

Our Most Important Connection is with You.™

SPDT Low PIM up to 18 GHz

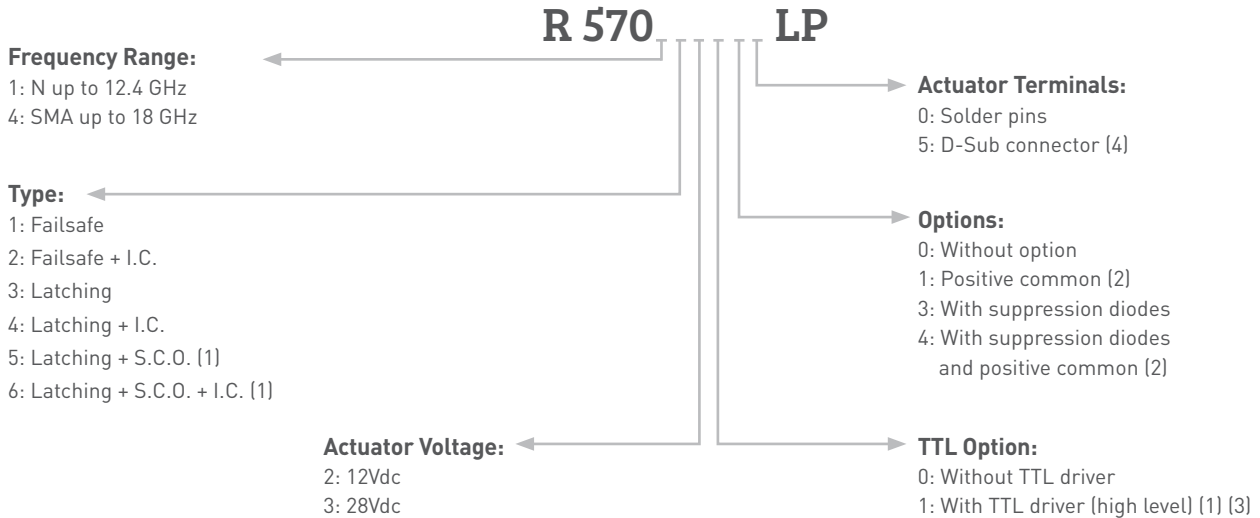


To meet growing market demands created by the deployment of 4G/LTE networks, Radiall has introduced a new range of Low PIM switches. RAMSES SPDT Low PIM switches are perfectly suited for RF test systems and test benches requiring excellent passive intermodulation performance up to 18 GHz, with a guarantee PIM performance of -160 dBc @ +43 dBm over a life span of 2 million switching cycles.

These products are specific to instrumentation and telecommunication applications.

Example of P/N:
R570413030LP is a SPDT SMA 18 GHz, failsafe, 28 Vdc, with suppression diodes, solder pins.

PART NUMBER SELECTION



I.C.: Indicator contact - S.C.O.: Self Cut-Off

(1): Suppression diodes are already included in Self Cut-OFF & TTL option

(2): Positive common shall be specified only with type 2, 3, 5 & 6 because failsafe models can be used with both polarities

(3): Polarity is not relevant to application for switches with TTL driver

(4): Available only for N models

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LOW PIM

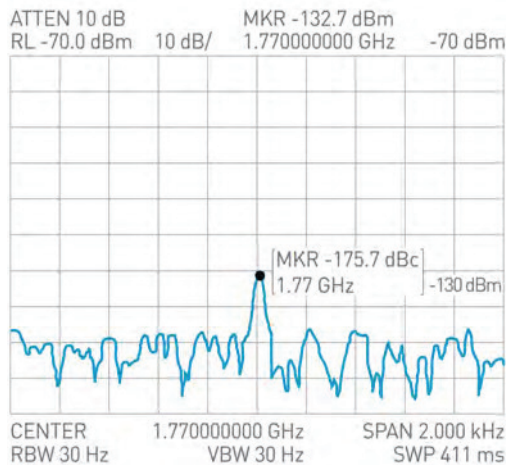
GENERAL SPECIFICATIONS

Operating mode		Failsafe		Latching	
Nominal operating voltage (across operating temperature)	Vdc	12 (10.2 to 13)	28 (24 to 30)	12 (10.2 to 13)	28 (24 to 30)
Coil resistance at 23°C (+/-10%)	Ω	47.5	275	58	350
Operating current at 23°C	mA	250	102	210	80
Average power		See Power Rating Chart on page 1-13			
TTL input	High Level	2.2 to 5.5 Volts		800µA max 5.5 Volts	
	Low Level	0 to 0.8 Volts		20µA max 5.5 Volts	
Indicator rating		1 W / 30 V / 100 mA			
Switching time	ms	10			
Life [Min]		2 million cycles			
Connectors		SMA - N			
Operating temperature range		-40°C to +85°C			
Storage temperature range		-55°C to +85°C			
Vibration (MIL STD 202, method 204D, cond.D)		10-2000 Hz, 20g		operating	
Shock (MIL STD 202, method 213B, cond.C)		100g / 6 ms, ½ sine		operating	

RF PERFORMANCES

Connectors	Frequency range GHz	V.S.W.R. (max)	Insertion loss (max) dB	Isolation (min) dB	Impedance Ω	Third order intermodulation
N	DC - 12.4	DC - 1	1.15	0.15	85	-160 dBc @ +43 dBm (2 carriers 20W)
		1 - 2	1.20	0.20	80	
		2 - 3	1.25	0.25	75	
		3 - 8	1.35	0.35	70	
		8 - 12.4	1.50	0.50	60	
SMA	DC - 8	DC - 3	1.10	0.15	80	50
		3 - 8	1.20	0.20	75	
		8 - 12.4	1.20	0.25	65	
		12.4 - 18	1.40	0.35	60	

OUTSTANDING PIM PERFORMANCE



Passive Intermodulation

Tone 1	1810 MHz, approximately 43 dBm
Tone 2	1850 MHz, approximately 43 dBm
3rd order PIM	160 dBc at 1770 MHz

Depending on application, carrier powers and frequencies, PIM measurements can vary. PIM testing is not measured during product acceptance test.

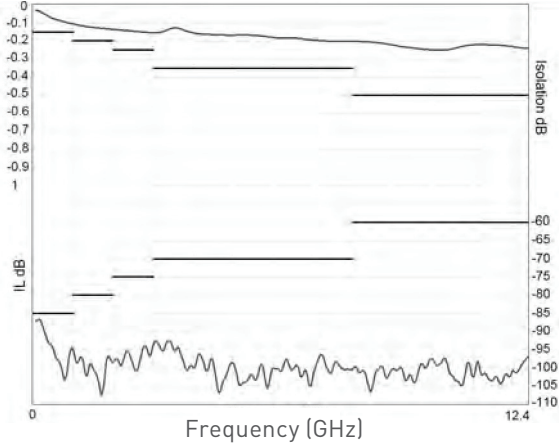
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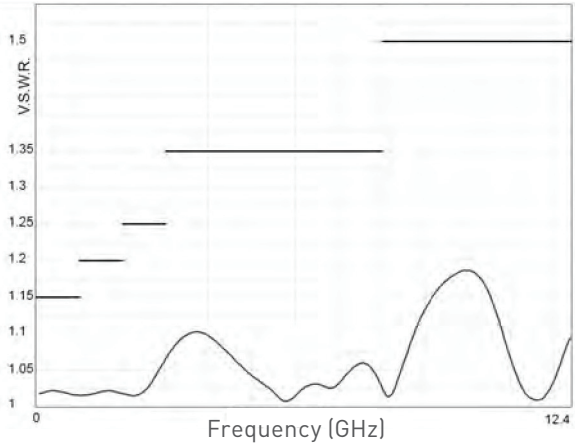
TYPICAL RF PERFORMANCES

Example: SPDT N up to 12.4 GHz

Insertion Loss and Isolation

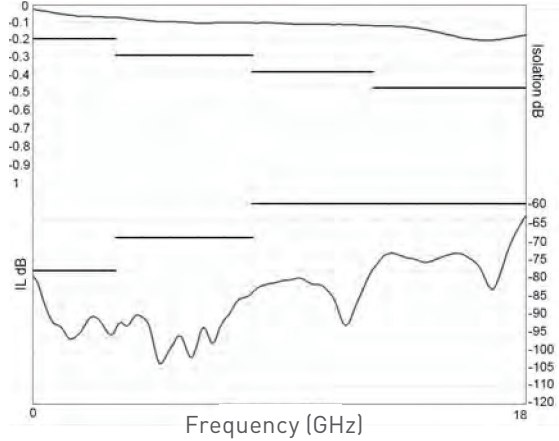


V.S.W.R.

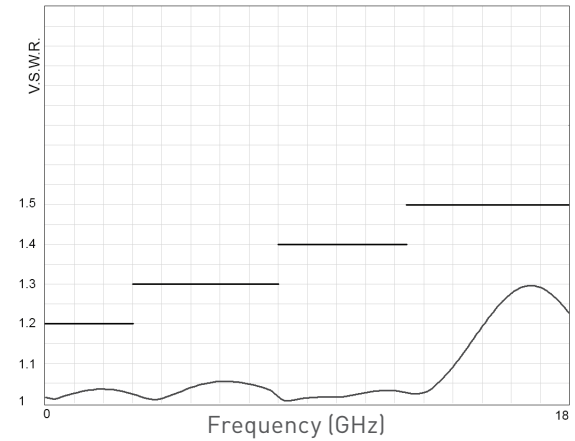


Example: SPDT SMA up to 18 GHz

Insertion Loss and Isolation



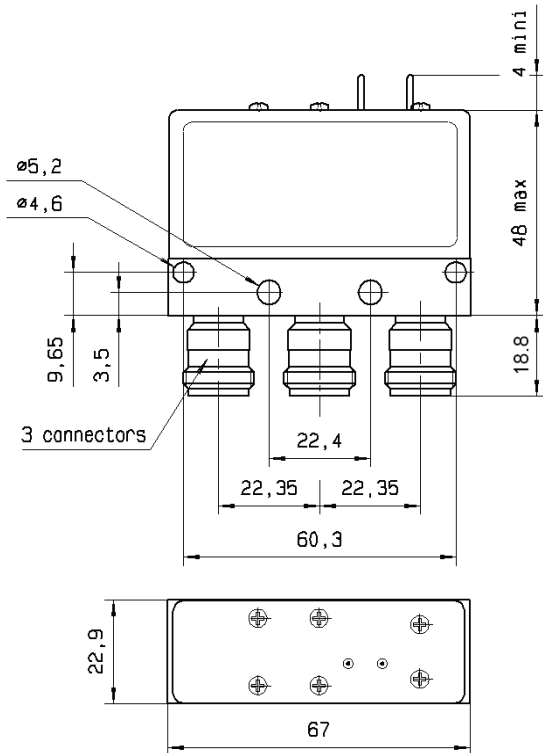
V.S.W.R.



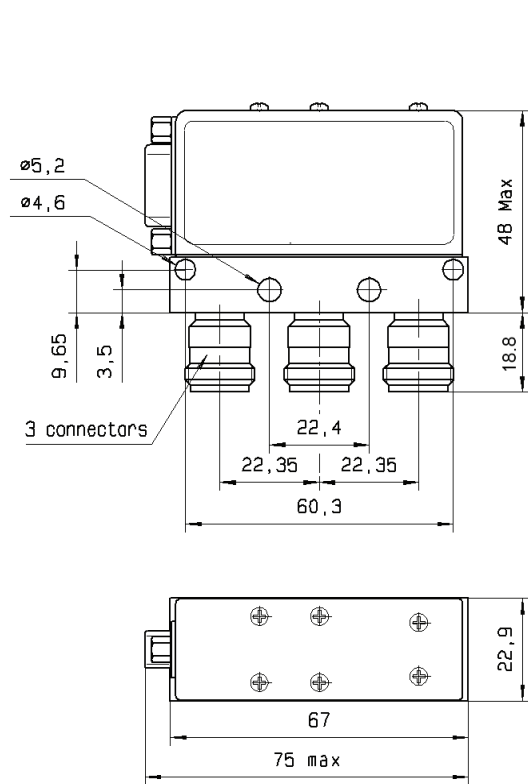
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TYPICAL OUTLINE DRAWING

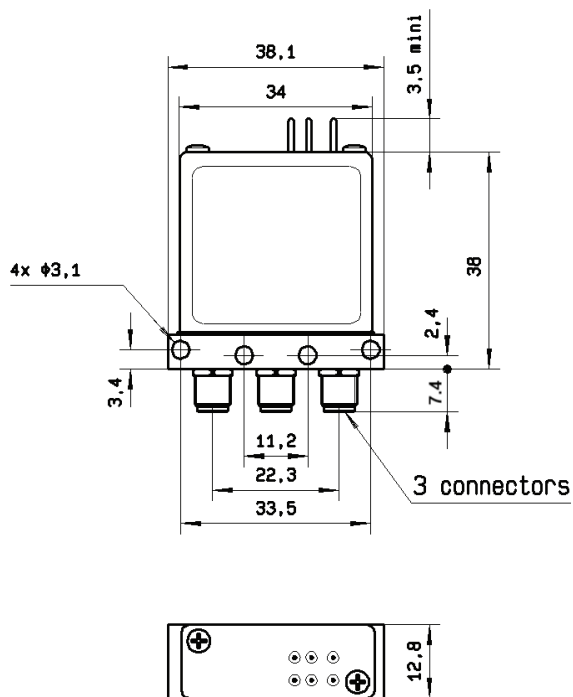
Example: SPDT N up to 12.4 GHz with pins



Example: SPDT N up to 12.4 GHz with D-sub



Example: SPDT SMA up to 18 GHz



LOW PIM