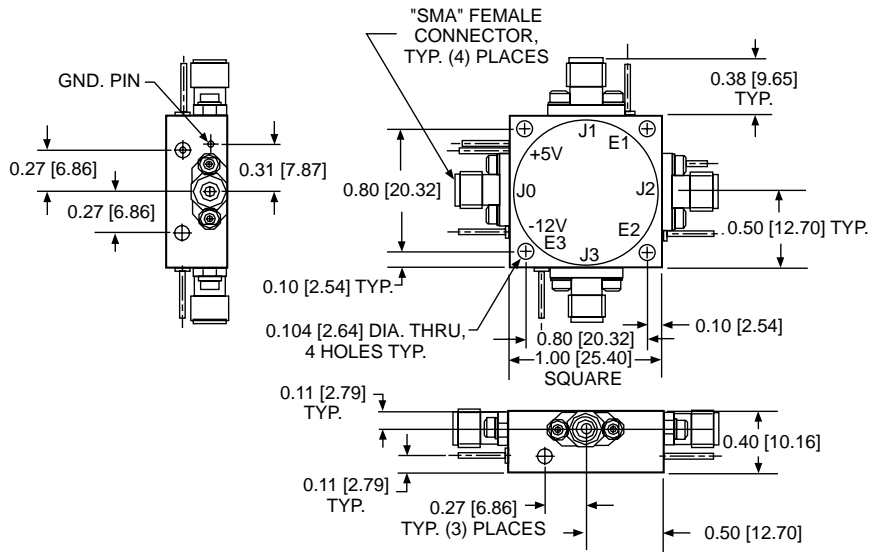
Electrical performance of multioctave models can be optimized over narrower bandwidths, or for a particular parameter. Electrical options include: Lower insertion loss, lower VSWR, higher isolation, high power and flat amplitude response. Mechanical/Control options include: Custom packaging, single supply operation, ultra-fast on/off time and BCD decoder. Consult MITEQ for options.

SINGLE-POLE THREE-THROW SWITCHES (CONT.)

TTL CONTROL LOGIC

| | | Non-inverting Control Input | | | Inverting Control Input | | | Signal Path | |
|---------------|-------------------------------|-----------------------------|-----------|-----------|-------------------------|------|------|-------------|---------|
| | | E1 | E2 | E3 | E1 | E2 | E3 | | |
| Non-inverting | Logic 0 (low) (0 to 0.8 V) | Low | High | High | J0 - J1 | High | Low | Low | J0 - J1 |
| | Logic 1 (high) (2.4 to 4.7 V) | High | Low | High | J0 - J2 | Low | High | Low | J0 - J2 |
| Inverting | Logic 0 (low) (0 to 0.8 V) | High | High | Low | J0 - J3 | Low | Low | High | J0 - J3 |
| | Logic 1 (high) (2.4 to 4.7 V) | Isolation | Isolation | Isolation | | | | | |

SP3T OUTLINE DRAWING



GENERAL NOTES:

- Dimensions shown in brackets [] are in millimeters.
- Unless specified, all connectors are type SMA female field replaceable. SMA male also available, see ordering options.
- Tolerance as follows:
 .xx = ±0.01 [xx = ±0.25]
 .xxx = ±0.005 [xxx = ±0.13]



MITEQ

SP3T SWITCH ORDERING INFORMATION

To order a switch, please include the model number derived from the following table. If requesting a quotation for a switch not listed in this catalog, please consult MITEQ. Include any additional specifications that are not listed.

| | | | | | | | | | | |
|---------------------------------|-----------------------|----------|----------|------------|------------|----------|----------|----------|----------|----------|
| | SW | 3 | - | 020 | 180 | A | N | 1 | N | F |
| SWITCH _____ | | | | | | | | | | |
| Number of throw(s) _____ | | | | | | | | | | |
| Frequency (100's of MHz) | | | | | | | | | | |
| Lower frequency _____ | | | | | | | | | | |
| Upper frequency _____ | | | | | | | | | | |
| Type _____ | | | | | | | | | | |
| Absorptive | A | | | | | | | | | |
| Reflective | R | | | | | | | | | |
| Logic _____ | | | | | | | | | | |
| Non-inverting | N | | | | | | | | | |
| Inverting | I | | | | | | | | | |
| No driver | X (See Note 1) | | | | | | | | | |
| Power Supply _____ | | | | | | | | | | |
| +5 V, -12 V | 1 | | | | | | | | | |
| +5 V, -5 V | 2 (See Note 2) | | | | | | | | | |
| +5 V, -15 V | 3 | | | | | | | | | |
| +12 V, -12 V | 4 | | | | | | | | | |
| +15 V, -15 V | 5 | | | | | | | | | |
| No driver | X | | | | | | | | | |
| Hermeticity _____ | | | | | | | | | | |
| Non-hermetic | N | | | | | | | | | |
| Hermetic | H | | | | | | | | | |
| Connectors _____ | | | | | | | | | | |
| SMA-Female | F | | | | | | | | | |
| SMA-Male | M | | | | | | | | | |

Note 1: For "no driver" option, unit is current controlled through logic control pin, -20 mA for low loss condition and +20 mA for isolation state. Switching speeds are not measured on driverless units.
 Note 2: This option has 0.2 dB higher insertion loss, on/off time is 150 ns maximum and rise/fall time is 30 ns typical.

AVAILABLE OPTIONS

- Add suffix AM Amplitude matching port-to-port
- Add suffix PM Phase matching port-to-port
- Add suffix VL1 Common port video filter
- Add suffix VL2 Output port(s) video filter
- Add suffix VL3 Both common port and output port(s) video filter
- Add suffix HP Higher power (alternate package configurations)

Example:

The above illustrated part number SW3-020180AN1NF is for the following:

| |
|------------------|
| Switch SP3T |
| 2 to 18 GHz |
| Absorptive |
| Non-inverting |
| +5 V, -12 V |
| Non-hermetic |
| SMA-F connectors |

Consult MITEQ for additional options.
 When additional options are ordered, MITEQ will add a 4 digit number (-SXXXX) suffix to the part number.