

Low Power Coaxial T Switch



LOW-POWER LATCHING COAXIAL T SWITCH according to Radiall specification
RAD-DET-TSSD-002 and RAD-DET-TSRD-003

- Random or Sequential drive
- 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
- Stand up or Lay Down or fixing plate
- 58 grams and up

GENERAL SPECIFICATIONS

	Unit	RAD-DET-TSSD-002 Sequential Drive			RAD-DET-TSRD-003 Random Drive		
		Min	Typical	Max	Min	Typical	Max
Actuation Voltage	V	+22	+26	+29	+22	+26	+29
Pick-Up Voltage	V			+20.5			+20.5
Actuation Current	mA						
@+29V, +25°C			345	364		285	305
@+29V, -30°C			439	462		365	390
@+29V, +85°C			280	295		234	250
Switching Time	ms			25			20
Pulse Duration	ms	20		1000	20		1000
Coil Resistance (at +25°C)	Ω	79.8	84		88	95	
RF Contact Resistance	mΩ			100			100
TLM Indicator Circuit							
Contact closed	mΩ			1000			1000
Contact Open	mΩ	10			10		
Contact Current	mA			100			100
Coil Isolation at 500 VDC	MΩ	10			10		
Dielectric Withstanding at 50 or 60Hz	Vrms	500			500		
Mass	grams						
T-Switch, Lay Down Pins				73			64
T-Switch, Stand Up D-Sub				100			-
T-Switch, Stand Up Pins				75			75
T-Switch, Fixing Plate			-			58	
Torque Screws for	N.m						
Fixing unit				2.0			2.0
For DC connector				0.44			N/A
For SMA connector		0.8	1.1	1.15	0.8	1.1	1.15

RF PERFORMANCES

DC to 22 GHz SMA

Frequency	GHz	DC-4.2	4.2-5.5	5.5-6.6	6.6-7.7	7.7-8.8	8.8-10.5	10.5-14.5	14.5-17.8	17.8-20	20-22
Insertion Loss (max)	dB	0.15	0.17	0.18	0.21	0.24	0.30	0.35	0.45	0.50	0.50
VSWR (max)	(dB)	1.20:1	1.22:1	1.25:1	1.25:1	1.25:1	1.25:1	1.25:1	1.33:1	1.33:1	1.40:1
Return Loss (min)		(21)	(20)	(19)	(19)	(19)	(19)	(19)	(19)	(17)	(17)
Isolation (min)	dB	70						65			
E-Field Shielding Effectiveness (min)	dB	75			70			65			

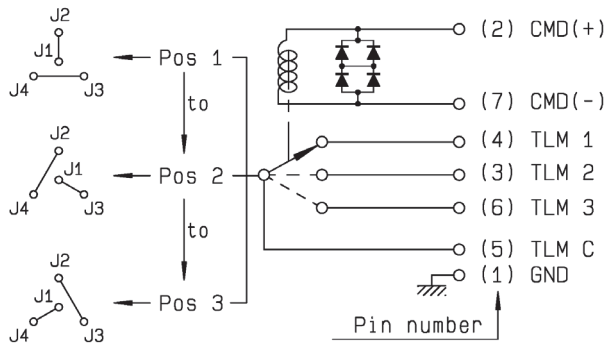
KA – BAND SMA2.9

Frequency	GHz	17.5-21.5	27.5 - 31
Insertion Loss (max)	dB	0.50	0.65
VSWR (max)	(dB)	1.33:1	1.40:1
Return Loss (min)		(17)	(15.6)
Isolation (min)	dB	65	60
E-Field Shielding Effectiveness (min)	dB	60	60
Power Handling (max)	W	10	5

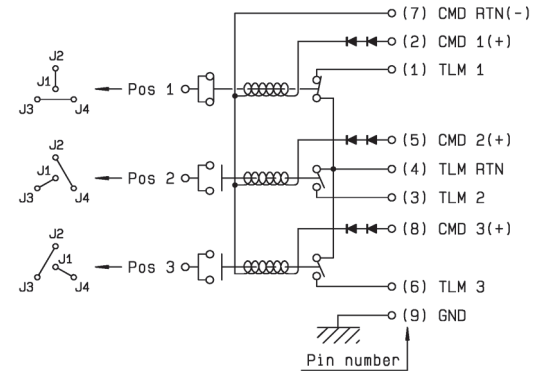
Low Power Coaxial T Switch

SCHEMATICS & DRAWINGS

Sequential Drive:



Random Drive:



T-Switch, Lay Down with pins:



T-Switch, Stand Up with D-Sub:



T-Switch, Fixing plate with pins:

POWER DERATING GRAPH

Variant 001 to 003: DC to 22 GHz SMA

