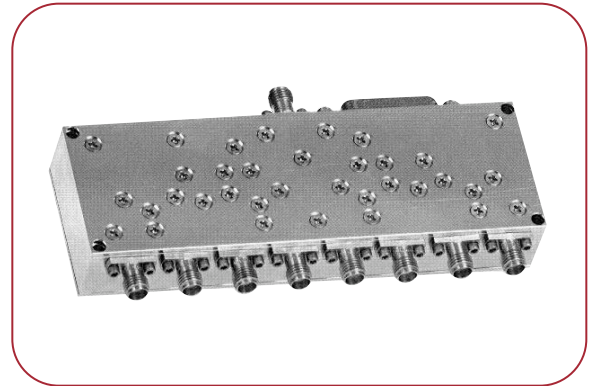


SINGLE-POLE EIGHT-THROW SWITCHES

FEATURES

- Wide frequency range 1–18 GHz
- High Isolation 50 dB minimum
- Low insertion loss 4.5 dB maximum
- In/Out VSWR 2:1 maximum
- Total switching speed..... <300 ns
- DC supply +5, -12 VDC



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	SW8-002020RN1NF	1.5	65	1.7:1	Reflective	30/30	200	300	215	215
	SW8-002020AN1NF	2	65	1.7:1	Absorptive	30/30	200	300	215	215
0.5–2	SW8-005020RN1NF	1.5	65	1.7:1	Reflective	30/30	200	300	215	215
	SW8-005020AN1NF	2	65	1.7:1	Absorptive	30/30	200	300	215	215
2–8	SW8-020080RN1NF	2.2	65	2:1	Reflective	30/30	200	300	215	215
	SW8-020080AN1NF	2.9	65	2:1	Absorptive	30/30	200	300	215	215
4–12	SW8-040120RN1NF	2.7	65	2:1	Reflective	30/30	200	300	215	215
	SW8-040120AN1NF	3.2	65	2:1	Absorptive	30/30	200	300	215	215
2–18	SW8-020180RN1NF	3.8	60	2:1	Reflective	30/30	200	300	215	215
	SW8-020180AN1NF	4.2	60	2:1	Absorptive	30/30	200	300	215	215
1–18	SW8-010180RN1NF	3.9	60	2:1	Reflective	30/30	200	300	215	215
	SW8-010180AN1NF	4.5	60	2:1	Absorptive	30/30	200	300	215	215
OPTIMIZED PERFORMANCE MODEL										
1–18	SW8-010180AB3NF*	4.5	50	2:1	Absorptive	300	400	500	105	185

* Includes built-in 3 bit TTL decoder.

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 EIGHT-THROW SWITCHES (CONT.)

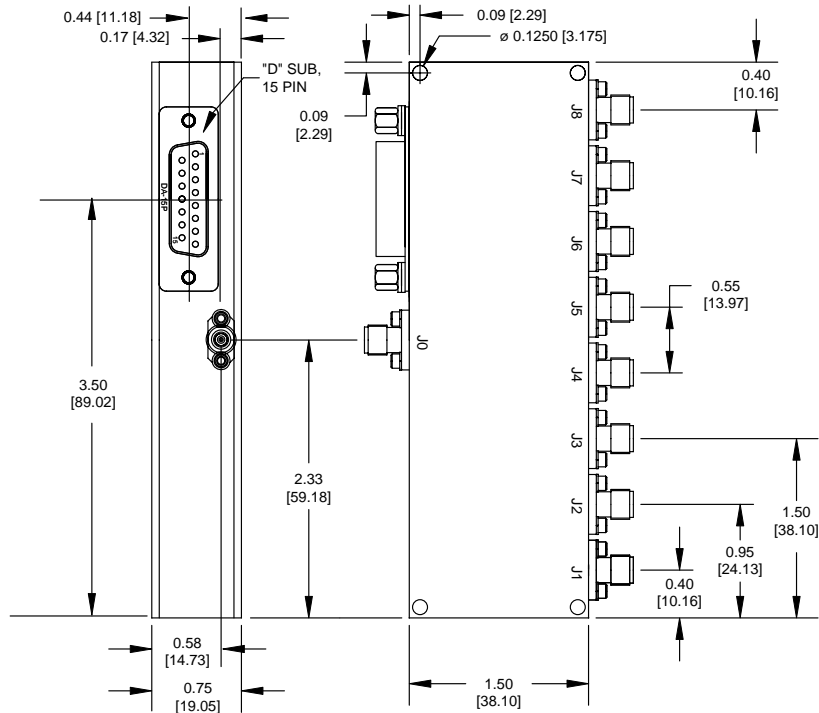
TTL CONTROL LOGIC

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

15 Pin D Connector		Non-Inverting Control Input							Signal Path
Pin 1	Pin 9	Pin 2	Pin 10	Pin 5	Pin 6	Pin 7	Pin 8		
Low	High	High	High	High	High	High	High	J0 - J1	
High	Low	High	High	High	High	High	High	J0 - J2	
High	High	Low	High	High	High	High	High	J0 - J3	
High	High	High	Low	High	High	High	High	J0 - J4	
High	High	High	High	Low	High	High	High	J0 - J5	
High	High	High	High	High	Low	High	High	J0 - J6	
High	High	High	High	High	High	Low	High	J0 - J7	
High	High	High	High	High	High	High	Low	J0 - J8	

15 Pin D Connector		Non-Inverting Control Input							Signal Path
Pin 1	Pin 9	Pin 2	Pin 10	Pin 5	Pin 6	Pin 7	Pin 9		
High	Low	Low	Low	Low	Low	Low	Low	J0 - J1	
Low	High	Low	Low	Low	Low	Low	Low	J0 - J2	
Low	Low	High	Low	Low	Low	Low	Low	J0 - J3	
Low	Low	Low	High	Low	Low	Low	Low	J0 - J4	
Low	Low	Low	Low	High	Low	Low	Low	J0 - J5	
Low	Low	Low	Low	Low	High	Low	Low	J0 -J6	
Low	Low	Low	Low	Low	Low	High	Low	J0 - J7	
Low	Low	Low	Low	Low	Low	Low	High	J0 - J8	

SP8T 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

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SP8T 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	8	-	020	180	A	N	1	N	F
SWITCH _____										
Number of throw(s) _____										
Frequency (100's of MHz)										
Lower frequency _____										
Upper frequency _____										
Type _____										
Absorptive										
Reflective										
Logic _____										
Non-inverting										
Built-in decoder										
Power Supply _____										
+5 V, -12 V										
+5 V, -15 V										
Hermeticity _____										
Non-hermetic										
Hermetic										
Connectors _____										
SMA-Female										
SMA-Male										

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 SW8-020180AN1NF is for the following:

Switch SP8T
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.

GENERAL SWITCH SPECIFICATIONS

Operating temperature 0 to 70°C	Power handling (full performance) 20 dBm
Storage temperature -30 to +85°C	Power handling (no damage) 30 dBm
Humidity 95%, noncondensing	Input -1 dB compression 30 dBm typical
Vibration 12 g's rms, 20-2000 Hz	Input third-order intercept point 35 dBm typical
Per MIL-STD-810B	Video leakage for "F" model
Method 514, Procedure 5	(rms power) < -53 dBm typical (> 2 GHz)
	< -42 dBm typical (< 2 GHz)



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