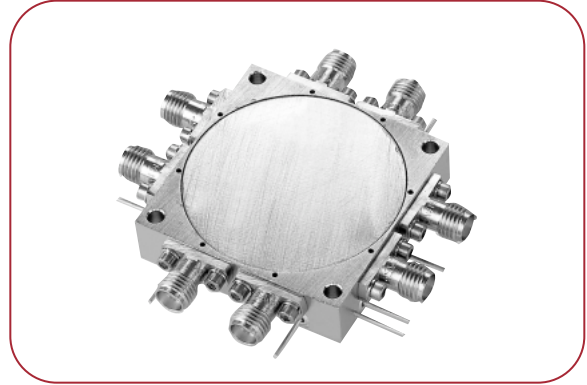


## SINGLE-POLE SEVEN-THROW SWITCHES

### FEATURES

- Multioctave bands 0.2 to 18 GHz
- Current or TTL control
- Low insertion loss
- High isolation
- Medium 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.)
<b>STANDARD, MULTIOCTAVE BAND MODELS</b>										
0.2–2	SW7-002020RN1NF	2	60	1.7:1	Reflective	20/20	150	180	185	185
	SW7-002020AN1NF	2.4	65	1.7:1	Absorptive	20/20	150	180	185	185
0.5–2	SW7-005020RN1NF	1.9	65	1.7:1	Reflective	20/20	150	180	185	185
	SW7-005020AN1NF	2.3	65	1.7:1	Absorptive	20/20	150	180	185	185
2–8	SW7-020080RN1NF	2.3	65	1.8:1	Reflective	20/20	150	180	185	185
	SW7-020080AN1NF	2.6	65	1.8:1	Absorptive	20/20	150	180	185	185
4–12	SW7-040120RN1NF	3.1	65	1.8:1	Reflective	20/20	150	180	185	185
	SW7-040120AN1NF	3.2	65	1.8:1	Absorptive	20/20	150	180	185	185
2–18	SW7-020180RN1NF	3.7	60	2:1	Reflective	20/20	150	180	185	185
	SW7-020180AN1NF	4	50	2:1	Absorptive	20/20	150	180	185	185
1–18	SW7-010180RN1NF	3.9	60	2:1	Reflective	20/20	150	180	185	185
	SW7-010180AN1NF	4.2	50	2:1	Absorptive	20/20	150	180	185	185
<b>OPTIMIZED PERFORMANCE MODEL</b>										
1–1.5	SW7-010015AN1NF	1.5	60	1.6:1	Absorptive	100	200	1000	200	200

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.

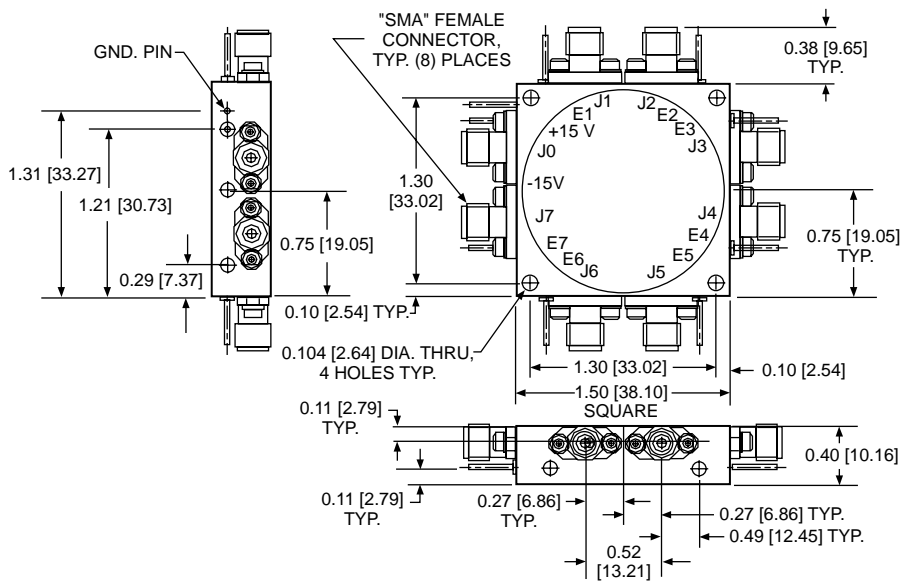
# SINGLE-POLE SEVEN-THROW SWITCHES (CONT.)

## TTL CONTROL LOGIC

Non-inverting	Logic 0 (low) (0 to 0.8 V)	Insertion loss
	Logic 1 (high) (2.4 to 4.7 V)	Isolation
Inverting	Logic 0 (low) (0 to 0.8 V)	Isolation
	Logic 1 (high) (2.4 to 4.7 V)	Insertion loss

SP7T	Non-inverting Control Input							Signal Path	Inverting Control Input							Signal Path
	E1	E2	E3	E4	E5	E6	E7		E1	E2	E3	E4	E5	E6	E7	
	Low	High	High	High	High	High	High	J0 - J1	High	Low	Low	Low	Low	Low	Low	J0 - J1
	High	Low	High	High	High	High	High	J0 - J2	Low	High	Low	Low	Low	Low	Low	J0 - J2
	High	High	Low	High	High	High	High	J0 - J3	Low	Low	High	Low	Low	Low	Low	J0 - J3
	High	High	High	Low	High	High	High	J0 - J4	Low	Low	Low	High	Low	Low	Low	J0 - J4
	High	High	High	High	Low	High	High	J0 - J5	Low	Low	Low	Low	High	Low	Low	J0 - J5
	High	High	High	High	High	Low	High	J0 - J6	Low	Low	Low	Low	Low	High	Low	J0 - J6
	High	High	High	High	High	High	Low	J0 - J7	Low	Low	Low	Low	Low	Low	High	J0 - J7

## SP7T 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]



# SP7T 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	7	- 020	180	A	N	1	N	F
<b>SWITCH</b> _____									
<b>Number of throw(s)</b> _____									
<b>Frequency (100's of MHz)</b>									
Lower frequency _____									
Upper frequency _____									
<b>Type</b> _____									
Absorptive .....									
Reflective .....									
<b>Logic</b> _____									
Non-inverting .....									
Inverting .....									
No driver .....									
<b>Power Supply</b> _____									
+5 V, -12 V .....									
+5 V, -5 V .....									
+5 V, -15 V .....									
+12 V, -12 V .....									
+15 V, -15 V .....									
No driver .....									
<b>Hermeticity</b> _____									
Non-hermetic .....									
Hermetic .....									
<b>Connectors</b> _____									
SMA-Female .....									
SMA-Male .....									

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 200 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 SW7-020180AN1NF is for the following:

- Switch SP7T
- 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.



**MITEQ**