

Our Most Important Connection is with You.™

Low Power Coaxial SPDT Switch



LOW-POWER LATCHING COAXIAL SPDT SWITCH according to Radiall specification RAD-DET-SPDT-001

- DC to 22 GHz with SMA connectors
- Up to 31 GHz with SMA 2.9 connectors
- Telemetry circuit
- Suppression diodes
- D-Sub or solder pins
- Lay Down or Fixing plate
- 44 grams and up

GENERAL SPECIFICATIONS

	Unit	Min	Typical	Max
Actuation Voltage	V	+22	+26	+29
Pick-Up Voltage	V			+20.5
Actuation Current	mA		129	139
@+29V, +25°C			164	176
@+29V, -30°C			105	113
@+29V, +85°C				
Switching Time	ms			20
Pulse Duration	ms	20		1000
Coil Resistance [at +25°C]	Ω	210	225	
RF Contact Resistance	mΩ			100
	mΩ		1000	
	mΩ	10		
	mA		100	
Coil Isolation at 500 VDC	MΩ	10		
Dielectric Withstanding at 50 or 60Hz	Vrms	500		
Mass	grams			44
Variant 001: SPDT, Fixing Plate, Pins				62
Variant 002: SPDT, Lay Down, Pins				72
Variant 003: SPDT, Lay Down, D-Sub				

RF PERFORMANCES

DC to 22 GHz SMA

Frequency	GHz	DC - 4.2	4.2 - 10.7	10.7 - 12.75	12.75 - 14.5	14.5 - 22
Insertion Loss (max)	dB	0.12	0.20	0.25	0.30	0.35
VSWR (max)	(dB)	1.20:1	1.20:1	1.20:1	1.25:1	1.33:1
Return Loss (min)		(21)	(21)	(21)	(19)	(17)
Isolation (min)	dB	70			65	60
E-Field Shielding Effectiveness (min)	dBi	75	70	70	70	70

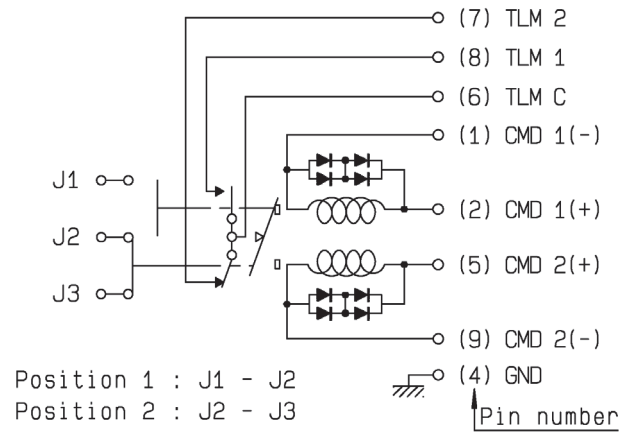
Ka – band SMA 2.9

Frequency	GHz	17.5-21.5	21.5 - 27.5	27.5 - 31
Insertion Loss (max)	dB	0.45	0.45	0.50
VSWR (max)		1.33:1	1.35:1	1.40:1
Return Loss (min)	(dB)	(17.0)	(16.5)	(15.6)
Isolation (min)	dB	65	60	60
E-Field Shielding Effectiveness (min)	dBi	70	60	60
Power Handling (max)	W	10	5	

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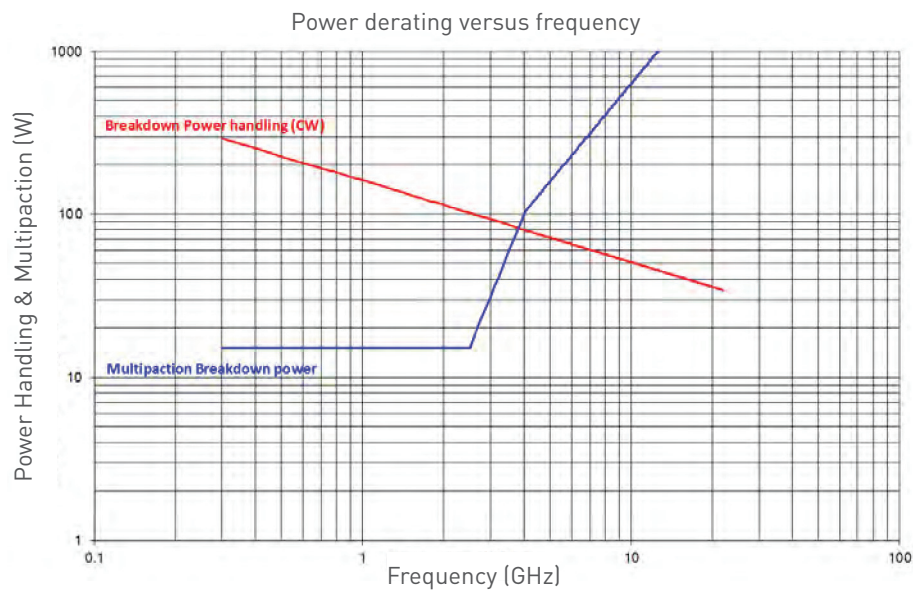
SCHEMATICS & DRAWINGS

SDPT, lay down, pins:



POWER DERATING GRAPH

Variant 001 to 003: DC to 22 GHz SMA



Frequency (GHz)	Breakdown Power Handling (W)	Breakdown Multipaction Power (W)
0.3	292.1	15.2
2.3	105.5	15.2
2.4	103.3	15.2
2.5	101.2	15.2
2.6	99.2	17.8
2.7	97.4	20.7
2.8	95.6	23.9
2.9	94.0	27.5
3.0	92.4	31.5
4.0	80.0	101.6
5.0	71.6	158.8
6.0	65.3	228.6
7.0	60.5	311.2
8.0	56.6	406.4
9.0	53.3	514.4
10.0	50.6	635.0
12.0	46.2	914.5
14.0	42.8	1244.7
16.0	40.0	1625.7
18.0	37.7	2057.5
20.0	35.8	2540.2
22.0	34.1	3073.6