

**DP3T SECTION**

**SECTION 3**

**Pages**

RAMSES series.....

    DP3T and Terminated SPDT up to 40 GHz: **R585 Series** ..... 3-2 to 3-5

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**DP3T PRODUCTS SELECTION GUIDE**

Quick access to the right page:

| Connector | Frequency |        |         |            |         |
|-----------|-----------|--------|---------|------------|---------|
|           | DC - 3    | DC - 6 | DC - 18 | DC - 26.5  | DC - 40 |
| SMA       |           |        |         | 3-2 / 3-12 |         |
| SMA2.9    |           |        |         |            | 3-2     |

For more detailed technical information please consult Radiall customer support.



Radiall's RAMSES DP3T and Terminated SPDT switches offer excellent reliability, high performance and operating frequencies from DC to 40 GHz. A full range of options are available with RADIALL RAMSES concept to offer customers complete solutions.

These relays are dedicated to market applications including: Defense Instrumentation and Telecommunications.

Example of P/N:

**R585423300** is a SPDT terminated SMA 18GHz, failsafe, 28Vdc, indicator contacts, internal terminations without TTL drivers and solder pins.

**PART NUMBER SELECTION**

R 585

**RF Connectors:**

- 3: SMA up to 3 GHz
- 4: SMA up to 18 GHz
- F: SMA up to 26.5 GHz
- 8: SMA2.9 up to 40 GHz (4) (5)

**Type:**

- 1: Failsafe
- 2: Failsafe + I.C.
- 3: Latching
- 4: Latching + I.C.
- 5: Latching + S.C.O. (1)
- 6: Latching + S.C.O + I.C. (1)
- 7: Normally open
- 8: Normally open + I.C.

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

- (1): Suppression diodes are already included in Self Cut-OFF & TTL option
- (2): Polarity is not relevant to application for switches with TTL driver
- (3): Positive common shall be specified only with type 3, 4, 5, 6, 7 & 8 because failsafe switches can be used with both polarities
- (4): Not available with switch model "2" & "3"

**Actuator Terminals:**

- 0: Solder pins

**Options:**

- 0: Without option
- 1: Positive common (2) (3)
- 3: With suppression diodes (1)
- 4: With suppression diodes and positive common (2) (3)

**Switch Model:**

- 0: DP3T without TTL Driver (DP3T)
- 1: DP3T with TTL Driver (DP3T) (high level) (1) (2)
- 2: SPDT terminated without TTL Driver / (internal termination)
- 3: SPDT terminated without TTL Driver / (high level) (1) (2) / (internal termination)
- 4: SPDT terminated without TTL Driver / (external termination)
- 5: SPDT terminated with TTL Driver / (high level) (1) (2) / (external termination)
- 6: Terminated 4 ports bypass no option (external terminations)
- 7: Terminated 4 ports bypass with TTL (external termination)

**Actuator Voltage:**

- 2: 12 Vdc
- 3: 28 Vdc

(5): Connector SMA2.9 is equivalent to "K connector", registered trademark of Anritsu.

To download technical data sheets, visit [www.radiall.com](http://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  |               | Failsafe   |            | Latching            |            | Normally open |            |
|---|---------------|--|------------|---------------------|------------|---------------|------------|
| Nominal operating voltage<br>(across operating temperature) | Vdc           | 12   | 28         | 12                  | 28         | 12            | 28         |
|   |               | (10.2 to 13)   | (24 to 30) | (10.2 to 13)        | (24 to 30) | (10.2 to 13)  | (24 to 32) |
| Coil resistance (+/-10%)                                    | Ω             | 24   | 138        | 29                  | 175        | 47.5          | 275        |
| Nominal operating current at 23°C                           | mA            | 500  | 205        | 420                 | 160        | 250           | 102        |
| Average power   |               | RF path: see power rating chart <b>page 1-16</b><br>Internal terminations: 1 Watt CW into 50 Ohms                      |            |                     |            |               |            |
| TTL Input   | High level    | 2.5 to 5.5 Volts   |            | 800µA max 5.5 Volts |            |               |            |
|   | Low level     | 0 to 0.8 Volts   |            | 20µA max 0.8 Volts  |            |               |            |
| Switching time (max)  | ms            | 10   |            |                     |            |               |            |
| Life (min)  |               | 2 million cycles for products with internal terminations and 40 GHz models<br>10 million cycles for all other products |            |                     |            |               |            |
| Connectors  |               | SMA - SMA2.9   |            |                     |            |               |            |
| Actuator terminals  |               | Solder pins  |            |                     |            |               |            |
| Operating temperature range                                 | SMA<br>SMA2.9 | -40°C, +85°C   |            |                     |            |               |            |
| Storage temperature range                                   | SMA<br>SMA2.9 | -55°C, +85°C   |            |                     |            |               |            |
| Vibration (MIL STD 202, Method 204D, cond.D)                |               | 10-2000 Hz, 20g  |            |                     |            | Operating     |            |
| Shock (MIL STD 202, Method 213B, cond.C)                    |               | 100g / 6ms, ½ sine   |            |                     |            | Operating     |            |

## RF PERFORMANCES

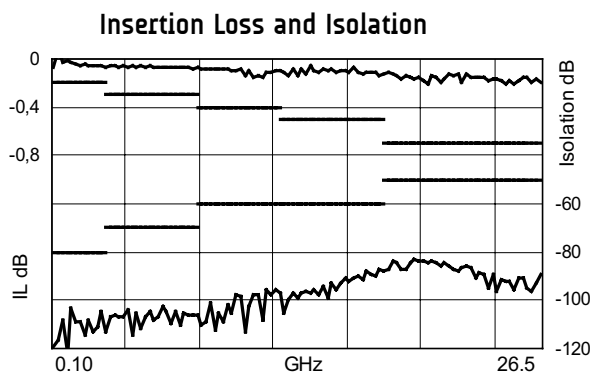
| Connectors | Frequency Range GHz            | V.S.W.R.<br>(max) | Insertion Loss<br>(max) dB | Isolation<br>(min) dB | Impedance<br>Ohms |    |
|------------|--------------------------------|-------------------|----------------------------|-----------------------|-------------------|----|
| SMA        | DC - 3<br>DC - 18<br>DC - 26.5 | DC - 3            | 1.20                       | 0.20                  | 80                | 50 |
|            |                                | 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         | 1.80                       | 0.70                  | 50                |    |
| SMA2.9     | DC - 40                        | DC - 6            | 1.30                       | 0.30                  | 70                | 50 |
|            |                                | 6 - 12.4          | 1.40                       | 0.40                  | 60                |    |
|            |                                | 12.4 - 18         | 1.50                       | 0.50                  | 60                |    |
|            |                                | 18 - 26.5         | 1.70                       | 0.70                  | 55                |    |
|            |                                | 26.5 - 40         | 1.90                       | 0.80                  | 50                |    |

See page 3-4 for typical RF performances

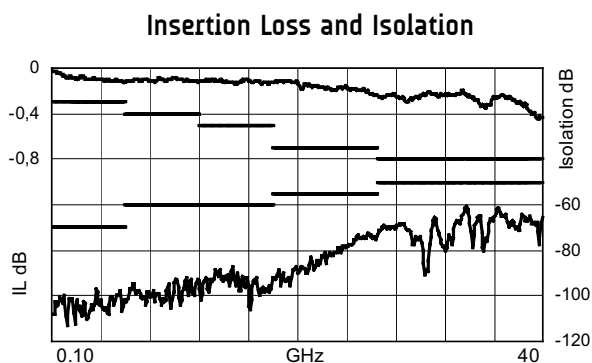
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
For more detailed technical information please consult Radiall customer support.

**R585 TYPICAL RF PERFORMANCES**

Example: DP3T SMA up to 26.5 GHz



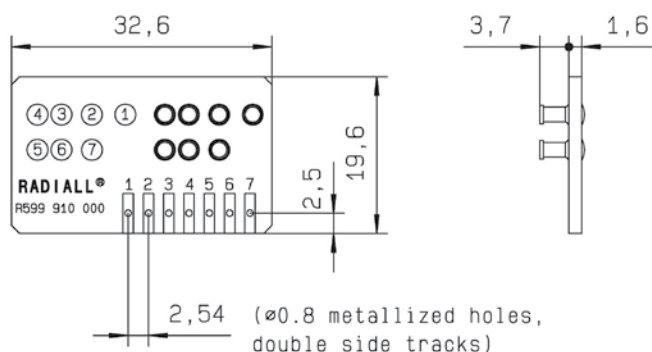
Example: DP3T SMA2.9 up to 40 GHz



**ACCESSORIES**

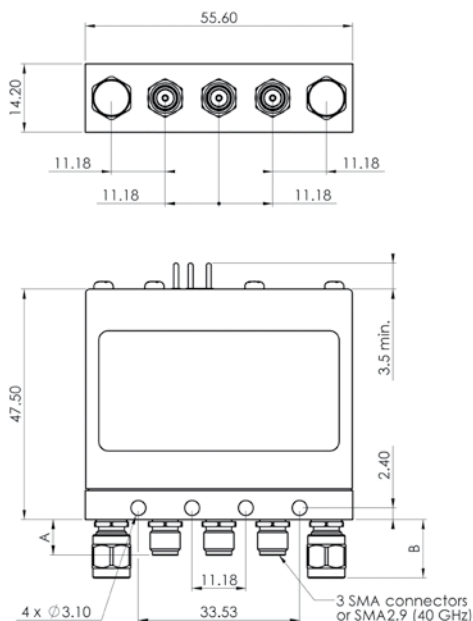
A printed circuit board interface connector (ordered separately) has been designed for easy mounting on terminals.

For DP3T model R585 series => Radiall part number: **R599910000**



To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
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TYPICAL OUTLINE DRAWING



SPDT with external terminations  
R585 --- 4--  
R585 --- 5--



SPDT with internal terminations  
R585 --- 2--  
R585 --- 3--

See page  
3-11  
for pin  
identification



DP3T  
R585---0--  
R585---1--



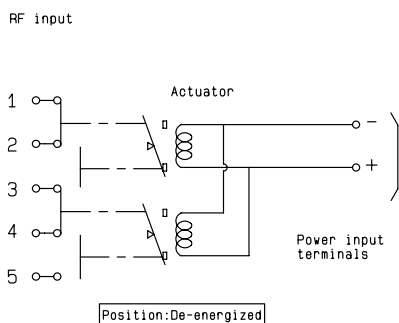
Terminated 4 ports BYPASS relay  
R585 --- 6--  
R585 --- 7--

| Connectors           | A (mm) | B max (mm)<br>If applicable |
|----------------------|--------|-----------------------------|
| SMA up to 18 GHz     | 7.4    | 13.5                        |
| SMA up to 26.5 GHz   | 7.4    | 21                          |
| SMA 2.9 up to 40 GHz | 6.3    | 21                          |

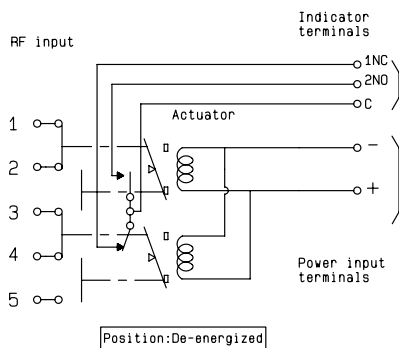
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
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### FAILSAFE

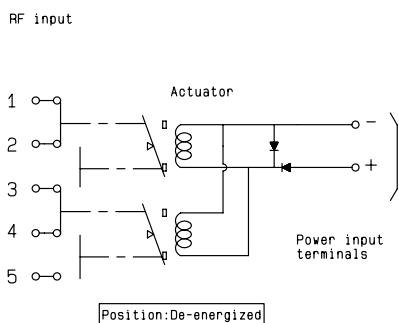
**WITHOUT OPTION**  
R585 -1- 000 / R585 -1- 200 / R585 -1- 400



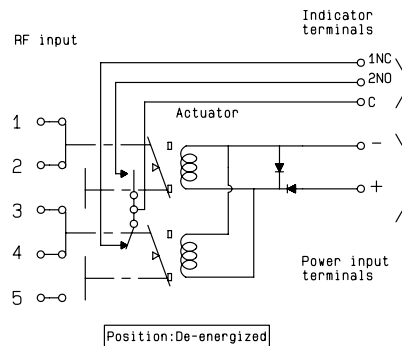
**WITH INDICATOR CONTACT**  
R585 -2- 000 / R585 -2- 200 / R585 -2- 400



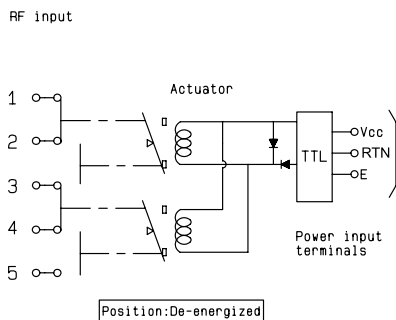
**WITH SUPPRESSION DIODES**  
R585 -1- 030 / R585 -1- 230 / R585 -1- 430



**WITH SUPPRESSION DIODES AND INDICATOR CONTACT**  
R585 -2- 030 / R585 -2- 230 / R585 -2- 430



**WITH TTL DRIVER**  
(suppression diodes are included)  
R585 -1- 100 / R585 -1- 300 / R585 -1- 500



**WITH TTL DRIVER AND INDICATOR CONTACT**  
(suppression diodes are included)  
R585 -2- 100 / R585 -2- 300 / R585 -2- 500



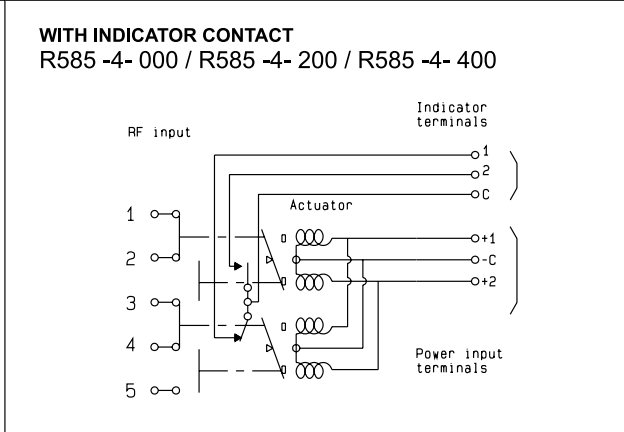
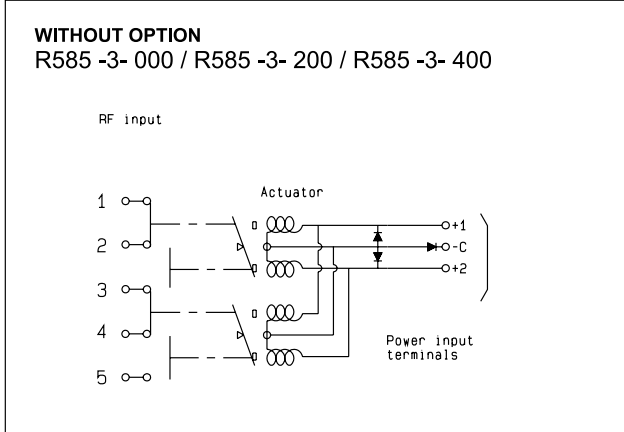
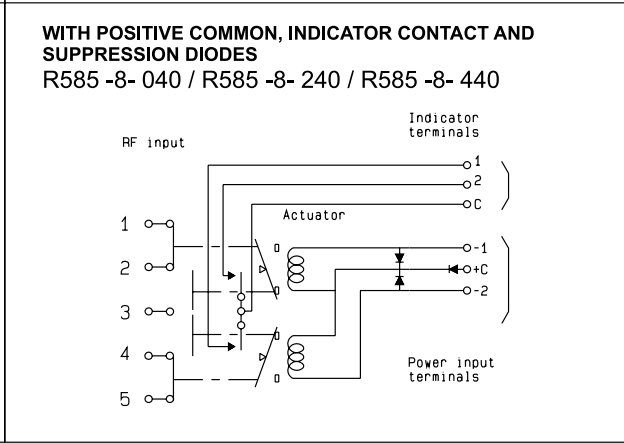
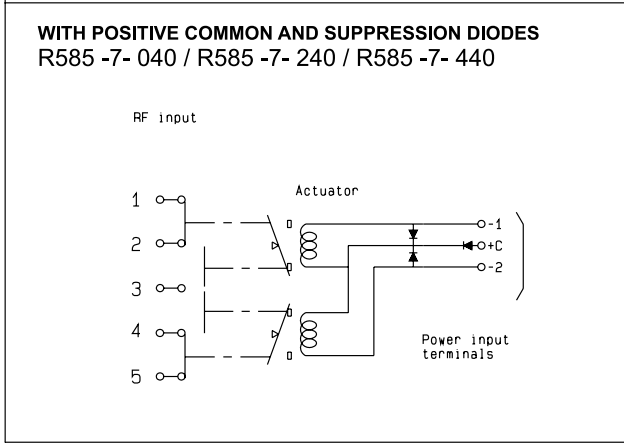
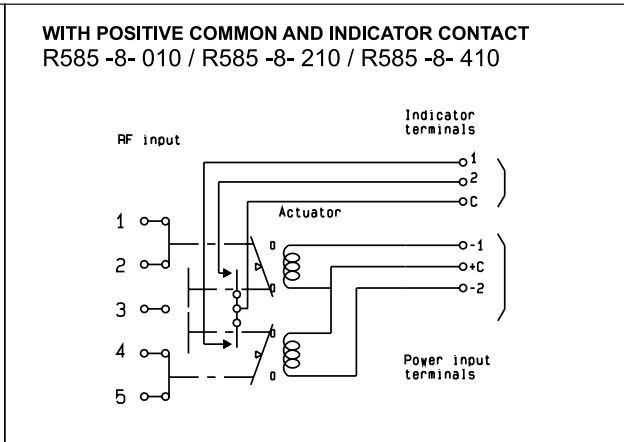
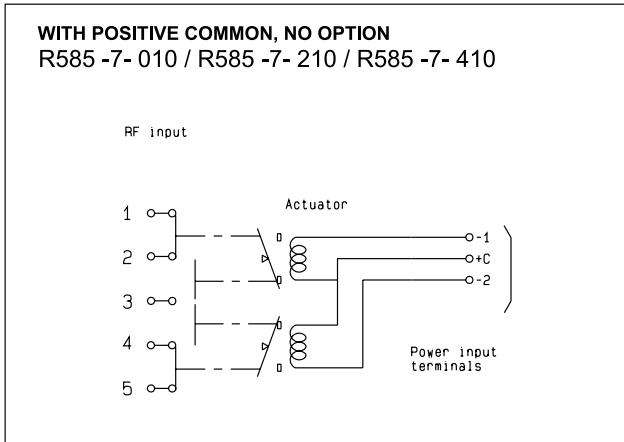
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
For more detailed technical information please consult Radiall customer support.

**NORMALLY OPEN**

|  |  |
|--|--|
| <p><b>WITHOUT OPTION</b><br/>R585 -7- 000 / R585 -7- 200 / R585 -7- 400</p>  | <p><b>WITH INDICATOR CONTACT</b><br/>R585 -8- 000 / R585 -8- 200 / R585 -8- 400</p>  |
| <p><b>WITH SUPPRESSION DIODES</b><br/>R585 -7- 030 / R585 -7- 230 / R585 -7- 430</p>                               | <p><b>WITH SUPPRESSION DIODES AND INDICATOR CONTACT</b><br/>R585 -8- 030 / R585 -8- 230 / R585 -8- 430</p>                               |
| <p><b>WITH TTL DRIVER</b><br/>(suppression diodes are included)<br/>R585 -7- 100 / R585 -7- 300 / R585 -7- 500</p> | <p><b>WITH TTL DRIVER AND INDICATOR CONTACT</b><br/>(suppression diodes are included)<br/>R585 -8- 100 / R585 -8- 300 / R585 -8- 500</p> |

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**NORMALLY OPEN**



DP3T

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LATCHING

**WITH SUPPRESSION DIODES**  
R585 -3- 030 / R585 -3- 230 / R585 -3- 430



**WITH SUPPRESSION DIODES AND INDICATOR CONTACT**  
R585 -4- 030 / R585 -4- 230 / R585 -4- 430



**WITH TTL DRIVER**  
(suppression diodes are included)  
R585 -3- 100 / R585 -3- 300 / R585 -3- 500



**WITH TTL DRIVER AND INDICATOR CONTACT**  
(suppression diodes are included)  
R585 -4- 100 / R585 -4- 300 / R585 -4- 500



**WITH CUT-OFF**  
(suppression diodes are included)  
R585 -5- 000 / R585 -5- 200 / R585 -5- 400



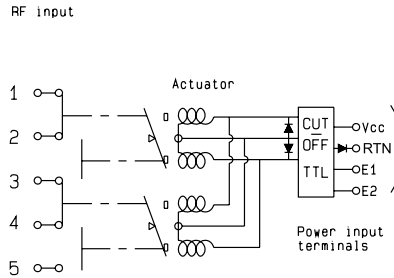
**WITH CUT-OFF AND INDICATOR CONTACT**  
(suppression diodes are included)  
R585 -6- 000 / R585 -6- 200 / R585 -6- 400



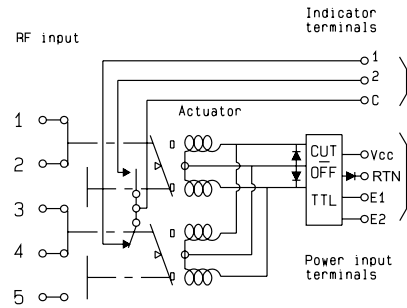
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**LATCHING**

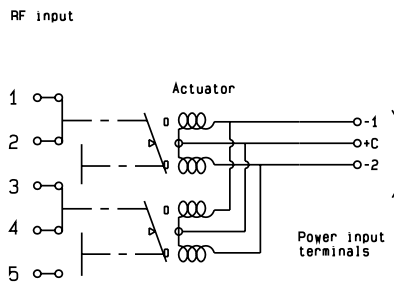
**WITH CUT-OFF AND TTL DRIVER**  
(suppression diodes are included)  
R585 -5- 100 / R585 -5- 300 / R585 -5- 500



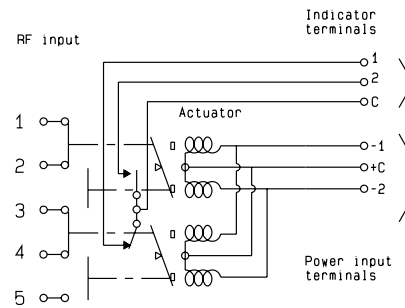
**WITH CUT-OFF, TTL DRIVER AND INDICATOR CONTACT**  
(suppression diodes are included)  
R585 -6- 100 / R585 -6- 300 / R585 -6- 500



**WITH POSITIVE COMMON, NO OPTION**  
R585 -3- 010 / R585 -3- 210 / R585 -3- 410



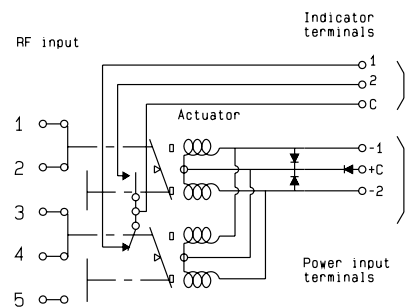
**WITH POSITIVE COMMON AND INDICATOR CONTACT**  
R585 -4- 010 / R585 -4- 210 / R585 -4- 410



**WITH POSITIVE COMMON AND SUPPRESSION DIODES**  
R585 -3- 040 / R585 -3- 240 / R585 -3- 440



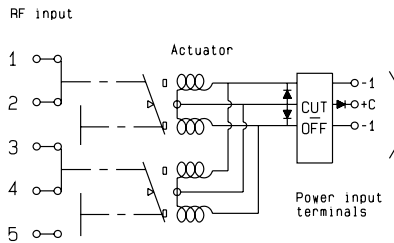
**WITH POSITIVE COMMON, SUPPRESSION DIODES AND INDICATOR CONTACT**  
R585 -4- 040 / R585 -4- 240 / R585 -4- 440



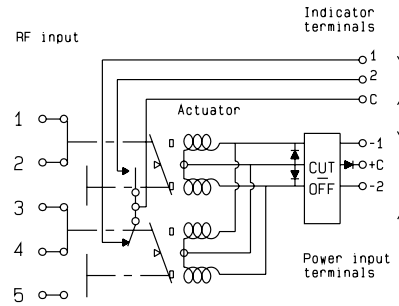
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
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## LATCHING

**WITH POSITIVE COMMON AND CUT-OFF**  
(suppression diodes are included)  
R585 -5- 010 / R585 -5- 210 / R585 -5- 410



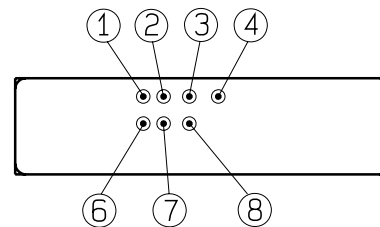
**WITH POSITIVE COMMON, CUT-OFF AND INDICATOR CONTACT**  
(suppression diodes are included)  
R585 -6- 010 / R585 -6- 210 / R585 -6- 410



## PIN IDENTIFICATION

| Type                            | PIN      |          |          |     |     |     |   |   |
|---------------------------------|----------|----------|----------|-----|-----|-----|---|---|
|                                 | 1        | 2        | 3        | 4   | 5   | 6   | 7 | 8 |
| Failsafe                        | +        |          | -        |     |     |     |   |   |
| Failsafe + I.C.                 | +        |          | -        |     | 2NO | 1NC | C |   |
| Failsafe + TTL                  | E        |          | RTN      | VCC |     |     |   |   |
| Failsafe + I.C. + TTL           | E        |          | RTN      | VCC | 2NO | 1NC | C |   |
| Latching                        | -2 or +2 | -1 or +1 | +C or -C |     |     |     |   |   |
| Latching + I.C.                 | -2 or +2 | -1 or +1 | +C or -C |     | 2   | 1   | C |   |
| Latching + TTL                  | E2       | E1       | RTN      | VCC |     |     |   |   |
| Latching + I.C.                 | E2       | E1       | RTN      | VCC | 2   | 1   | C |   |
| Latching + TTL + I.C. + Cut-off | E2       | E1       | RTN      | VCC | 2   | 1   | C |   |
| Normally open                   | -2       | -1       | +C       |     |     |     |   |   |
| Normally open + I.C.            | -2       | -1       | +C       |     |     |     |   |   |
| Normally open + TTL             | E2       | E1       | RTN      | VCC |     |     |   |   |
| Normally open + TTL + I.C.      | E2       | E1       | RTN      | VCC | 2   | 1   | C |   |

Bottom view



To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
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Radiall's PLATINUM series switches are optimised to perform at a high level over an extended life span. With outstanding RF performances, and a guaranteed Insertion Loss repeatability of 0.03 dB over a life span of 10 million switching cycles. PLATINUM SERIES switches are perfect for automated test and measurement equipment, as well as signal monitoring devices.

Example of P/N:

R595F63215 is a Terminated SPDT SMA 26.5 GHz, latching with Self Cut-Off, 24Vdc, Indicators, D-Sub connector.

## PART NUMBER SELECTION

# R 595

### RF Connectors:

- 3: SMA up to 6 GHz
- 4: SMA up to 20 GHz
- F: SMA up to 26.5 GHz

### Type:

- 3: Latching
- 4: Latching + I.C.
- 5: Latching + S.C.O.
- 6: Latching + S.C.O. + I.C.

### Actuator Voltage:

- 3: 24 Vdc
- 7: 15 Vdc

### Switch Model:

- 2: Terminated SPDT switch
- 3: Terminated 4 ports bypass switch
- 4: Non terminated 5 ports DP3T switch

### Documentation:

- : Certificate of conformity
- C: Calibration certificate
- R: Calibration certificate + RF curves

### Actuator Termination:

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

### Options:

- 1: Without option (positive common)
- 2: Compatible TTL driver (high level)

To download technical data sheets, visit [www.radiall.com](http://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   |            | Latching                                    |   |
|--|------------|---|---|
| Nominal operating voltage (across operating temperature) | Vdc        | 24 (20 to 32)                               | 15 (12 to 20)   |
| Coil resistance (+/-10%)                                 | $\Omega$   | 175   | 60  |
| Operating current at 23°C                                | mA         | 140   | 250   |
| Average Power  |            | RF Path                                     | Cold switching: see Power Chart on <b>page 3-21</b><br>Hot switching: 1 Watt CW |
|  |            | Internal terminations                       | 1 Watt average into 50 Ohms   |
| TTL input  | High level | 3 to 7 Volts: 800 $\mu$ A max at 7 Volts    |   |
|  | Low level  | 0 to 0.8 Volts: 20 $\mu$ A max at 0.8 Volts |   |
| Switching time (max)                                     | ms         | 15  |   |
| Life (min)   |            | 10 million cycles                           |   |
| Connectors   |            | SMA   |   |
| Actuator terminal  |            | D-Sub 9 pin female<br>Solder pins           |   |
| Weight   | g          | 100   |   |

## ENVIRONMENTAL SPECIFICATIONS

|   |                                   |
|---|-----------------------------------|
| Operating temperature range                                 | -25°C to +75°C                    |
| Storage temperature range                                   | -55°C to +85°C                    |
| Temperature cycling (MIL STD 202F, Method 107D, Cond.A)     | -55°C to +85°C (10 cycles)        |
| Sine vibration operating (MIL STD 202, Method 204D, Cond.D) | 10-2000 Hz, 20g                   |
| Random vibration operating                                  | 16.91g (rms) 50-2000 Hz 3min/axis |
| Shock operating (MIL STD 202, Method 213B, Cond.G)          | 50g / 11ms, sawtooth              |
| Humidity operating  | 15 to 95% relative humidity       |
| Humidity storage (MIL STD 202, Method 106E, Cond.E)         | 65°C, 95% RH, 10 days             |
| Altitude operating  | 15,000 feet (4,600 meters)        |
| Altitude storage (MIL STD 202, Method 105C, Cond.B)         | 50,000 feet (15,240 meters)       |

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RF PERFORMANCES

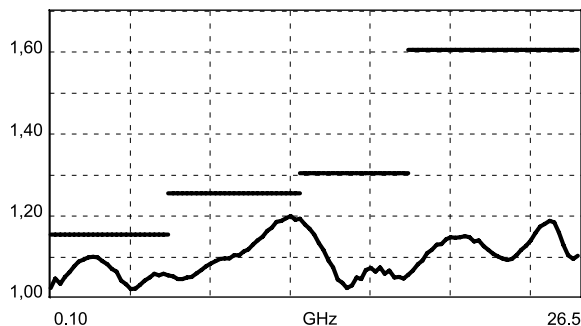
| Part Number  |      | R5953-----                             | R5954----- | R595F-----     |      |
|--|------|--|------------|----------------|------|
| Frequency range  | GHz  | DC to 6                                | DC to 20   | DC to 26.5     |      |
| Impedance  | Ω    | 50                                     |            |                |      |
| Insertion Loss (max)                                       | dB   | 0.20 + (0.45 / 26.5) x frequency (GHz) |            |                |      |
| Isolation (min)  | 85   | DC to 6 GHz                            | 85         | DC to 6 GHz    | 85   |
|  |      | 6 to 12.4 GHz                          | 75         | 6 to 12.4 GHz  | 75   |
|  |      | 12.4 to 20 GHz                         | 65         | 12.4 to 20 GHz | 65   |
| 20 to 26.5 GHz   | 60   |  |            |                |      |
| V.S.W.R. (max)   | 1.15 | DC to 6 GHz                            | 1.15       | DC to 6 GHz    | 1.15 |
|  |      | 6 to 12.4 GHz                          | 1.25       | 6 to 12.4 GHz  | 1.25 |
|  |      | 12.4 to 18 GHz                         | 1.30       | 12.4 to 18 GHz | 1.30 |
|  |      | 18 to 20 GHz                           | 1.60       | 18 to 26.5 GHz | 1.60 |
| Repeatability<br>(up to 10 million cycles mesured at 25°C) |      | 0.03 dB maximun                        |            |                |      |

TYPICAL RF PERFORMANCES

Insertion Loss and Isolation



V.S.W.R.



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

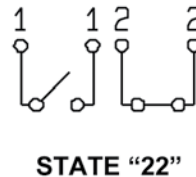
## SWITCH MODEL: TERMINATED SPDT SWITCH

The terminated SPDT switch is a single pole double throw switch. The unused ports are terminated into 50 ohms. This switch is "break before make".

### RF SCHEMATIC DIAGRAM



### POSITION INDICATORS



#### Standard drive option "1" (Positive common):

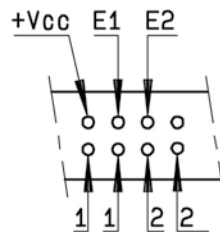
- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc).
- Select desired RF path by applying ground to the corresponding "close" pin (Ex: ground pin E1 to switch to position E1. RF path 1-2 closed and RF path 2-3 open).
- To open desired path and close the new RF path, connect ground to the corresponding "close" pin (Ex: ground pin E2 to open RF path 1-2 and close RF path 2-3).

#### TTL drive option "2"

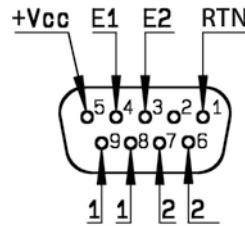
- Connect pin RTN to ground.
- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc)
- Select (close) desired RF path by applying TTL "High" to the corresponding "drive" pin. (Ex: apply TTL "High" to pin E1 to switch to position E1. RF path 1-2 closed and RF path 2-3 open).
- To open desired path and close the new RF path, apply TTL "High" to the "drive" pin which corresponds to the desired RF path. (Ex: apply TTL "High" to pin E2 to open RF path 1-2 and close RF path 2-3).



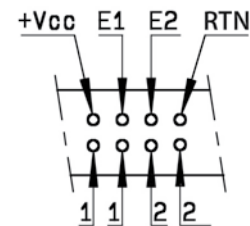
D-Sub connector



Solder pins



D-Sub connector



Solder pins

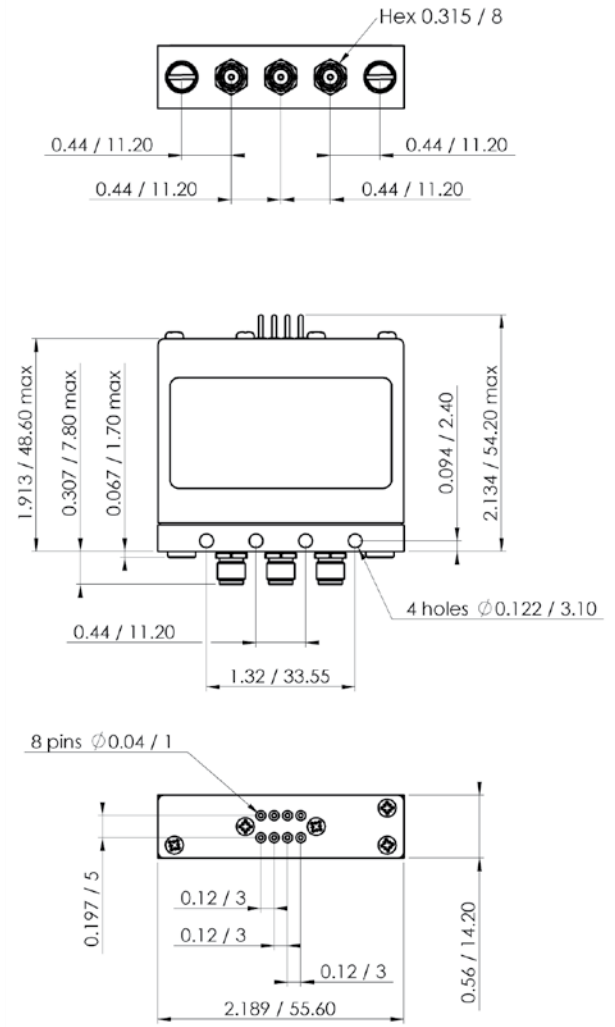
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box. For more detailed technical information please consult Radiall customer support.

SWITCH MODEL: TERMINATED SPDT SWITCH

With D-Sub connector



With solder pins



All dimensions are in inches/millimeters

To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box.  
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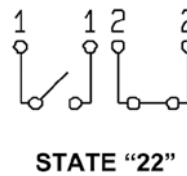
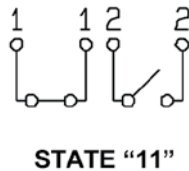
## SWITCH MODEL: TERMINATED 4 PORT BYPASS SWITCH

The terminated 4 port bypass switch can terminate into the 50 ohms device under test. These switches are "break before make".

### RF SCHEMATIC DIAGRAM



### POSITION INDICATORS

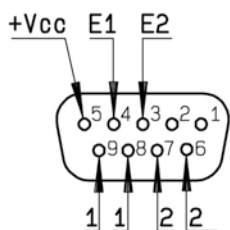


#### Standard drive option "1" (Positive common):

- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc).
- Select desired RF path by applying ground to the corresponding "close" pin (Ex: ground pin E1 to switch to position E1. RF path 1-2 and RF path 3-4 closed and RF path 2-3 open).
- To open desired path and close the new RF path, connect ground to the corresponding "close" pin (Ex: ground pin E2 to open RF path 1-2 and 3-4 and close RF path 2-3).

#### TTL drive option "2":

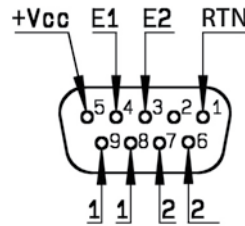
- Connect pin RTN to ground.
- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc).
- Select (close) desired RF path by applying TTL "High" to the corresponding "drive" pin (Ex: apply TTL "High" to pin E1 to switch to position E1. RF path 1-2 and 3-4 closed and RF path 2-3 open).
- To open desired path and close the new RF path, apply TTL "High" to the "drive" pin which corresponds to the desired RF path. (Ex: apply TTL "High" to pin E2 to open RF path 1-2 and 3-4 and close RF path 2-3).



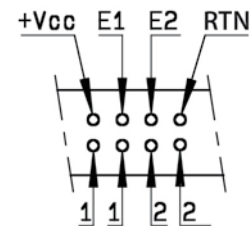
D-Sub connector



Solder pins



D-Sub connector

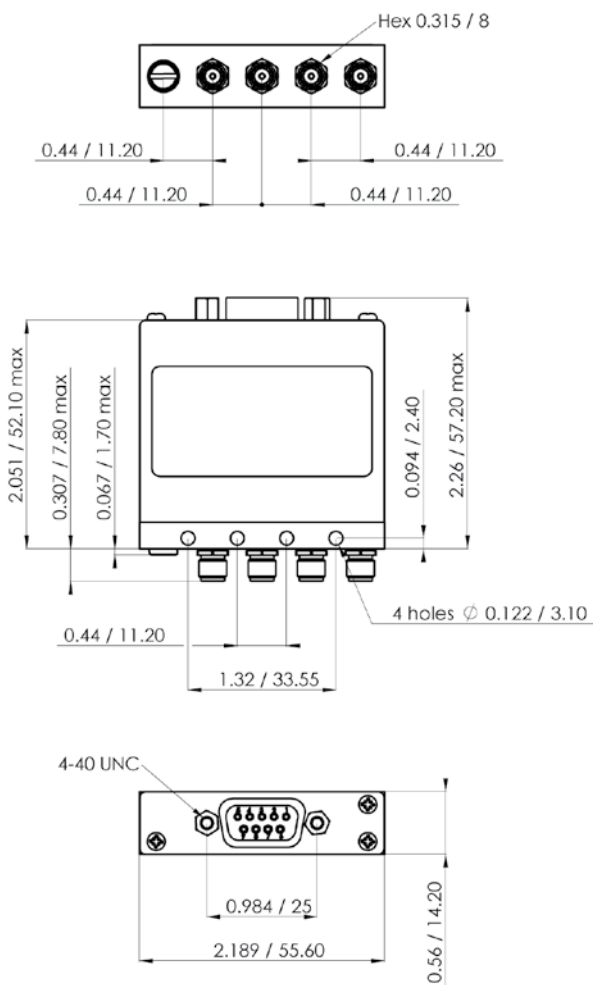


Solder pins

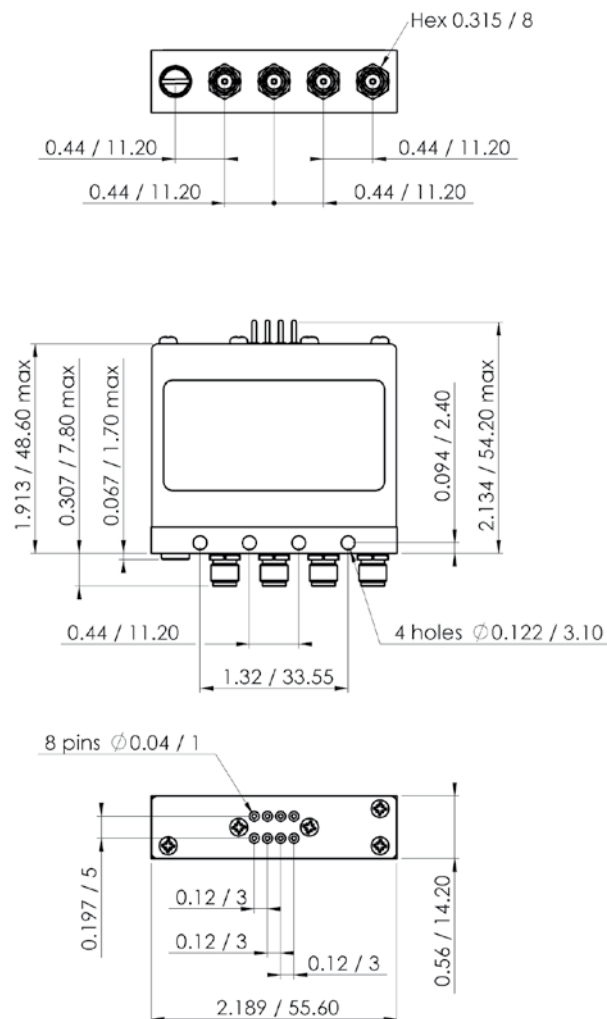
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box. For more detailed technical information please consult Radiall customer support.

SWITCH MODEL: TERMINATED 4 PORT BYPASS SWITCH

With D-Sub connector



With solder pins



All dimensions are in inches/millimeters

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

## SWITCH MODEL: 5 PORT DP3T SWITCH

The non terminated 5 port DP3T switch can be used as SPDT with high power terminations, as a bypass switch. In this application, the fifth port can be terminated externally with a high power termination. These switches are "break before make".

### RF SCHEMATIC DIAGRAM



### POSITION INDICATORS



#### Standard drive option "1" (Positive common):

- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc).
- Select desired RF path by applying ground to the corresponding "close" pin (Ex: ground pin E1 to switch to position E1. RF path 2-3 and RF path 4-5 closed and RF path 1-2 and RF path 3-4 open).
- To open desired path and close the new RF path, connect ground to the corresponding "close" pin (Ex: ground pin E2 to open RF path 2-3 and 4-5 and close RF path 1-2 and 3-4).

#### TTL drive option "2":

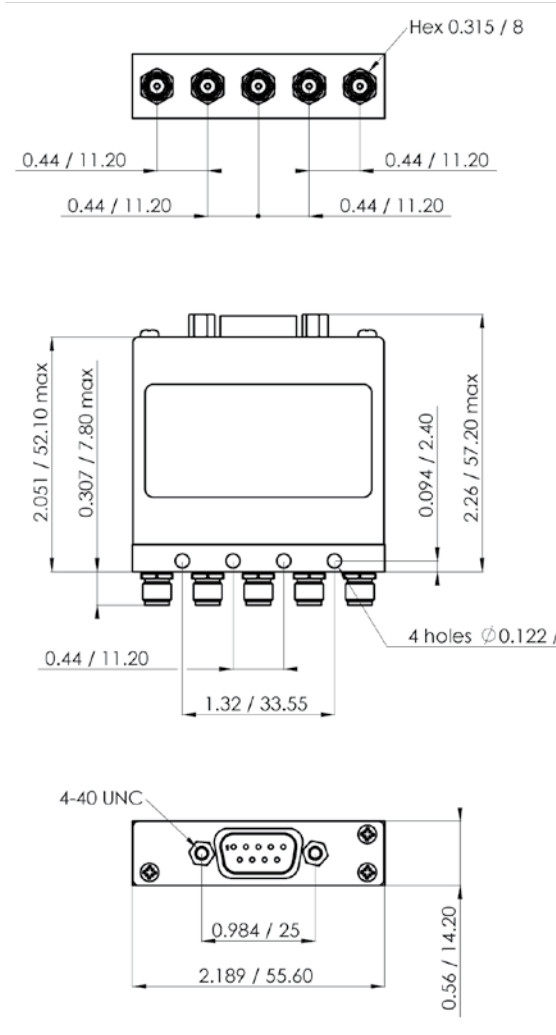
- Connect pin RTN to ground.
- Connect pin +Vcc to supply (+20 Vdc to +32 Vdc)
- Select (close) desired RF path by applying TTL "High" to the corresponding "drive" pin (Ex: apply TTL "High" to pin E1 to switch to position E1. RF path 2-3 and RF path 4-5 closed and RF path 1-2 and 3-4 open).
- To open desired path and close the new RF path, apply TTL "High" to the "drive" pin which corresponds to the desired RF path. (Ex: apply TTL "High" to pin E2 to open RF path 2-3 and 4-5 and close RF path 1-2 and 3-4).



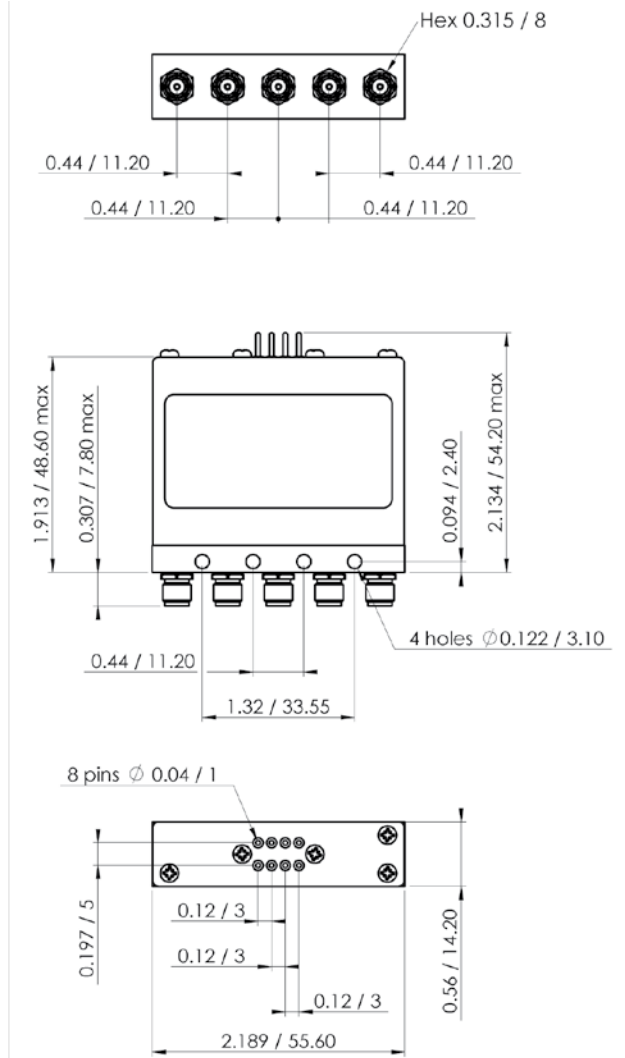
To download technical data sheets, visit [www.radiall.com](http://www.radiall.com) & enter the part number in the Search box. For more detailed technical information please consult Radiall customer support.

SWITCH MODEL: 5 PORT DP3T SWITCH

With D-Sub connector



With solder pins



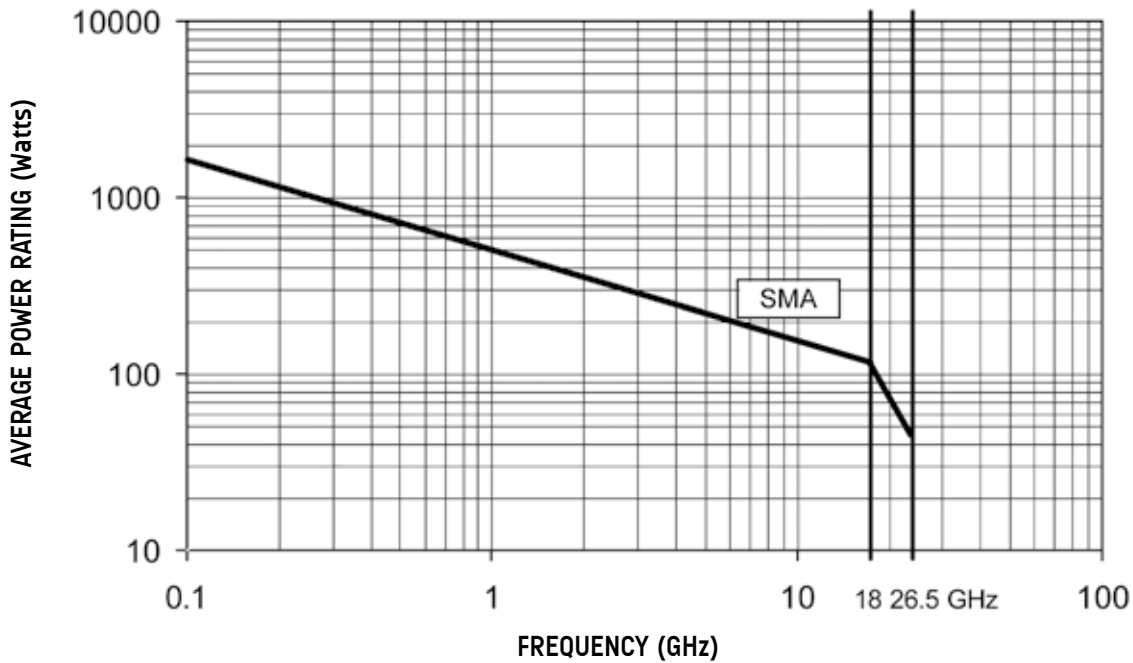
All dimensions are in inches/millimeters

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## POWER RATING CHART

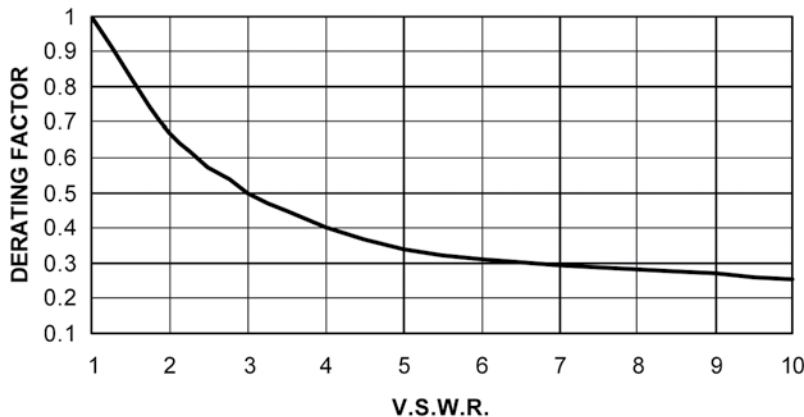
This graph is based on the following conditions:

- Ambient temperature: + 25°C
- Sea level
- V.S.W.R.: 1 and cold switching



## DERATING FACTOR VERSUS V.S.W.R.

The average power input must be reduced for load V.S.W.R. above 1.1



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

# Optional features for DP3T switches

COAXIAL DP3T RELAYS

## GENERAL

RADIALL DP3T / SPDT terminated are designed only with SMA connectors.

For all other connectors (N, BNC etc ..), the same function as SPDT Terminated can be easily performed with a standard DPDT and an external load.



POS 1 : J1 to J2 / J3 to load

### Examples of dedicated applications



This SPDT Terminated is composed of a DP3T with SMA connectors and 2 RADIALL cable loads used as medium power terminations. The Key advantage of this solution is the ability to mount the switch with external terminations at power level desired.



This is an example of an SPDT terminated switch that was designed with 2 separate coils for a specific test network application.

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

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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