

SPnT Terminated and non Terminated up to 40 GHz

SMA - SMA2.9 - QMA - DIN 1.6 / 5.6

COAXIAL
SWITCHES

RADIAL R573 & R574 multithrow coaxial switches are offered in many configurations (over 40,000 possible combinations) including Terminated and non Terminated options. RADIAL offers reliability, reduced deliveries and competitive pricing. Excellent typical RF performances make RAMSES switches (40 GHz) ideal for Automated Test Equipment (ATE) and other measurement applications. These switches are also an excellent choice for defense, industrial, instrumentation applications and telecommunications as well.

Example of P/N:

R57463605 is a SP6T SMA up to 18 GHz, Latching, Self Cut-Off, 28 Vdc, Indicators & male 25 pin D-Sub connector.

PART NUMBER SELECTION

R 57

Model:

- 3: Without 50 Ω termination
- 4: With 50 Ω termination

RF Connectors:

- 3: SMA up to 3 GHz
- E: QMA up to 6 GHz (4) (5) (10)
- 4: SMA up to 18 GHz
- 7: SMA 2.9 up to 26.5 GHz (4) (5)
- F: SMA up to 26.5 GHz (4) (6)
- 8: SMA 2.9 up to 40 GHz (4) (5) (11)
- 9: DIN 1.6/5.6 up to 2.5 GHz (4) (5)

Type:

- 0: Normally open
- 1: Normally open + I.C.
- 2: Latching
- 3: Latching + I.C.
- 4: Latching + S.C.O. (1) (4)
- 5: Latching + S.C.O. + I.C. (1) (4)
- 8: Latching + S.C.O. + A.R. (1)
- 9: Latching + S.C.O. + I.C. + A.R. (1)

Actuator Voltage:

- 2: 12 Vdc
- 3: 28 Vdc

Actuator Terminals:

- 0: Solder pins
- 5: D-Sub connector

Options:

- 0: Without option
- 1: Positive common (2) (7)
- 2: Compatible TTL driver (high level) (1) (9)
- 3: With suppression diodes
- 4: With suppression diodes and positive common (2) (7)
- 8: BCD TTL driver compatible (1) (3) (8) (9)

Number of positions:

- 3: 3 Positions
- 4: 4 Positions
- 5: 5 Positions
- 6: 6 Positions
- 7: 7 Positions
- 8: 8 Positions
- 9: 9 Positions
- 0: 10 Positions
- 1: 11 Positions
- 2: 12 Positions

I.C.: Indicator contact / S.C.O. : Self Cut-Off / A.R. : Auto Reset

(1): These models are already equipped with suppression diodes.

(2): Standard products are equipped with negative common.

(3): Latching BCD driver enables also a global reset through driver code 0000 (see BCD logic coding page 1-13).

(4): Available only up 6 positions.

(5): Model "3" only.

(6): Model "4" only.

(7): Option not available for type 4,5,8 & 9.

(8): Option available only with type 0,1,8 & 9.

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

(10) : The QLF trademark (quick lock formula®) standard applies to QMA and QN series and guaranties the full intermateability between suppliers using this trademark. Using QLF certified connectors also guaranties the specified level of RF performance.

(11) connector SMA 2.9 is equivalent to "K connector®", registered trademark of Anritsu.



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GENERAL SPECIFICATIONS

Type 2, 3, 4 & 5:

Latching models have a RESET pin which commands the reset of all positions. This command should be used before switching from one position to another. If not, two positions will be set at the same time.

Note: During the RESET operation the current is: Nominal operating current is multiplied by the number of positions.

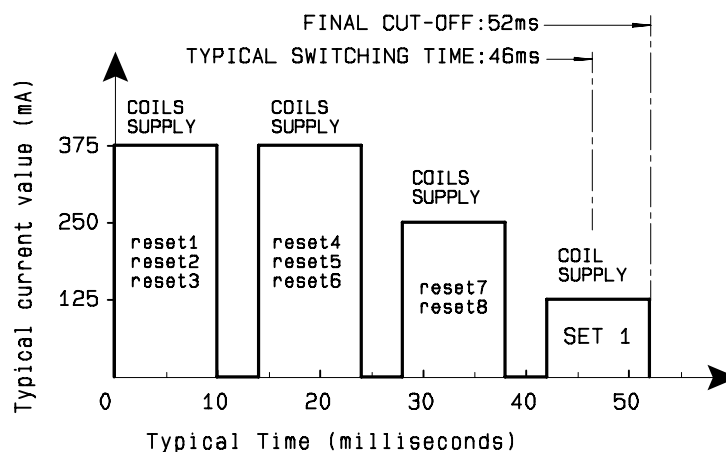
Type 8, 9:

Latching models with AUTOMATIC RESET are available; these products have an internal SET/RESET circuit which automatically resets all the non-selected positions and sets the desired position. This option simplifies the use of latching switches by suppressing the RESET command in switching sequence.

An electronic circuit supplies successively groups of 2 or 3 actuators, in order to limit the maximum current. The current with this option is the total current of 2 or 3 reset coils in the same time (see table below).

Example: During the AUTOMATIC RESET operation, at 28 Vdc, 4 position switch has a temporary consumption of only 250 mA, during 40 ms maximum.

SWITCHING SEQUENCE



Availability of options according to both type and number of positions

n = number of positions

Operating Total current at 23 ° C (mA) SPnT LATCHING				
Number of positions	12 Volts		28 Volts	
	Manual Reset	Automatic Reset	Manual Reset	Automatic Reset
3 to 4	320 x n	640	125 x n	250
5 to 8	320 x n	960	125 x n	375
9 to 12	320 x n	1280	125 x n	500

Type	Numbers of positions	Available Options
0 or 1	3 to 12	0 - 1 - 2 - 3 - 4 - 8
2 or 3	3 to 6	0 - 1 - 2 - 3 - 4
	7 to 12	0 - 1 - 3 - 4
4 or 5	3 to 6	0 - 2
	7 to 12	Not available
8 or 9	3 to 12	0 - 2 - 8

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SWITCHES

GENERAL SPECIFICATIONS

Operating mode		Normally open		Latching	
Nominal operating voltage (across operating temperature)		Vdc	12 (10.2 / 13)	28 (24 / 30)	12 (10.2 / 13) 28 (24 / 30)
Coil resistance (+/-10%)		Ohms	47.5	275	See table on previous page
Nominal operating current at 23°C		mA	250	102	
Average power			See Power Rating Chart page 1-16		
TTL input	High Level		2.2 to 5.5 V (TTL Option) / 3.5 to 5.5 V (BCD Option) 800µA max 5.5 volts		
	Low Level		0 to 0.8 V (TTL Option) / 0 to 1.5 V (BCD Option) 20µA max 0.8 Volts		
Indicator rating			1 Watt / 30 Volts / 100 mA		
Switching time (max)		ms	15 ms For automatic reset models: SP3T to SP6T => 40 ms SP7T to SP12T => 50 ms		
Life (min)	Non terminated SP3 to 6T (R573 serie)		SMA - QMA		SMA 2.9 - 1.6/5.6
			5 million cycles		2 million cycles
	Terminated SP3 to 6T (R574 serie) SP7 to 12T (all models)		2 million cycles		
Connectors			SMA - SMA2.9 - QMA - DIN 1.6/5.6		
Actuator terminals			Solder pins or male 25 pin D-Sub connector		
Operating temperature range	DIN 1.6/5.6		-25°C to +70°C		
	SMA - SMA2.9 - QMA		-40°C to +85°C		
Storage temperature range	DIN 1.6/5.6		-40°C to +85°C		
	SMA - SMA2.9 - QMA		-55°C to +85°C		
Vibration (MIL STD 202, method 204D, cond.D)			10-2000 Hz , 20g operating for SP3 to 6T, survival for SP7 to 12T		
Shock (MIL STD 202, method 213B, cond.C)			100g / 6 ms, ½ sine operating for SP3 to 6T, survival for SP7 to 12T		

RF PERFORMANCES

SMA Connector					
Number of positions	Frequency Range GHz		V.S.W.R. (max)	Insertion Loss (max) dB	Isolation (min) dB
3 to 6	DC - 3 DC - 18 DC - 26.5	DC - 3	1.20	0.20	80
		3 - 8	1.30	0.30	70
		8 - 12.4	1.40	0.40	60
		12.4 - 18	1.50	0.50	60
		18 - 26.5	1.70	0.70	50
7 to 8	DC - 3 DC - 18	DC - 3	1.20	0.20	80
		3 - 8	1.30	0.30	70
		8 - 12.4	1.40	0.40	60
		12.4 - 16	1.50	0.55	60
		16 - 18	1.60	0.60	60
9 to 10	DC - 3 DC - 18	DC - 3	1.20	0.20	80
		3 - 8	1.30	0.30	70
		8 - 12.4	1.40	0.40	60
		12.4 - 15.5	1.50	0.50	60
		15.5 - 18	1.70	0.70	55
11 to 12	DC - 3 DC - 12.4	DC - 3	1.20	0.20	80
		3 - 8	1.40	0.35	70
		8 - 12.4	1.80	0.70	60

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RF PERFORMANCES

SMA2.9 Connector						
Number of positions	Frequency Range GHz		V.S.W.R. (max)	Insertion Loss (max) dB	Isolation (min) dB	Impedance Ohms
3 to 6	DC - 26.5 DC - 40	6 - 12.4	1.40	0.40	60	50
		12.4 - 18	1.50	0.50	60	
		18 - 26.5	1.70	0.70	55	
		26.5 - 40	2.20	1.10	50	

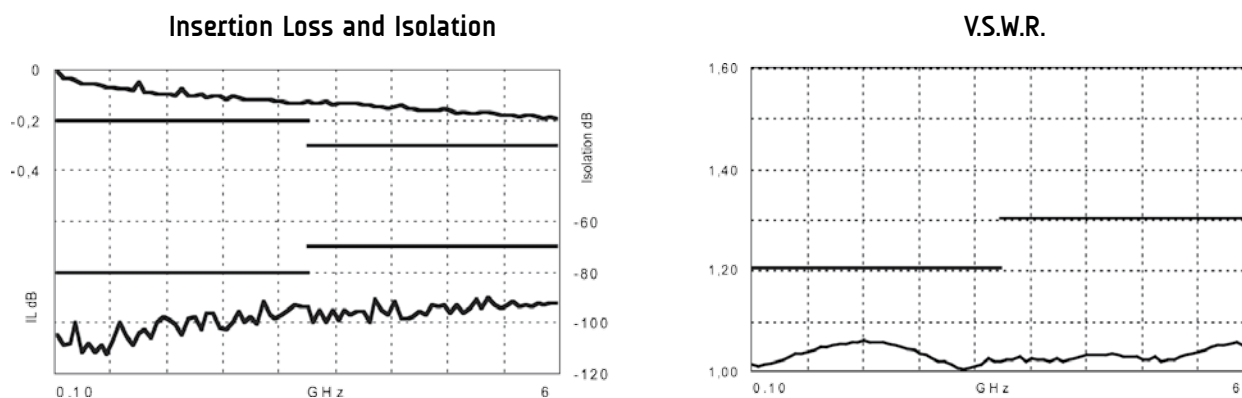
1.6/5.6 Connector						
Number of positions	Frequency Range GHz		V.S.W.R. (max)	Insertion Loss (max) dB	Isolation (min) dB	Impedance Ohms
3 to 6	DC - 2.5	DC - 1	1.30	0.20	80	75
		1 - 2.5	1.40	0.30	70	

QMA Connector						
Number of positions	Frequency Range GHz		V.S.W.R. (max)	Insertion Loss (max) dB	Isolation (min) dB	Impedance Ohms
3 to 6	DC - 6	DC - 3	1.20	0.20	80	50
		3 - 6	1.30	0.30	70	

See page 5-12, 5-13, 5-14 and 5-15 for typical RF performances

R573 AND R574 TYPICAL RF PERFORMANCES

Example: SP6T QMA up to 6 GHz



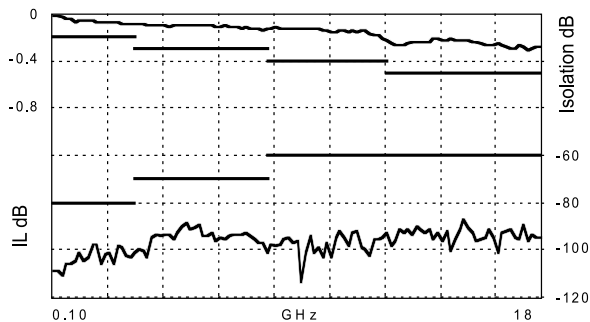
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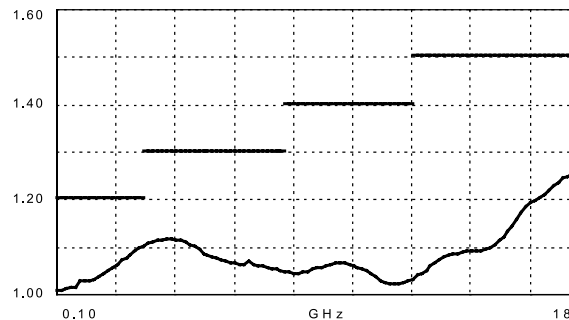
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Example: Non terminated SP6T SMA up to 18 GHz

Insertion Loss and Isolation

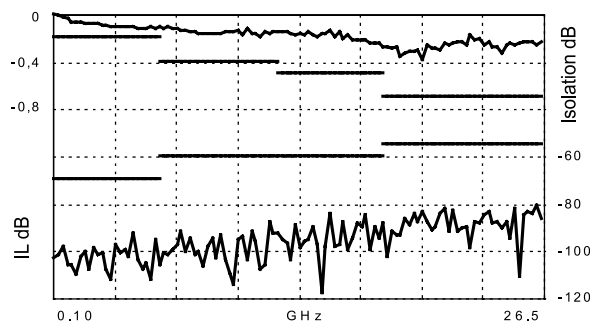


V.S.W.R.

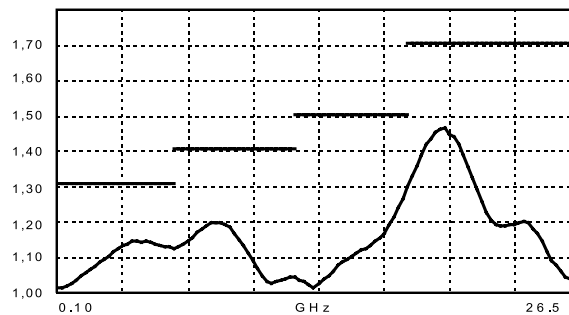


Example: Non terminated SP6T SMA2.9 up to 26.5 GHz

Insertion Loss and Isolation

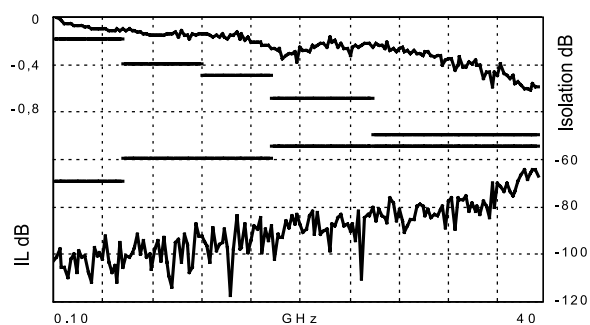


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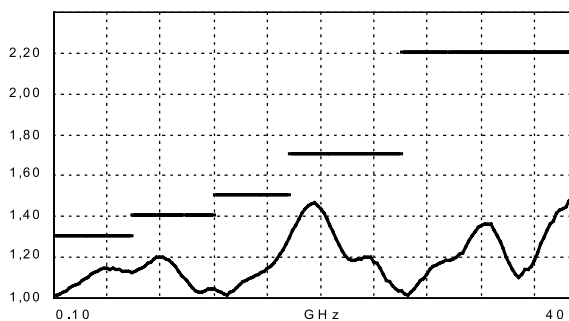


Example: Non terminated SP6T SMA2.9 up to 40 GHz

Insertion Loss and Isolation



V.S.W.R.

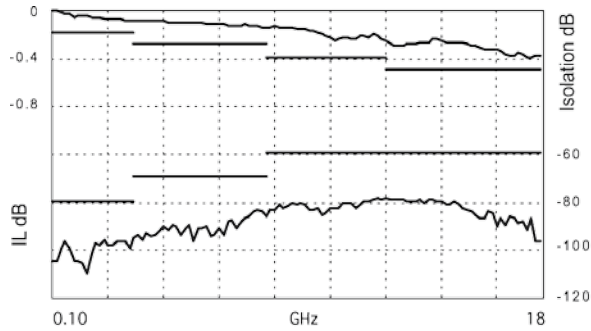


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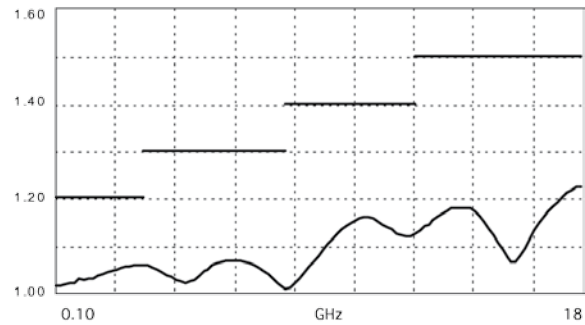
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Example: Terminated SP6T SMA up to 18 GHz

Insertion Loss and Isolation

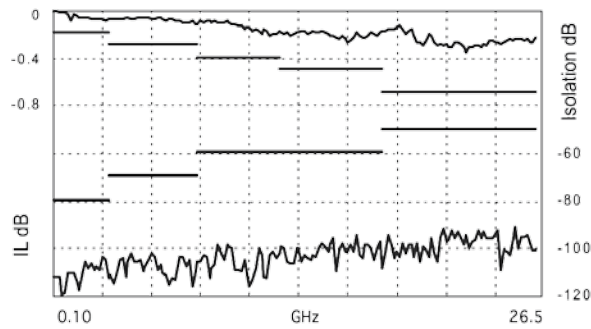


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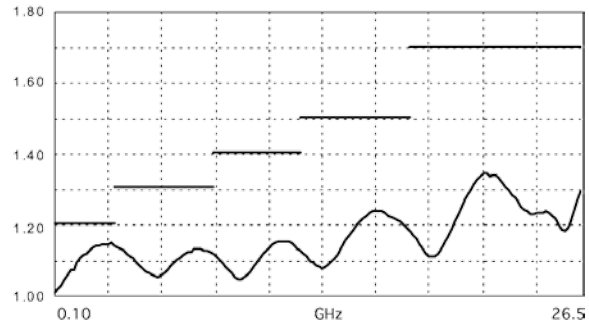


Example: Terminated SP6T SMA up to 26.5 GHz

Insertion Loss and Isolation

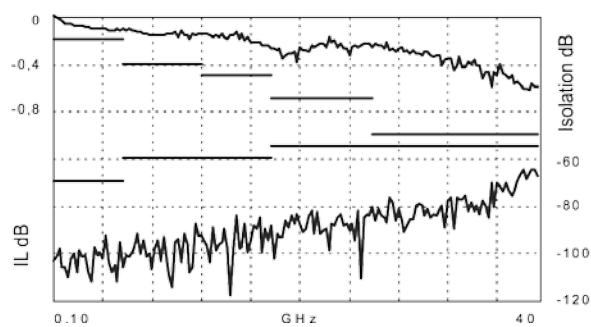


V.S.W.R.

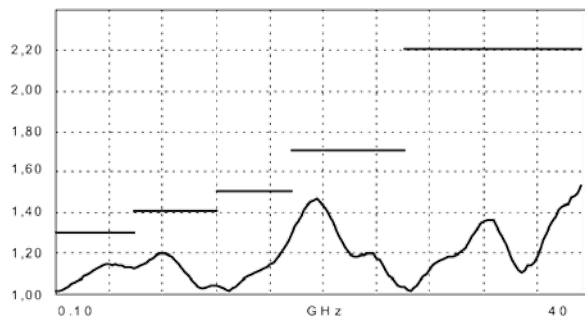


Example: Terminated SP6T SMA2.9 up to 40 GHz

Insertion Loss and Isolation



V.S.W.R.

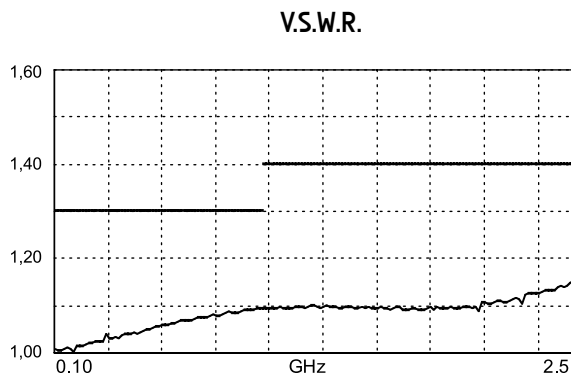
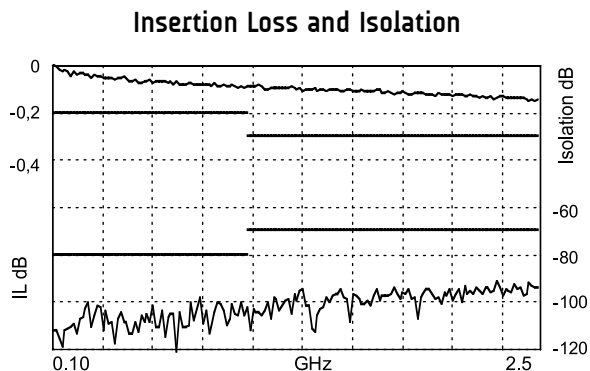


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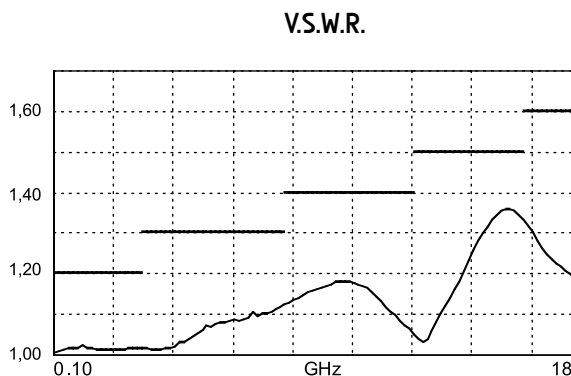
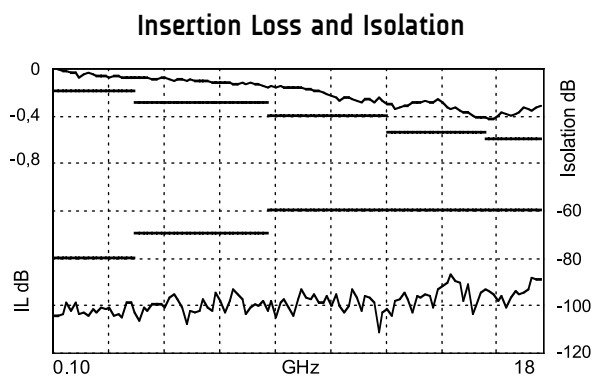
SPnT Terminated and non Terminated up to 40 GHz SMA - SMA2.9 - QMA - DIN 1.6 / 5.6

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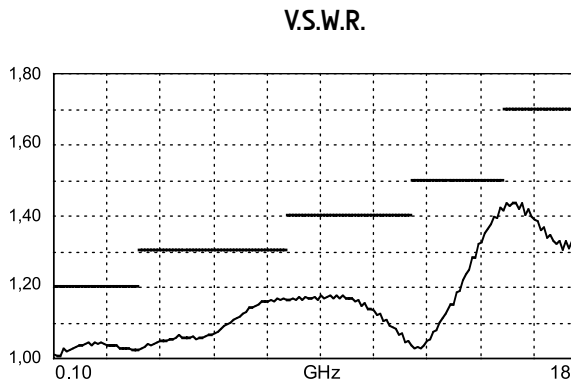
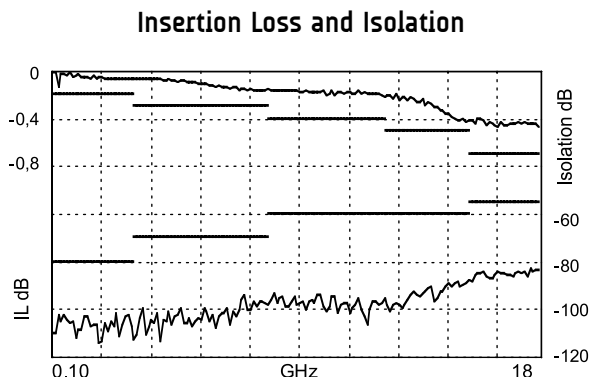
Example: Non terminated SP6T 1.6/5.6 up to 2.5 GHz



Example: SP8T SMA up to 18 GHz



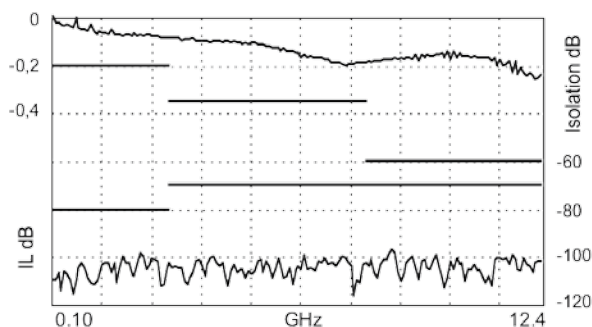
Example: SP10T SMA up to 18 GHz



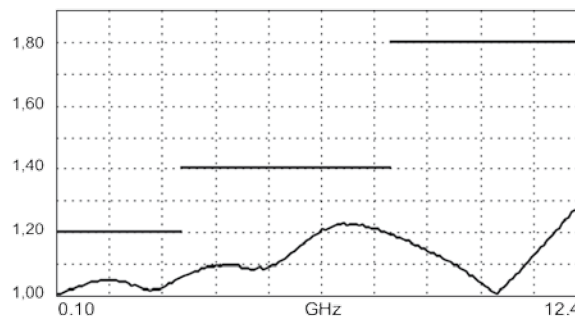
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Example: SP12T SMA up to 12.4 GHz

Insertion Loss and Isolation



V.S.W.R.

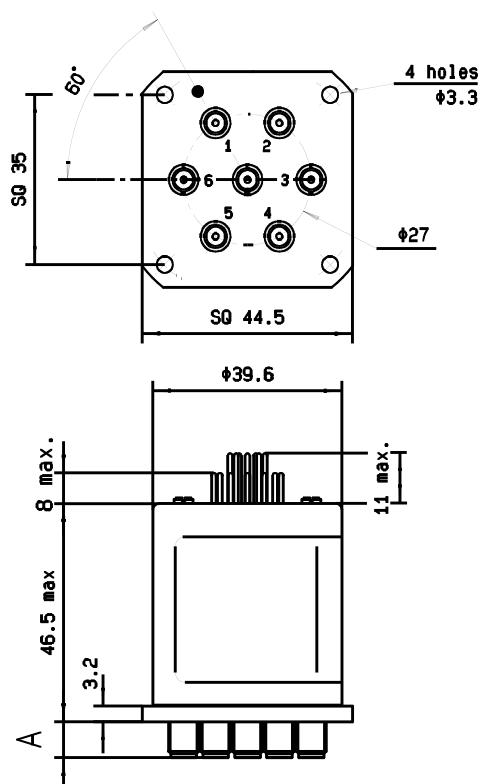


TYPICAL OUTLINE DRAWINGS

NON TERMINATED 3 to 6 positions

Connectors	A (mm)
SMA up to 26.5 GHz	7.4
SMA2.9 up to 40 GHz	6.3
QMA up to 6 GHz	10.8
DIN 1.6/5.6 up to 2.5 GHz	11.5

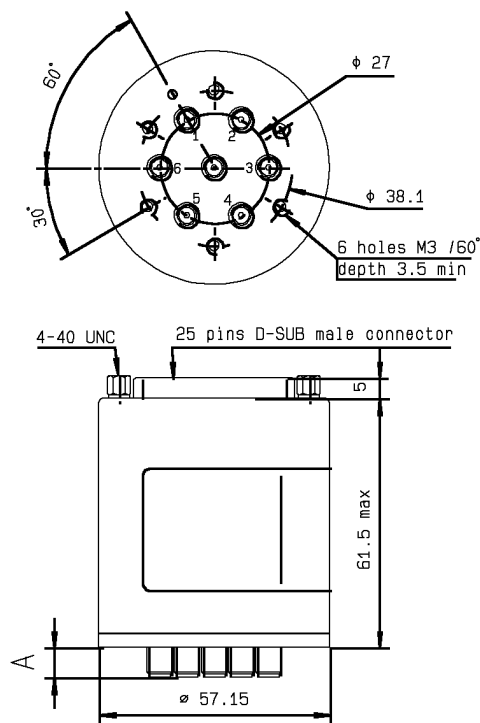
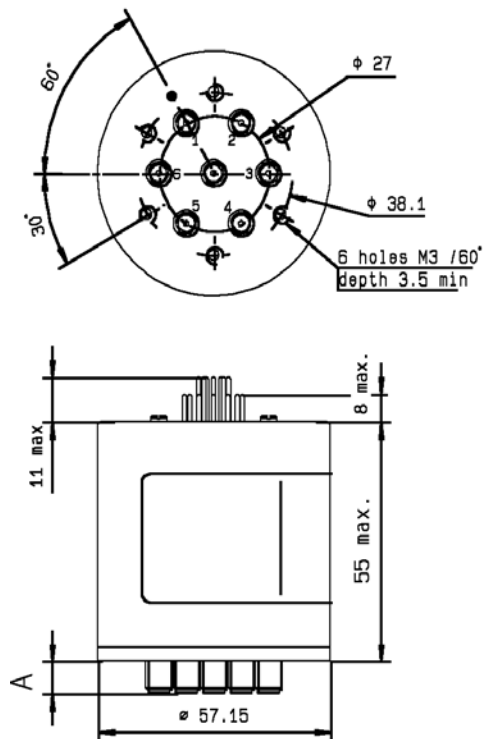
Solder pins	Type 0 or 1 with option 0 - 1 - 3 or 4
	Type 2 or 3 with option 0 or 1



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TYPICAL OUTLINE DRAWINGS

NON TERMINATED 3 to 6 positions (Continued)

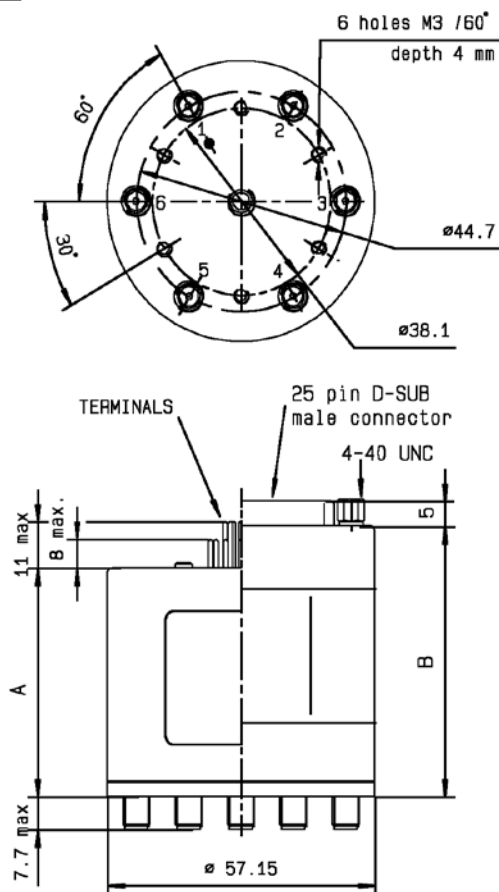


Solder Pins	Type 0 or 1 with option 2 or 8
	Type 2 or 3 with option 2 - 3 - 4 or 8
	Type 4 - 5 - 8 or 9 with option 0 - 2 or 8

D-Sub connector	All models
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Connectors	A (mm)
SMA up to 26.5 GHz	7.4
SMA2.9 up to 40GHz	6.3
QMA up to 6 GHz	10.8
DIN 1.6/5.6 up to 2.5 GHz	11.5

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TYPICAL OUTLINE DRAWINGS**TERMINATED 3 to 6 positions**

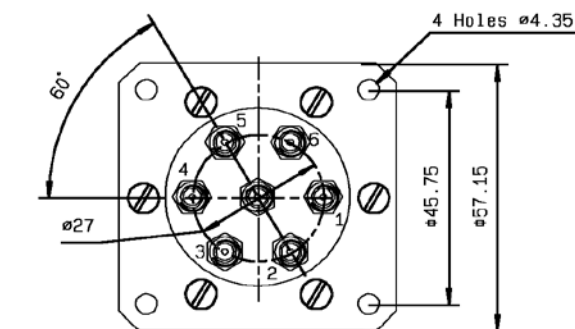
	A	B
	Solders Pins	D-Sub connector
Type 0 - 1 - 2 or 3 with option 0 - 1 - 3 or 4	46.5	61.5
Type 0 - 1 - 2 or 3 with option 2 or 8	55.5	61.5
Type 4 - 5 - 8 or 9 with option 0 - 1 - 2 or 8	55.5	61.5

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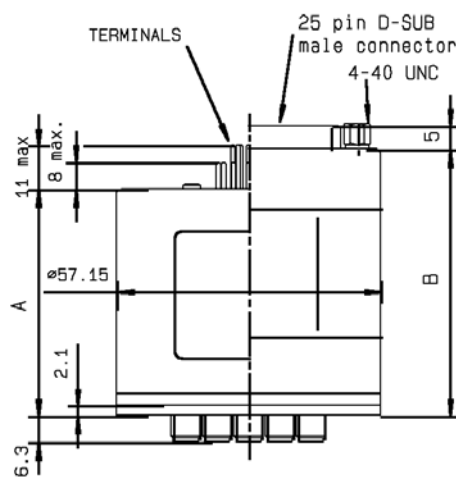
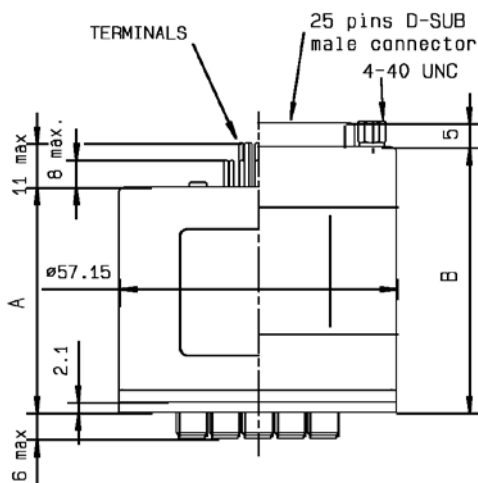
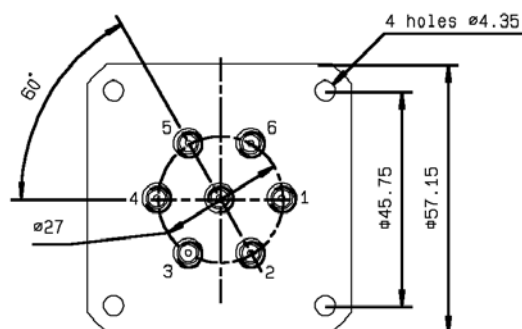
TYPICAL OUTLINE DRAWINGS

TERMINATED 3 to 6 positions 26.5 GHz & 40 GHz

26.5 GHz model



40 GHz model



	A	B
	Solders Pins	D-Sub connector
Type 0 - 1 - 2 or 3 with option 0 - 1 - 3 or 4	48.5	63.5
Type 0 - 1 - 2 or 3 with option 2 or 8	57.5	63.5
Type 4 - 5 - 8 or 9 with option 0 - 1 - 2 or 8	57.5	63.5

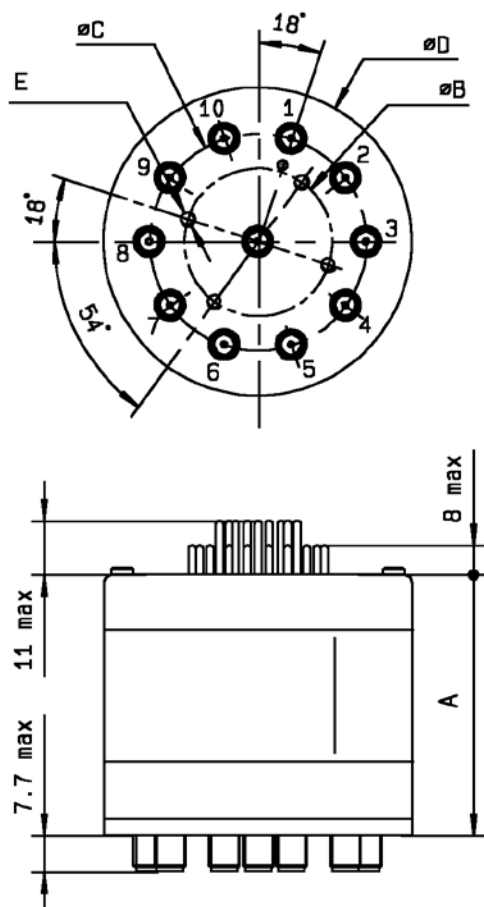
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TYPICAL OUTLINE DRAWINGS**TERMINATED or NON TERMINATED 7 to 12 positions**

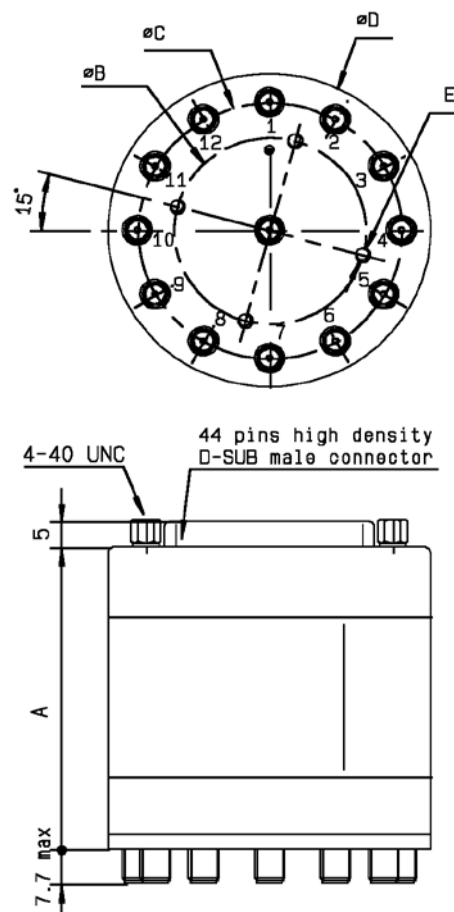
Type	A maxi (mm)	
	Solder Pins	D-Sub connector
Type 0 - 1 - 2 or 3 with option 0 - 1 - 3 or 4	50	66
Type 0 - 1 - 2 or 3 with option 2 or 8 and	61	66
Type 4 - 5 - 8 or 9 with option 0 - 1 - 2 or 8		

Number of positions	B diameter	C diameter	D diameter	E
7 - 8	49.8	44.7	56.9	4 holes M3 depth 4mm
9 - 10	30.5	44.7	63.5	
11 - 12	40.6	55.9	68.3	

10 position model
Terminated up to 18 GHz with solder pins



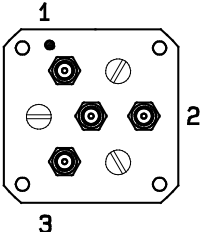
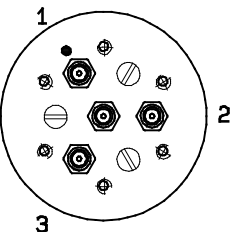
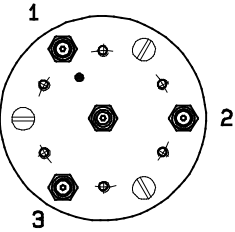
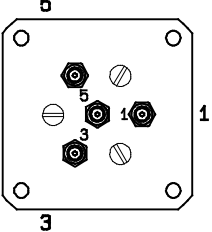
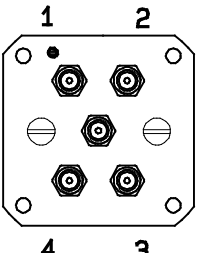
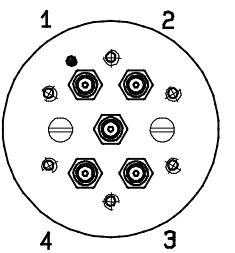
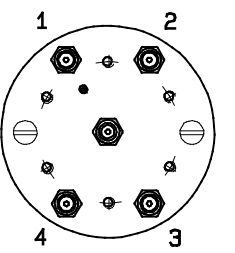
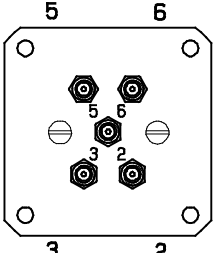
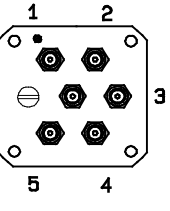
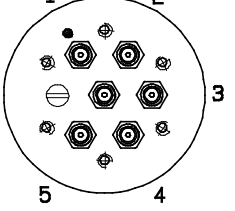
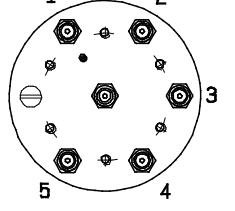
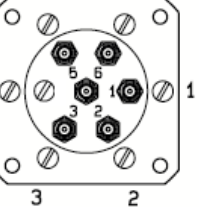
12 position model
Terminated up to 12.4 GHz with D-Sub



To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

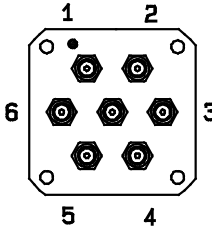
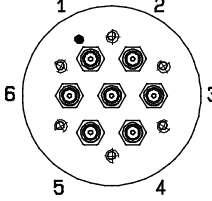
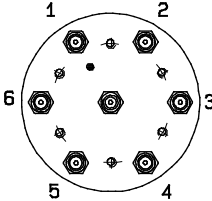
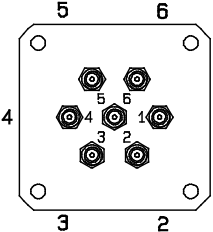
RF CONNECTORS ALLOCATION FOR SPnT SERIE

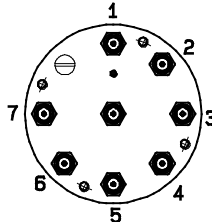
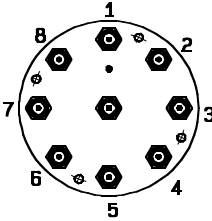
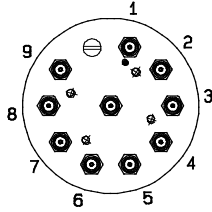
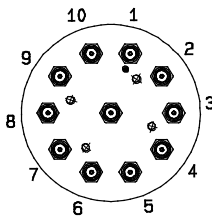
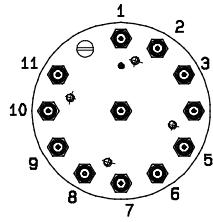
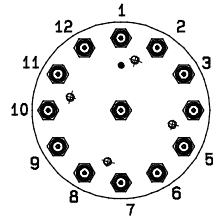
Connectors « A »: 1.6/5.6, QMA, SMA, SMA2.9
Other Connectors: N, BNC, TNC

SPnT 3 ways			
NON TERMINATED Version		TERMINATED Version	
Up to 18 GHz models Up to 40 GHz models Connectors « A »	Up to 18 GHz models All connectors	Up to 18 GHz models All connectors	26.5 GHz and 40 GHz models with SMA - SMA2.9
			
SPnT 4 ways			
NON TERMINATED Version		TERMINATED Version	
Up to 18 GHz models Up to 40 GHz models Connectors « A »	Up to 18 GHz models All connectors	Up to 18 GHz models All connectors	26.5 GHz and 40 GHz models with SMA - SMA2.9
			
SPnT 5 ways			
NON TERMINATED Version		TERMINATED Version	
Up to 18 GHz models Up to 40 GHz models Connectors « A »	Up to 18 GHz models All connectors	Up to 18 GHz models All connectors	26.5 GHz and 40 GHz models with SMA - SMA2.9
			

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

RF CONNECTORS ALLOCATION (CONTINUED)

SPnT 6 ways			
NON TERMINATED Version		TERMINATED Version	
Up to 18 GHz models Up to 40 GHz models Connectors « A »	Up to 18 GHz models All connectors	Up to 18 GHz models All connectors	26.5 GHz and 40 GHz models with SMA - SMA2.9
			

SPnT 7 and 8 ways	SPnT 9 and 10 ways	SPnT 11 and 12 ways
All connectors	All connectors	All connectors
 	 	 

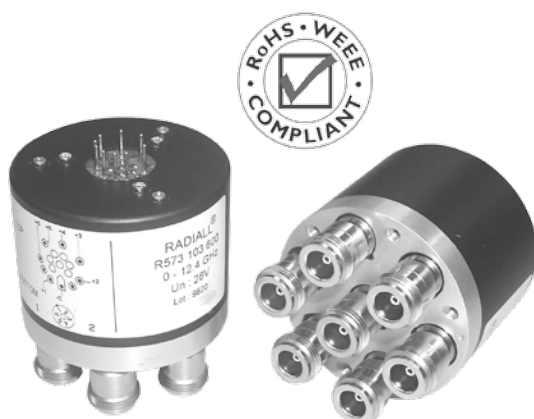
ACCESSORIES

A printed circuit board interface connector has been designed for easy mounting on terminals :
It must be ordered separately. Refer to page 5-27 for details.

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

SPnT up to 12.4 GHz - RAMSES Concept

N - BNC - TNC

COAXIAL
SWITCHES

RADIAL R573 & R574 multithrow coaxial switches are offered in many configurations (over 40,000 possible combinations) including Terminated and non Terminated options. RADIAL offers reliability, reduced deliveries and competitive pricing. Excellent typical RF performances make RAMSES switches (12.4 GHz) ideal for Automated Test Equipment (ATE) and other measurement applications. These switches are also an excellent choice for defense, industrial applications and telecommunications as well.

Example of P/N:

R573123600 is a SP6T N up to 12.4 GHz, Normally Open, 28 Vdc, Indicators and solder pins

PART NUMBER SELECTION

R 57

Model:

- 3: Without 50 Ω termination
- 4: With 50 Ω termination

RF Connectors:

- 0: N up to 3 GHz
- 1: N up to 12.4 GHz
- 2: BNC up to 3 GHz (4) (5)
- 5: TNC up to 3 GHz (4) (5)
- 6: TNC up to 12.4 GHz (4) (5)

Type:

- 0: Normally open
- 1: Normally open + I.C.
- 2: Latching
- 3: Latching + I.C.
- 4: Latching + S.C.O. (1) (4)
- 5: Latching + S.C.O. + I.C. (1) (4)
- 8: Latching + S.C.O. + A.R. (1)
- 9: Latching + S.C.O. + I.C. + A.R. (1)

Actuator Voltage:

- 2: 12 Vdc
- 3: 28 Vdc

Actuator Terminals:

- 0: Solder pins
- 5: D-Sub connector

Options:

- 0: Without option
- 1: Positive common (2) (6)
- 2: Compatible TTL driver (1) (8)
- 3: With suppression diodes
- 4: With suppression diodes and positive common (2) (6)
- 8: BCD TTL driver compatible (1) (3) (7) (8)

Number of positions:

- | | |
|----------------|-----------------|
| 3: 3 Positions | 8: 8 Positions |
| 4: 4 Positions | 9: 9 Positions |
| 5: 5 Positions | 0: 10 Positions |
| 6: 6 Positions | 1: 11 Positions |
| 7: 7 Positions | 2: 12 Positions |

I.C.: Indicator contact / S.C.O.: Self Cut-Off / A.R.: Auto Reset

(1): These models are already equipped with suppression diodes.

(2): Standard products are equipped with negative common.

(3): Latching BCD driver enables also a global reset through driver code 0000 (see BCD logic coding page 1-13).

(4): Available only up 6 positions.

(5): Model "3" only.

(6): Option not available for type 4, 5, 8 & 9.

(7): Option available only with type 0, 1, 8 & 9.

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

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

GENERAL SPECIFICATIONS

Type 2, 3, 4 & 5:

Latching models have a RESET pin which commands the reset of all positions. This command should be used before switching from one position to another. If not, two positions will be set at the same time.

Note: During the RESET operation the current is: Nominal operating current x number of positions.

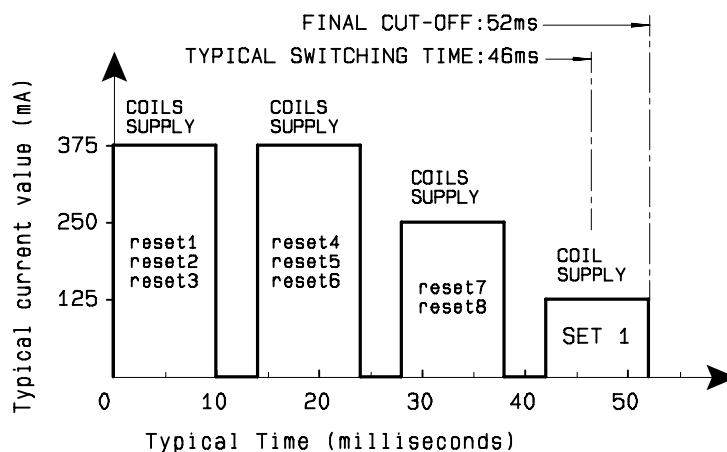
Type 8, 9:

Latching models with AUTOMATIC RESET are available; these products have an internal SET/RESET circuit which automatically resets all the non-selected positions and sets the desired position. This option simplifies the use of latching switches by suppressing the RESET command in switching sequence.

An electronic circuit supplies successively groups of 2 or 3 actuators, in order to limit the maximum current. The current with this option is the total current of 2 or 3 reset coils in the same time (see table below).

Example: During the AUTOMATIC RESET operation, at 28 Vdc, 4 positions switch has temporarily a consumption of only 250 mA, during 40 ms maximum.

SWITCHING SEQUENCE



n = number of positions

Operating Total current at 23°C (mA) SPnT LATCHING				
Number of positions	12 Volts		28 Volts	
	Manual Reset	Automatic Reset	Manual Reset	Automatic Reset
3 to 4	320 x n	640	125 x n	250
5 to 8	320 x n	960	125 x n	375
9 to 12	320 x n	1280	125 x n	500

Availability of options according to both type and number of positions

Type	Numbers of positions	Availables Options
1 or 2	3 to 12	0 - 1 - 2 - 3 - 4 - 8
2 or 3	3 to 6	0 - 1 - 2 - 3 - 4
	7 to 12	0 - 1 - 3 - 4
4 or 5	3 to 6	0 - 2
	7 to 12	Not available
8 or 9	3 to 12	0 - 2 - 8

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box. For more detailed technical information please consult Radiall customer support.

GENERAL SPECIFICATIONS

Operating mode		Normally open		Latching	
Nominal operating voltage (across operating temperature)		Vdc	12 (10.2 / 13)	28 (24 / 30)	12 (10.2 / 13) 28 (24 / 30)
Coil resistance (+/-10%)		Ohms	47.5	275	See table on previous page
Nominal operating current at 23°C		mA	250	102	
Average power			See Power Rating on page 1-16		
TTL input	High Level		2.2 to 5.5 V (TTL Option) / 3.5 to 5.5 V (BCD Option) 800µA max 5.5 Volts		
	Low Level		0 to 0.8 V (TTL Option) / 0 to 1.5 V (BCD Option) 20µA max 0.8 Volts		
Indicator rating			1 Watt / 30 Volts / 100 mA		
Switching time (max)		ms	15 ms For automatic reset models: SP3T to SP6T => 40 ms SP7T to SP12T => 50 ms		
Life (min)	Non terminated SP3 to 6T (R573 serie)		2 million cycles		
	Terminated SP3 to 6T (R574 serie)				
	SP7 to 12T (all models)				
Connectors			N - TNC - BNC		
Actuator terminals			Solder pins or male 25 pin D-Sub connector		
Operating temperature range			-40°C to +85°C		
Storage temperature range			-55°C to +85°C		
Vibration (MIL STD 202 , method 204D , cond.C)			10-2000 Hz, 10g		operating
Shock (MIL STD 202 , method 213B , cond.C)			50g / 1 ms, ½ sine		operating

RF PERFORMANCES

N - TNC - BNC Connector						
Number of positions	Frequency Range GHz		V.S.W.R. (max)	Insertion Loss (max) dB	Isolation (min) dB	Impedance Ohms
3 to 6	DC - 12.4	DC - 3	1.20	0.20	80	50
		3 - 8	1.35	0.35	70	
		8 - 12.4	1.50	0.50	60	
7 to 10	DC - 8	DC - 3	1.30	0.30	80	50
		3 - 8	1.50	0.50	70	
11 to 12	DC - 8	DC - 3	1.35	0.30	70	50
		3 - 8	1.70	0.50	60	

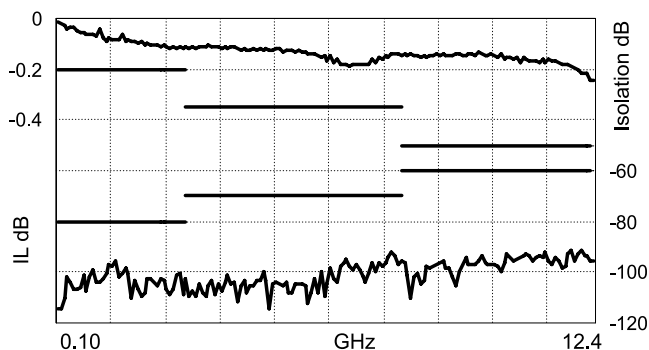
See page 5-25 for typical RF performances

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

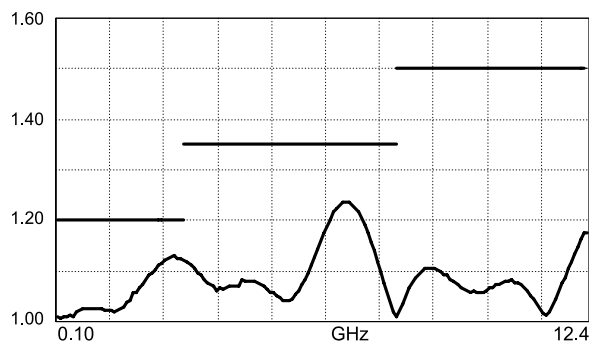
R573 AND R574 TYPICAL RF PERFORMANCES

Example: SP6T N up to 12.4 GHz

Insertion Loss and Isolation

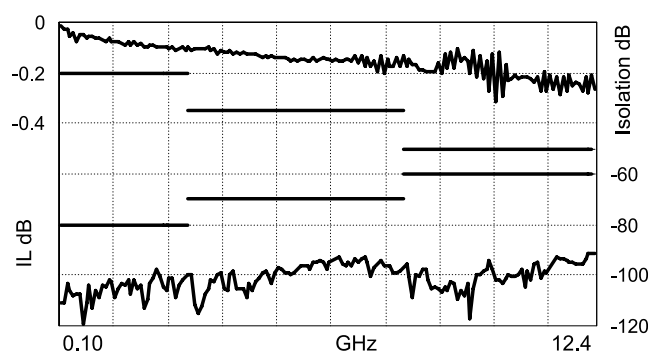


V.S.W.R.

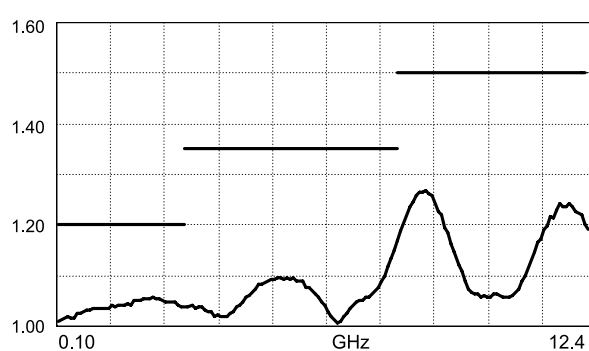


Example: SP6T TNC up to 12.4 GHz

Insertion Loss and Isolation

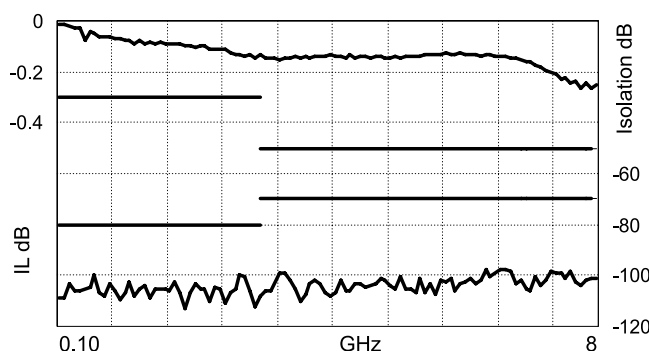


V.S.W.R.

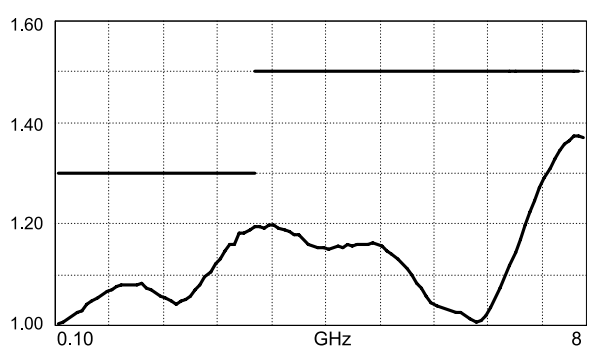


Example: SP8T up to 8 GHz

Insertion Loss and Isolation



V.S.W.R.



To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

TYPICAL OUTLINE DRAWINGS

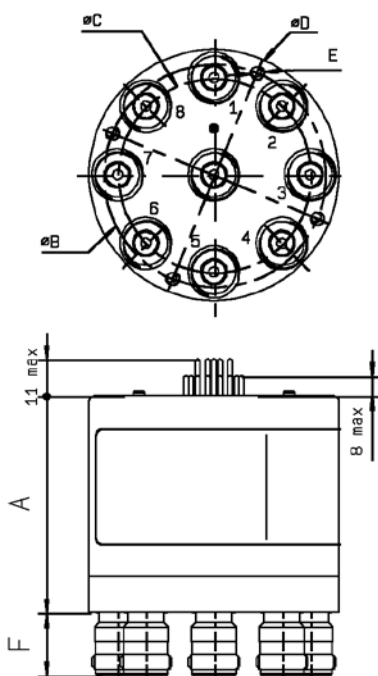
TERMINATED or NOT 3 to 12 positions

Connectors	F max (mm)
N	17.7
BNC	11.3
TNC	11.3

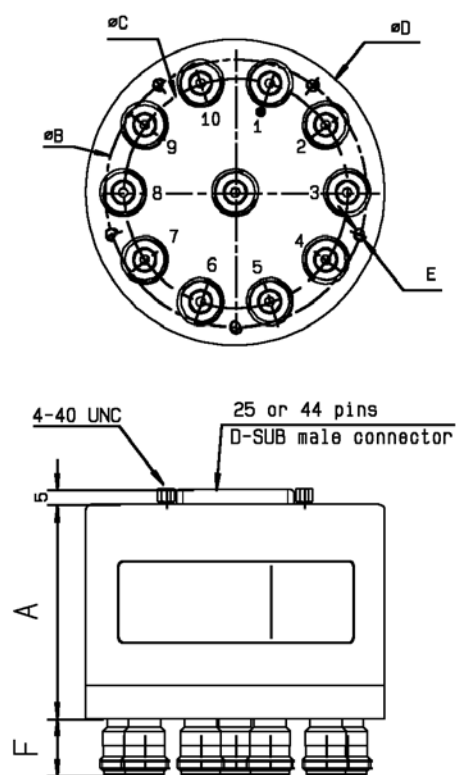
Type	A maxi (mm)	
	Solder Pins	D-Sub connector
Type 0 - 1 - 2 or 3 with option 0 - 1 - 3 or 4	56	66
Type 0 - 1 - 2 or 3 with option 2 or 8 and Type 4 - 5 - 8 or 9 with option 0 - 1 - 2 or 8	71	71

Number of positions	B diameter	C diameter	D diameter	E
3 - 6	54	44.7	63.5	6 holes M4/60°
7 - 8	67.7	58.9	76.2	4 holes M4/90°
9 - 10	88.9	76.2	101.6	5 holes M4/72°
11 - 12	67.7	101.6	127	6 holes M4/60°

Model SP8T positions up to 12.4 GHz
With solder pins



Model SP10T positions up to 8 GHz
D-Sub male connector



RF CONNECTORS ALLOCATION

See on page 5-20 and 5-21

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
 For more detailed technical information please consult Radiall customer support.

PRINTED CIRCUIT BOARD INTERFACE CONNECTOR

A printed circuit board interface connector (ordered separately) has been designed for easy mounting on terminals.

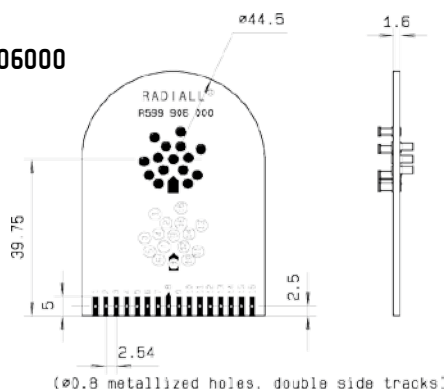
For SPnT model R573 and R574 series: Radiall part number: R599 906 000 for 3 to 6 positions

R599 908 000 for 7 to 8 positions

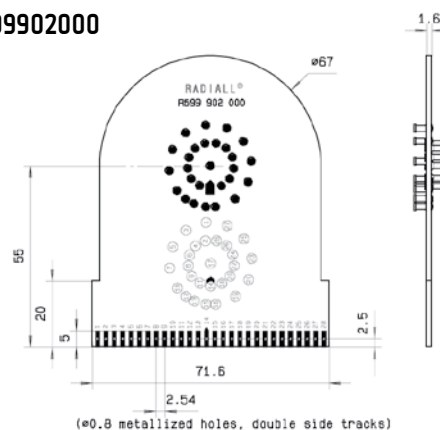
R599 900 000 for 9 to 10 positions

R599 902 000 for 11 to 12 positions

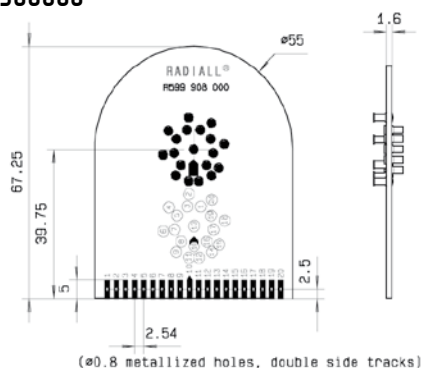
R599906000



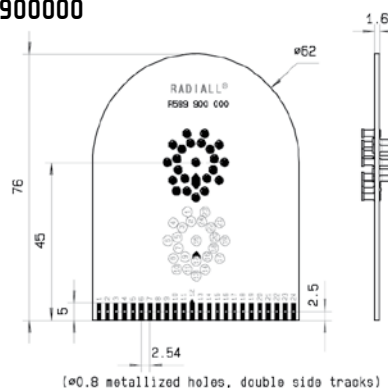
R599902000



R599908000



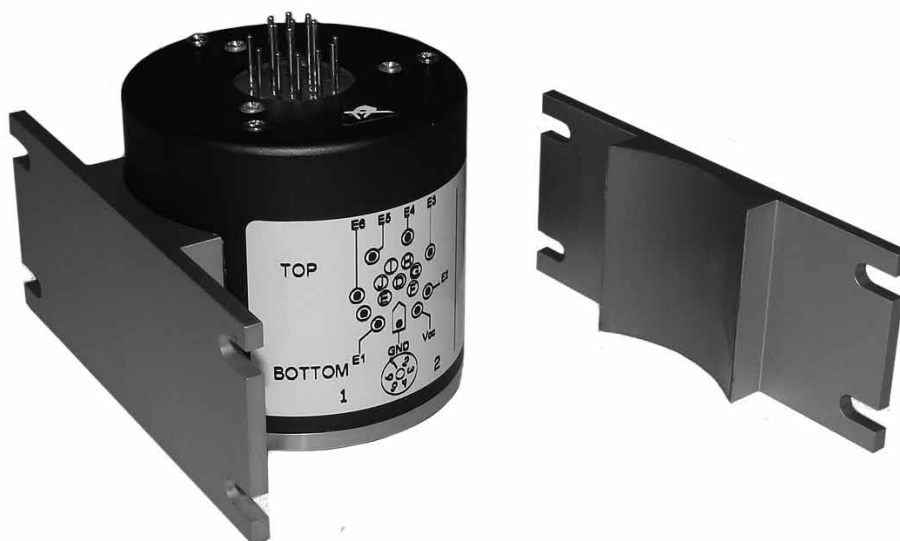
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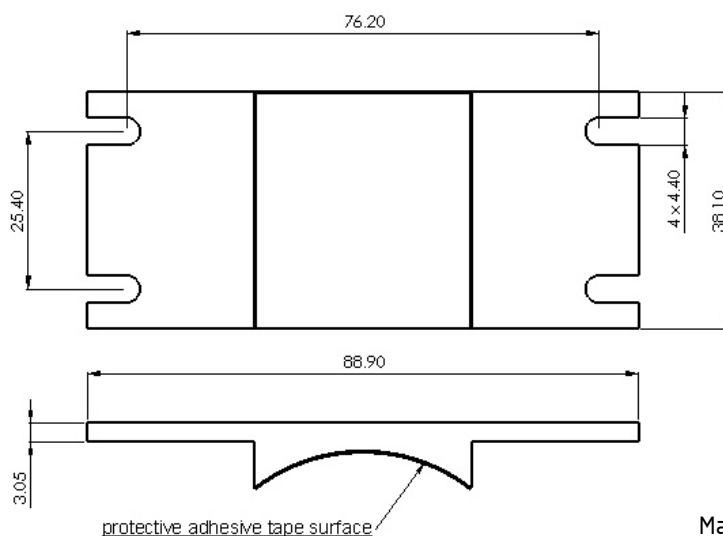
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

MOUNTING BRACKET

A metal bracket has been designed for an easy mechanical mounting of our SPnT switches for customer installation. These brackets must be ordered separately and assembled according to our recommended process on the following page.



MOUNTING BRACKET



Material: anodized aluminium

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box. For more detailed technical information please consult Radiall customer support.

FOR MODELS WITH CONNECTORS SMA, QMA, SMA2.9, DIN 1.6/5.6

Number of positions	Type	Options	Model	Part Number
3 to 6 positions	All	2 & 8	R573 series	R599920000
	4, 5, 8 & 9	All		
	All	All	R574 series	
7 & 8 positions	All		R573 series	R599920000
			R574 series	
9 & 10 positions	All	All	R573 series	R599921000
			R574 series	
11 & 12 positions	All	All	R573 series	R599922000
			R574 series	

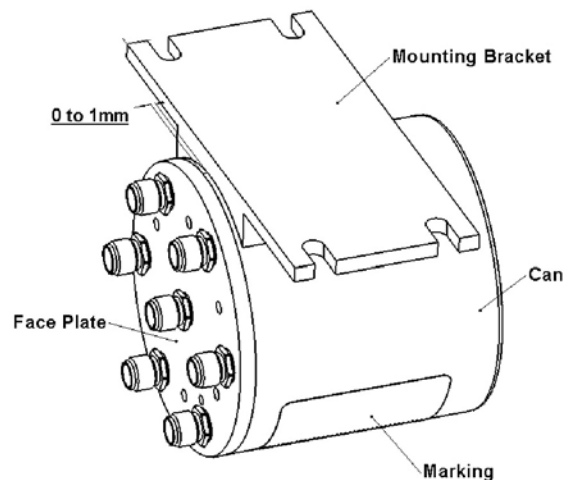
FOR MODELS WITH CONNECTORS N, TNC, BNC

Number of positions	Type	Options	Model	Part Number
3 to 6 positions	All	All	R573 series	R599921000
			R574 series	
7 to 12 positions	All	All	R573 series	Not Available
			R574 series	

*For 7 to 12 positions models, bracket are not available

ADHESIVE BONDING PROCESS

- 1) Clean the can with alcohol (Isopropanol or Ethanol).
- 2) Remove the protective adhesive tape surface.
- 3) Glue the mounting bracket ONLY on the blue can and NOT on the RF body.
DO NOT glue mounting bracket on the marking (See drawing).
- 4) Firmly press the mounting bracket against the can, and maintain pressure for several seconds (10 seconds min) to properly bond the unit (See notes 1 & 2).
- 5) The switch can now be installed in your equipment with 4 screws (not included).



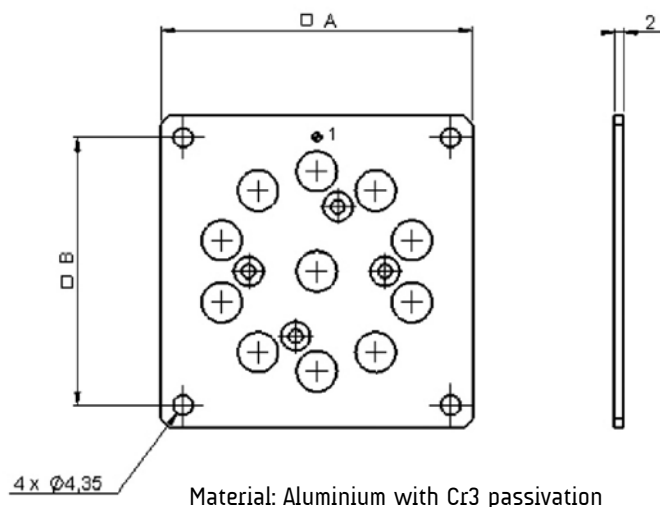
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

MOUNTING SQUARE FLANGE

A square flange has been designed for easy mechanical mounting of our SPnT switches for customer installation. These flanges must be ordered separately (like mounting bracket) and assembled according to our recommended process on the following page.



TYPICAL OUTLINE DRAWING



Radiall Part number	A (mm)	B (mm)
R599 310 000	63.45	53.45
R599 311 000	63.45	53.45
R599 312 000	63.45	53.45
R599 313 000	69.8	59.8
R599 314 000	74.6	64.6

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

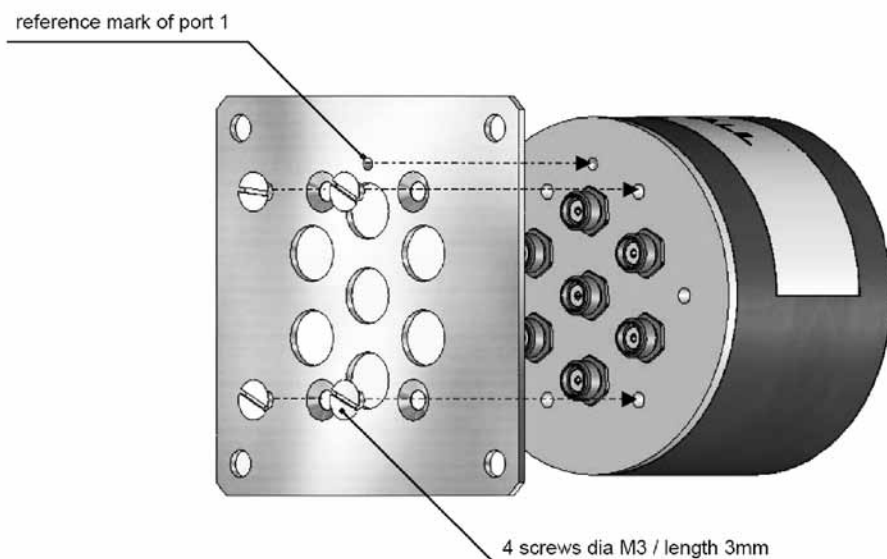
FOR MODELS WITH CONNECTORS SMA, QMA, SMA2.9

Number of positions	Type	Options	Model	Part Number
3 to 6 positions	All	All	R573 series	R599310000
			R574 series	R599311000
7 & 8 positions	All	All	R573 series	R599312000
			R574 series	
9 & 10 positions	All	All	R573 series	R599313000
			R574 series	
11 & 12 positions	All	All	R573 series	R599314000
			R574 series	

*For models with connectors 1.6/5.6, N, TNC, BNC: available upon request

FOR MODELS WITH CONNECTORS N, TNC, BNC

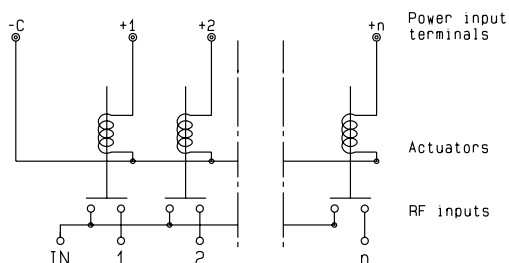
- 1) Assemble the square flange on the RF body of the switch as the following drawing below.
ATTENTION: Don't forget to correctly position the reference in line with the mark for port 1.
- 2) Tighten the 4 screws (delivered with the square flange).



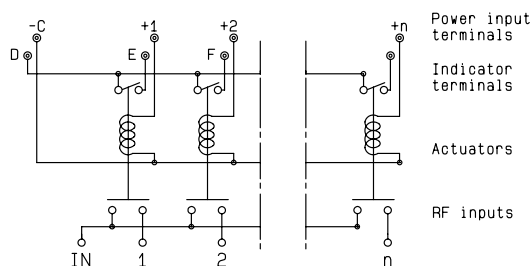
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

NORMALLY OPEN

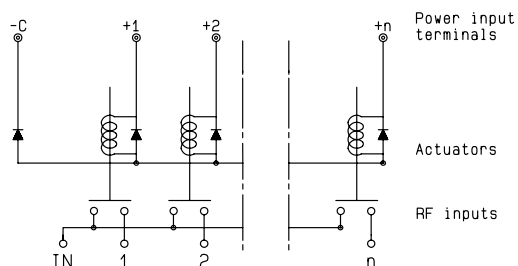
WITHOUT OPTION
R573 -0- -0- / R574 -0- -0-



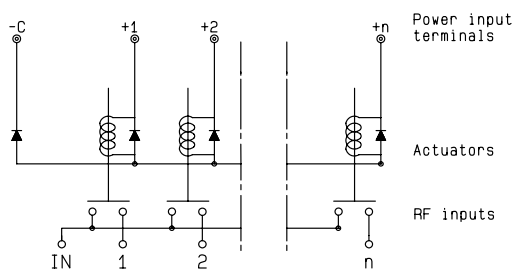
WITH INDICATOR CONTACT
R573 -1- -0- / R574 -1- -0-



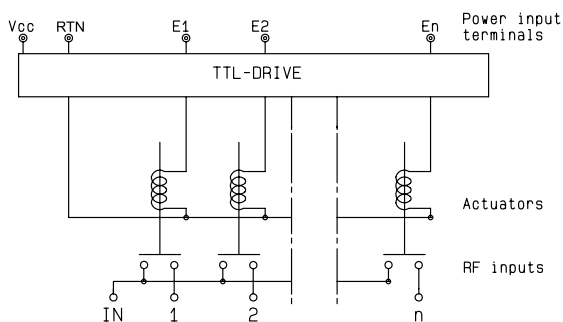
WITH SUPPRESSION DIODES
R573 -0- -3- / R574 -0- -3-



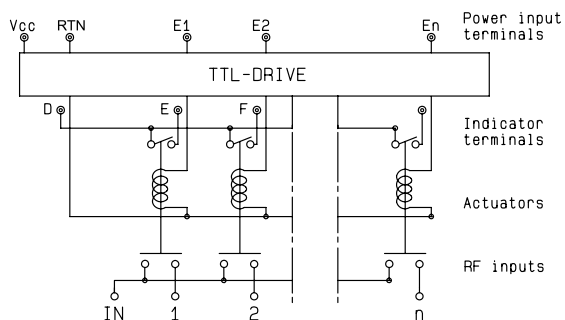
WITH SUPPRESSION DIODES AND INDICATOR CONTACT
R573 -1- -3- / R574 -1- -3-



WITH TTL DRIVER
(suppression diodes are included)
R573 -0- -2- / R574 -0- -2-



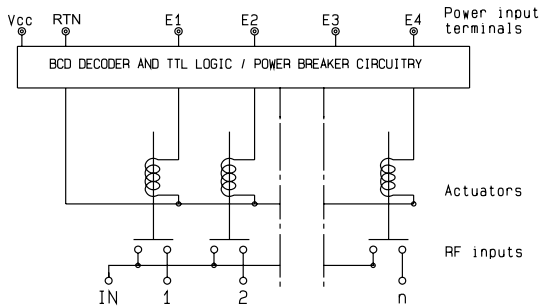
WITH TTL DRIVER AND INDICATOR CONTACT
(suppression diodes are included)
R573 -1- -2- / R574 -1- -2-



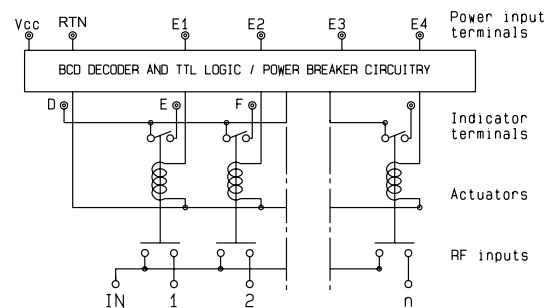
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

NORMALLY OPEN

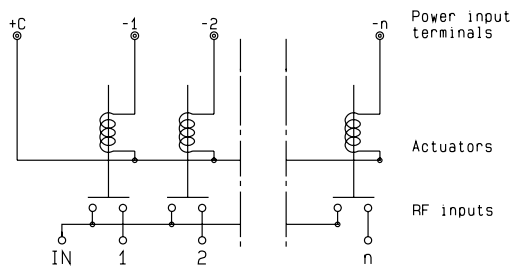
WITH BCD DRIVER, TTL COMPATIBLE
(suppression diodes are included)
573 -0- -8- / R574 -0- -8-



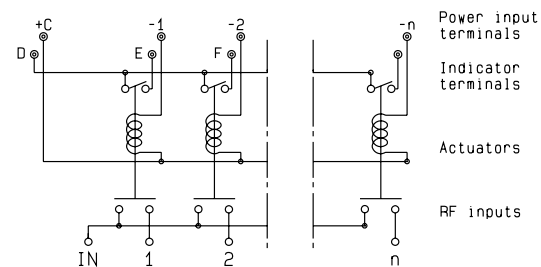
WITH BCD DRIVER, TTL COMPATIBLE AND INDICATOR CONTACT
(suppression diodes are included)
573 -1- -8- / R574 -1- -8-



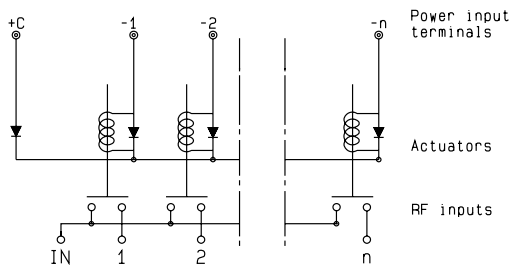
WITH POSITIVE COMMON
R573 -0- -1- / R574 -0- -1-



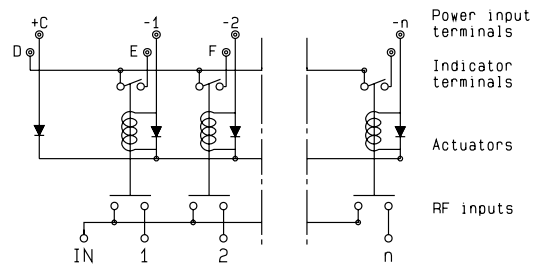
WITH POSITIVE COMMON AND INDICATOR CONTACT
R573 -1- -1- / R574 -1- -1-



WITH POSITIVE COMMON AND SUPPRESSION DIODES
R573 -0- -4- / R574 -0- -4-



WITH POSITIVE COMMON, SUPPRESSION DIODES AND INDICATOR CONTACT
R573 -1- -4- / R574 -1- -4-



To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

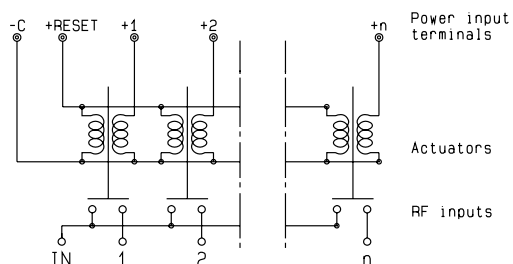
COAXIAL SPnT - ELECTRICAL SCHEMATICS

R573 - R574 Series

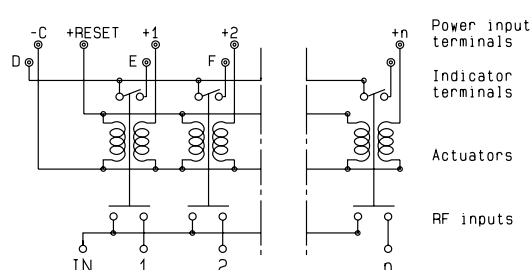
COAXIAL
SWITCHES

LATCHING

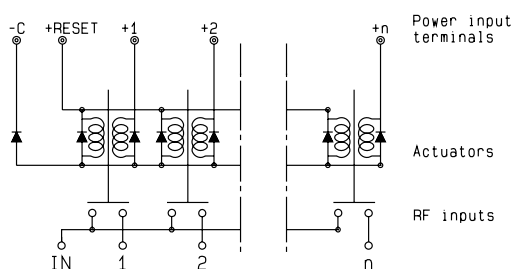
WITHOUT OPTION
R573 -2- -0- / R574 -2- -0-



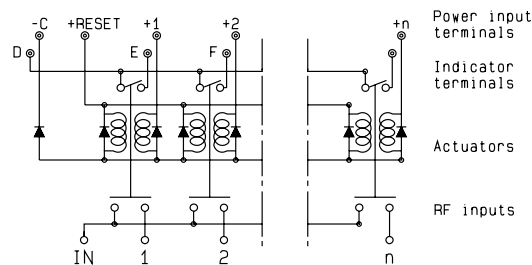
WITH INDICATOR CONTACT
R573 -3- -0- / R574 -3- -0-



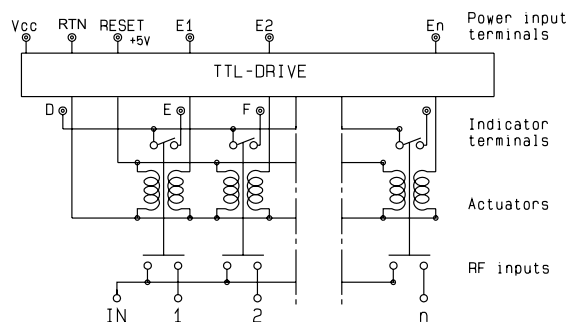
WITH SUPPRESSION DIODES
R573 -2- -3- / R574 -2- -3-



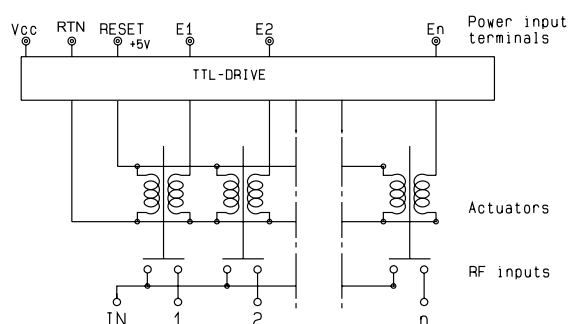
WITH SUPPRESSION DIODES AND INDICATOR CONTACT
R573 -3- -3- / R574 -3- -3-



WITH TTL DRIVER
(suppression diodes are included)
R573 -2- -2- / R574 -2- -2-



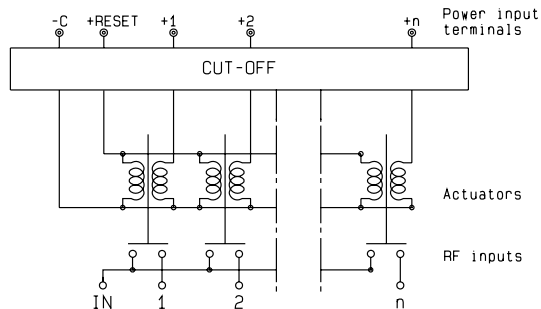
WITH TTL DRIVER AND INDICATOR CONTACT
(suppression diodes are included)
R573 -3- -2- / R574 -3- -2-



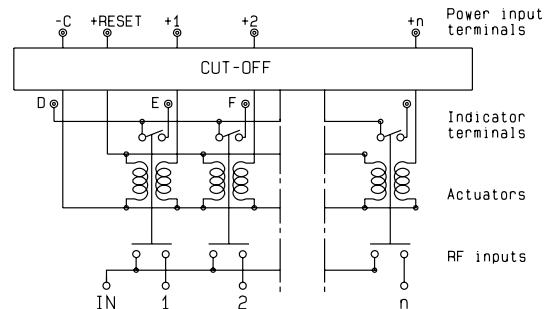
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

LATCHING

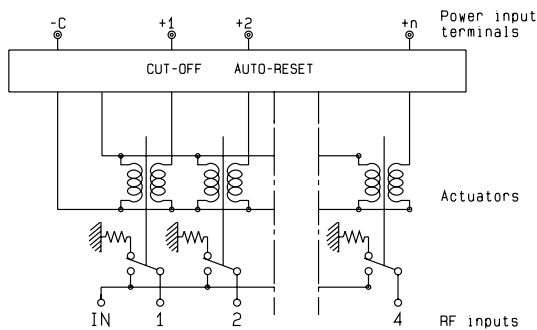
WITH CUT-OFF
(suppression diodes are included)
573 -4- -0- / R574 -4- -0-



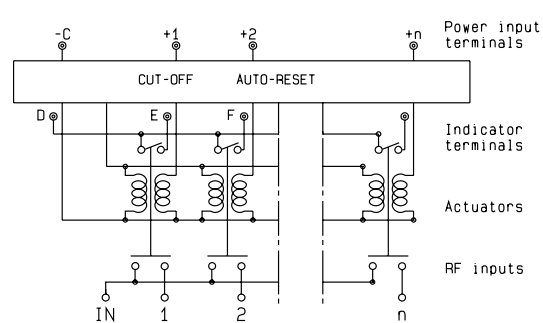
WITH CUT- OFF AND INDICATOR CONTACT
(suppression diodes are included)
573 -5- -0- / R574 -5- -0-



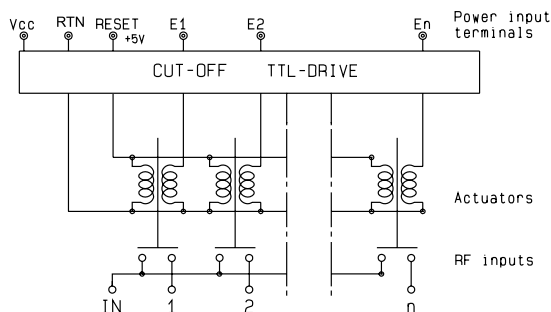
WITH CUT-OFF AND AUTO RESET
(Suppression diodes are included)
R573 -8- -0- / R574 -8- -0-



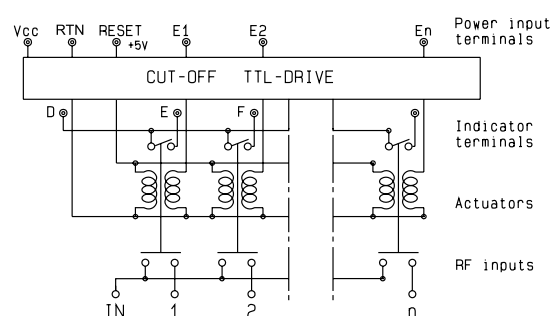
WITH CUT-OFF, AUTO RESET AND INDICATOR CONTACT
(Suppression diodes are included)
R573 -9- -0- / R574 -9- -0-



WITH TTL DRIVER AND CUT- OFF
(Suppression diodes are included)
R573 -4- -2- / R574 -4- -2-



WITH TTL DRIVER, CUT- OFF AND INDICATOR CONTACT
(Suppression diodes are included)
R573 -5- -2- / R574 -5- -2-



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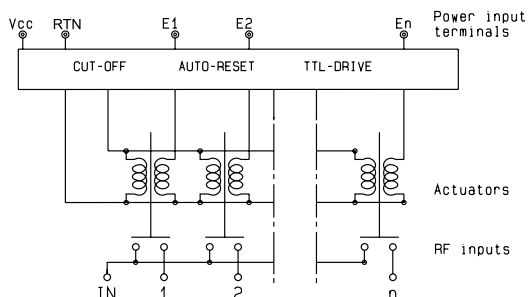
COAXIAL SPnT - ELECTRICAL SCHEMATICS

R573 - R574 Series

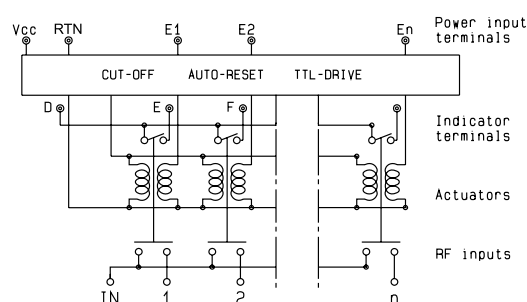
COAXIAL
SWITCHES

LATCHING

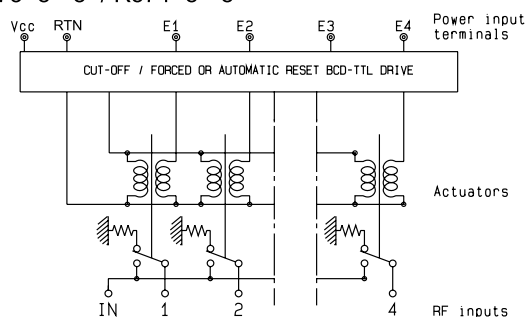
WITH TTL DRIVER, CUT-OFF AND AUTO RESET
(Suppression diodes are included)
R573 -8- -2- / R574 -8- -2-



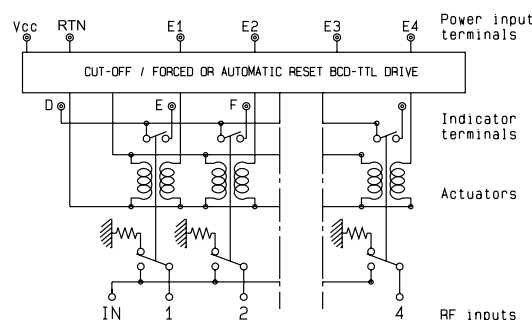
WITH TTL DRIVER, CUT-OFF, AUTO RESET AND INDICATOR CONTACT
(Suppression diodes are included)
R573 -9- -2- / R574 -9- -2-



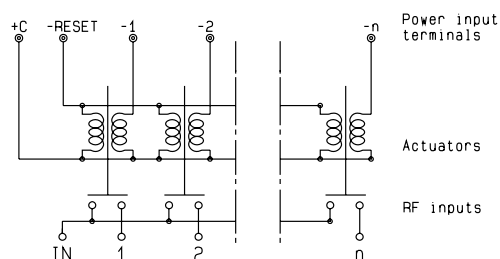
WITH CUT-OFF, FORCED OR AUTO RESET, BCD DRIVER, TTL COMPATIBLE
(Suppression diodes are included)
R573 -8- -8- / R574 -8- -8-



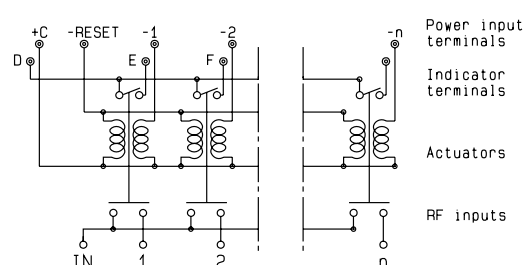
WITH CUT-OFF, FORCED OR AUTO RESET, BCD DRIVER, TTL COMPATIBLE AND INDICATOR CONTACT
(Suppression diodes are included)
R573 -9- -8- / R574 -9- -8-



WITH POSITIVE COMMON
R573 -2- -1- / R574 -2- -1-



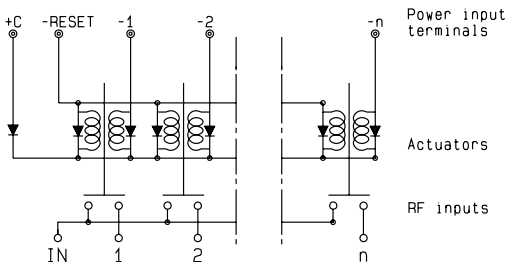
WITH POSITIVE COMMON AND INDICATOR CONTACT
(suppression diodes are included)
R573 -3- -1- / R574 -3- -1-



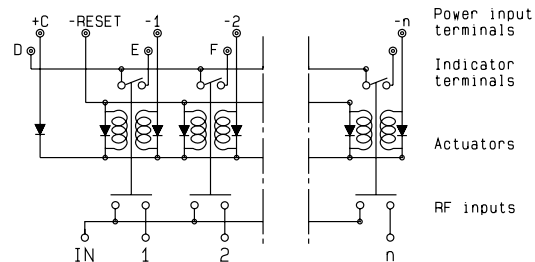
To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

LATCHING

WITH POSITIVE COMMON AND SUPPRESSION DIODES
(suppression diodes are included)
573 -2- -4- / R574 -2- -4-

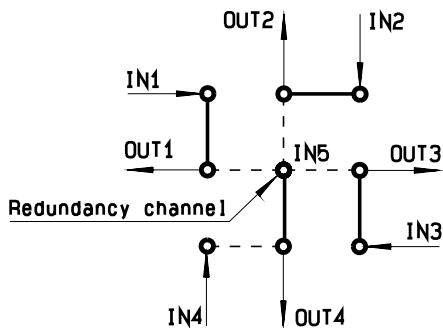


WITH POSITIVE COMMON, SUPPRESSION DIODES AND INDICATOR CONTACT
573 -3- -4- / R574 -3- -4-



OPTIONAL FEATURES FOR SPnT (see other examples on page 5-54)

Examples of dedicated application options



4P3T with redundancy channel on Out 4
In 1 to Out 1, In2 to Out 2, In 3 to Out 3



7P6T



SP6T terminated
with External
terminations

A Custom Matrix Switch (4P3T) with 4 Input ports and 4 Output ports configured for 3 transmission systems and one redundancy channel (N+1: N type). This product can be used also as a SP4T Terminated with low external VSWR or medium power terminations.

To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.