# DP3T SECTION

# SECTION 3

**Pages**

## 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.

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# DP3T and Terminated SPDT up to 40 GHz
## SMA - SMA2.9

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.

**Actuator Voltage:**
2: 12 Vdc
3: 28 Vdc

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)

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

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**COAXIAL DP3T RELAYS**

# DP3T and Terminated SPDT up to 40 GHz
## SMA - SMA2.9

## GENERAL SPECIFICATIONS

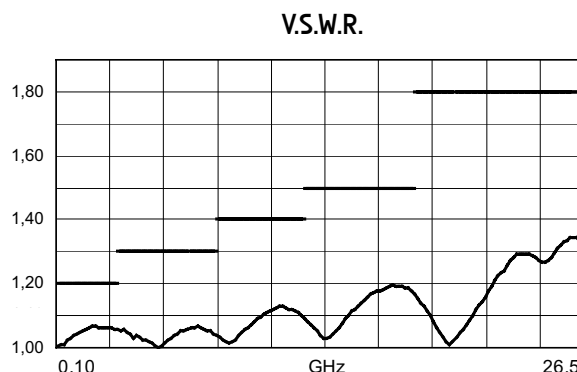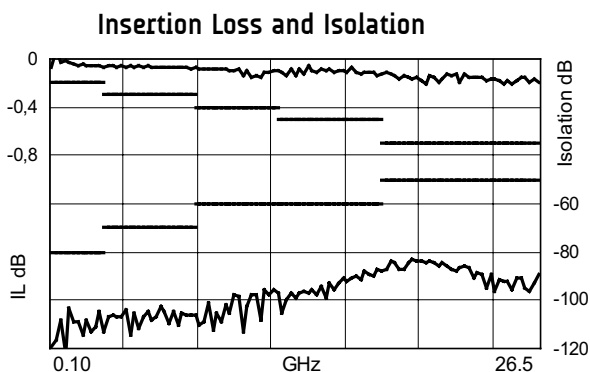| Operating mode | | Failsafe | | Latching | | Normally open | |
|---|---|---|---|---|---|---|---|
| Nominal operating voltage (across operating temperature) | Vdc | 12 | 28 | 12 | 28 | 12 | 28 |
| | | (10.2 to 13) | (24 to 30) | (10.2 to 13) | (24 to 30) | (10.2 to 13) | (24 to 32) |
| Coil resistance (+/-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 **page 1-16** | | | | | |
| | | 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 | | | | | |
| | | 10 million cycles for all other products | | | | | |
| Connectors | | SMA - SMA2.9 | | | | | |
| Actuator terminals | | Solder pins | | | | | |
| Operating temperature range | SMA SMA2.9 | –40°C, +85°C | | | | | |
| Storage temperature range | SMA 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. (max) | Insertion Loss (max) dB | Isolation (min) dB | Impedance Ohms |
|---|---|---|---|---|---|---|
| SMA | DC – 3 DC – 18 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

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## R585 TYPICAL RF PERFORMANCES
Example: DP3T SMA up to 26.5 GHz

**Insertion Loss and Isolation**



**V.S.W.R.**



Example: DP3T SMA2.9 up to 40 GHz

**Insertion Loss and Isolation**



**V.S.W.R.**
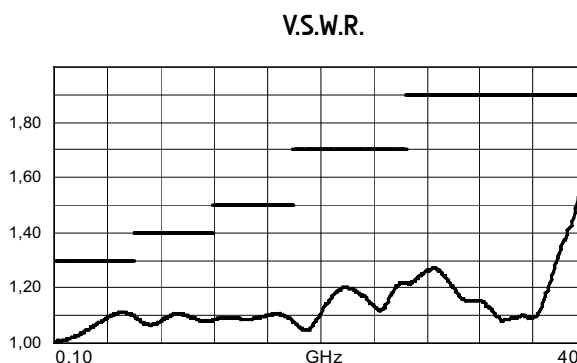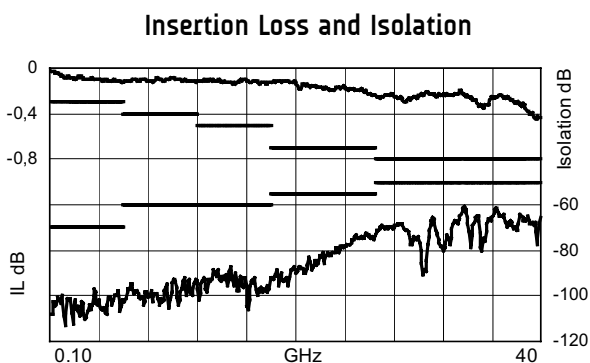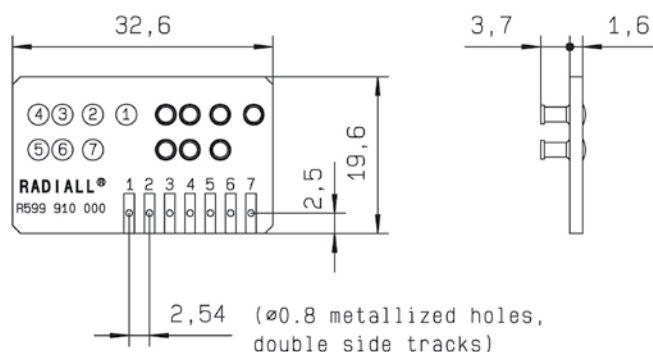


## ACCESSORIES

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

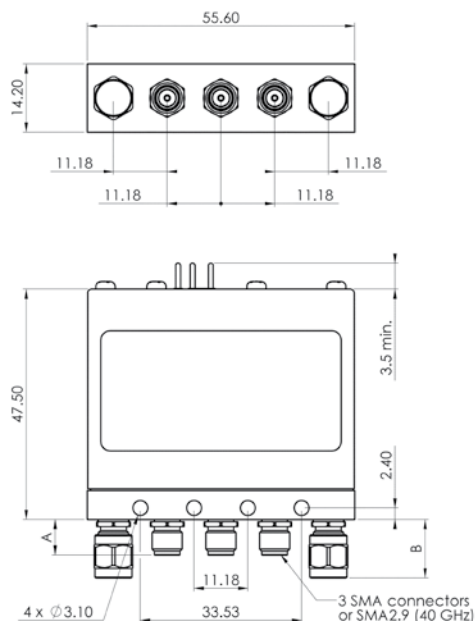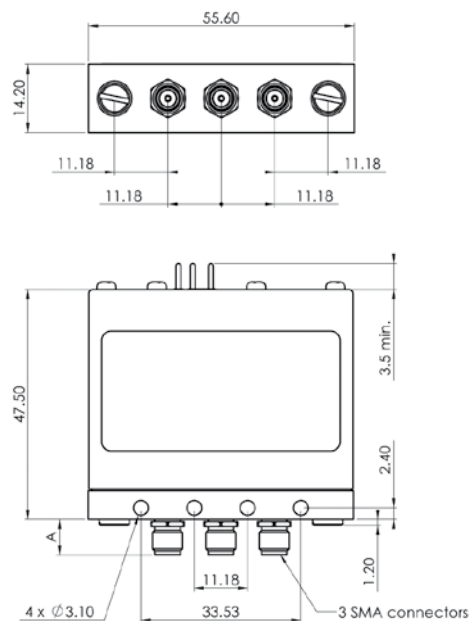For DP3T model R585 series => Radiall part number: **R599910000**

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# DP3T and Terminated SPDT up to 40 GHz
## SMA - SMA2.9

## TYPICAL OUTLINE DRAWING



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

See page
3-11
for pin
indentification

SPDT with **internal** terminations
R585 --- 2--
R585 --- 3--
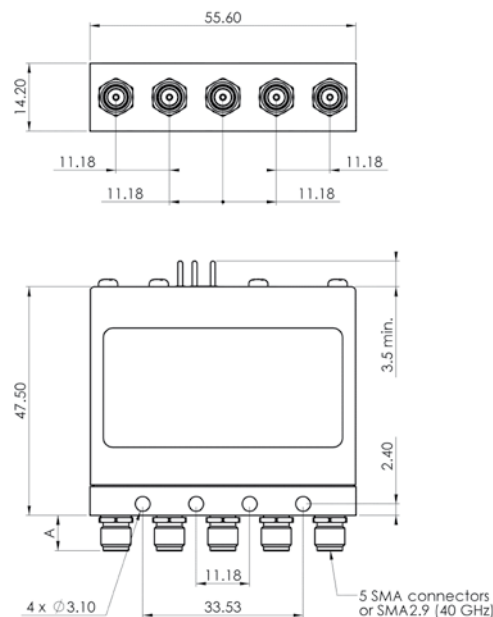
DP3T
R585---0--
R585---1--
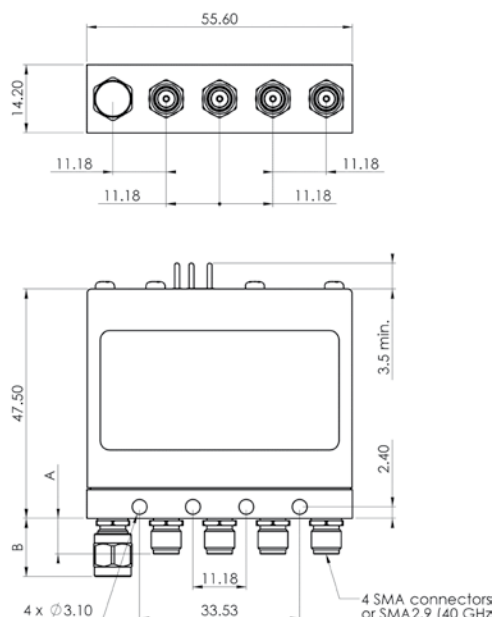
**Terminated** 4 ports **BYPASS** relay
R585 --- 6--
R585 --- 7--

| Connectors | A (mm) | B max (mm) 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 |

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**DP3T**

**www.radiall.com**

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**RAMSES Series**

**DP3T**

COAXIAL DP3T & Terminated SPDT – ELECTRICAL SCHEMATICS
R585 Series

COAXIAL DP3T
RELAYS

# FAILSAFE

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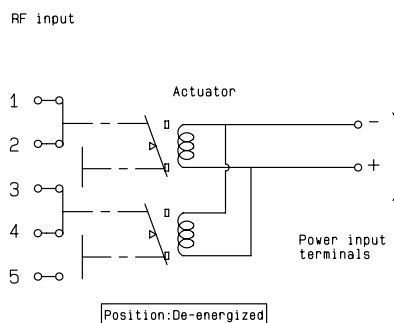


**WITH INDICATOR CONTACT**
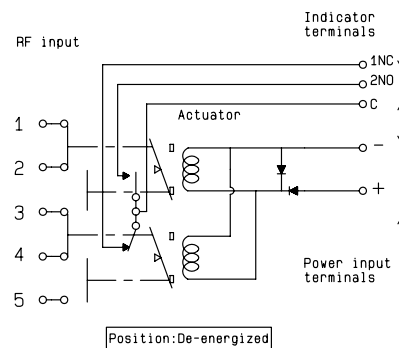R585 -2- 000 / R585 -2- 200 / R585 -2- 400
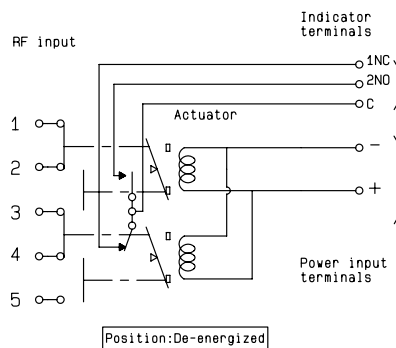


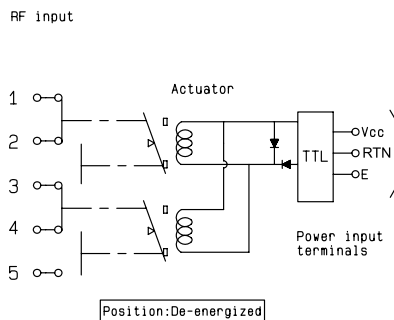**WITH SUPPRESSION DIODES**
R585 -1- 030 / R585 -1- 230 / R585 -1- 430
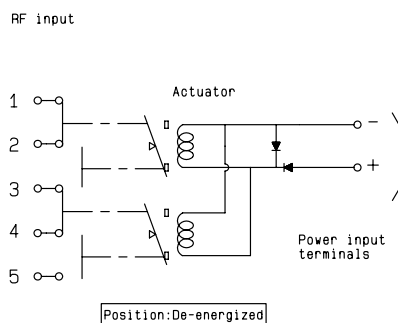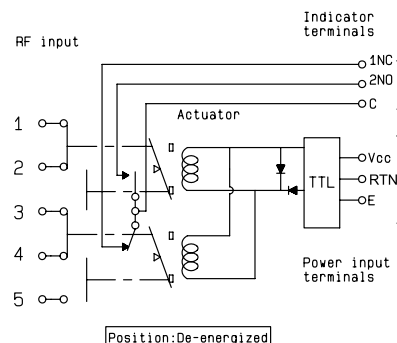


**WITH SUPPRESSION DIODES AND INDICATOR CONTACT**
R585 -2- 030 / R585 -2- 230 / R585 -2- 430



**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)
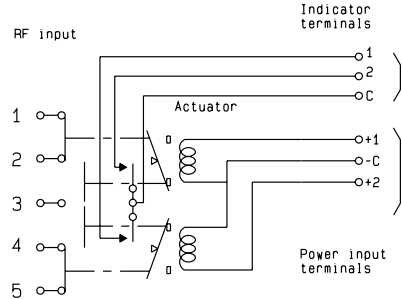R585 -2- 100 / R585 -2- 300 / R585 -2- 500



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For more detailed technical information please consult Radiall customer support.

**www.radiall.com**
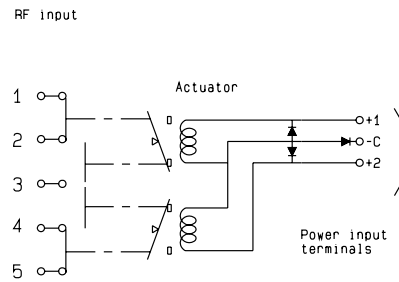
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**COAXIAL DP3T & Terminated SPDT - ELECTRICAL SCHEMATICS**
**R585 Series**

# NORMALLY OPEN

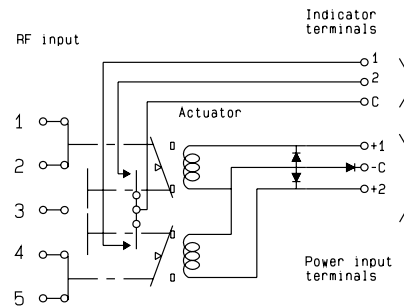**WITHOUT OPTION**
R585 -7- 000 / R585 -7- 200 / R585 -7- 400
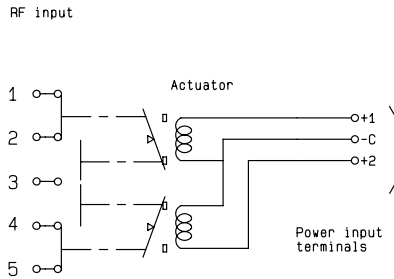


**WITH INDICATOR CONTACT**
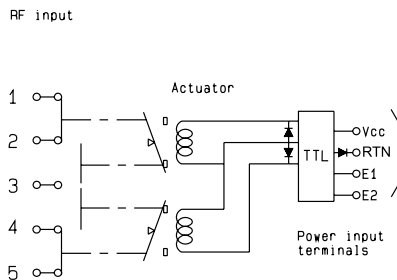R585 -8- 000 / R585 -8- 200 / R585 -8- 400



**WITH SUPPRESSION DIODES**
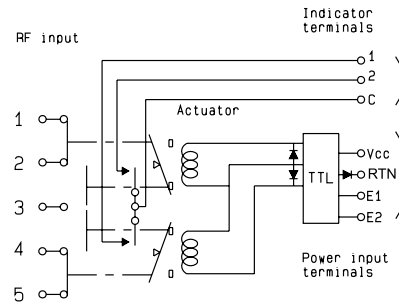R585 -7- 030 / R585 -7- 230 / R585 -7- 430



**WITH SUPPRESSION DIODES AND INDICATOR CONTACT**
R585 -8- 030 / R585 -8- 230 / R585 -8- 430



**WITH TTL DRIVER**
(suppression diodes are included)
R585 -7- 100 / R585 -7- 300 / R585 -7- 500



**WITH TTL DRIVER AND INDICATOR CONTACT**
(suppression diodes are included)
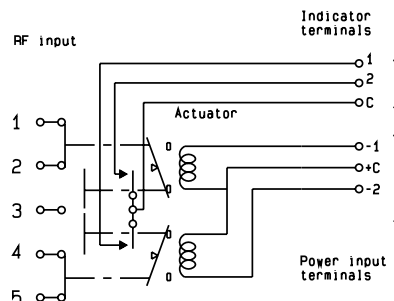R585 -8- 100 / R585 -8- 300 / R585 -8- 500



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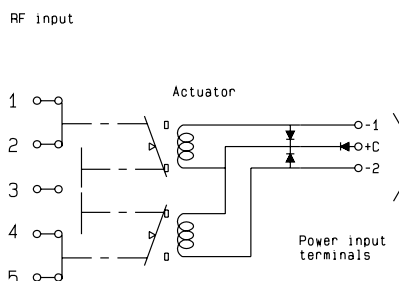The next conneXion

## NORMALLY OPEN

**WITH POSITIVE COMMON, NO OPTION**
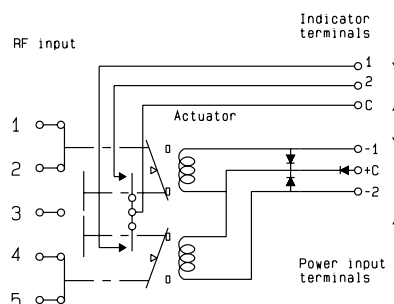R585 -7- 010 / R585 -7- 210 / R585 -7- 410
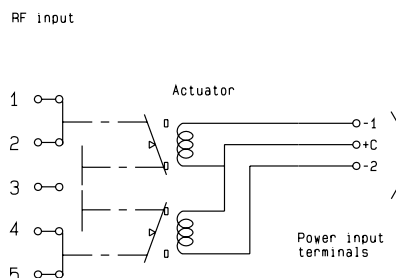
**WITH POSITIVE COMMON AND INDICATOR CONTACT**
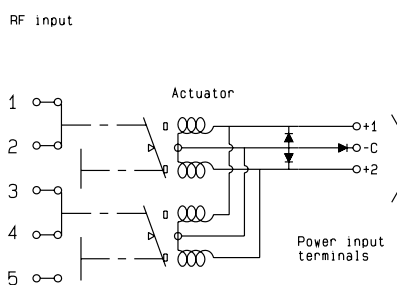R585 -8- 010 / R585 -8- 210 / R585 -8- 410

**WITH POSITIVE COMMON AND SUPPRESSION DIODES**
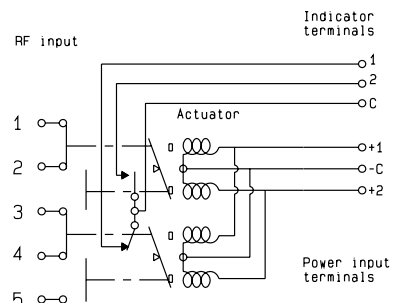R585 -7- 040 / R585 -7- 240 / R585 -7- 440

**WITH POSITIVE COMMON, INDICATOR CONTACT AND SUPPRESSION DIODES**
R585 -8- 040 / R585 -8- 240 / R585 -8- 440

**WITHOUT OPTION**
R585 -3- 000 / R585 -3- 200 / R585 -3- 400

**WITH INDICATOR CONTACT**
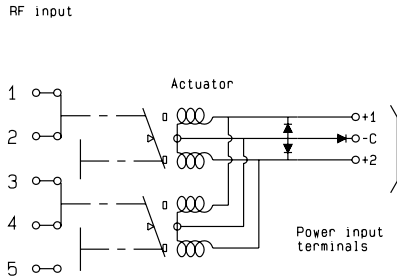R585 -4- 000 / R585 -4- 200 / R585 -4- 400

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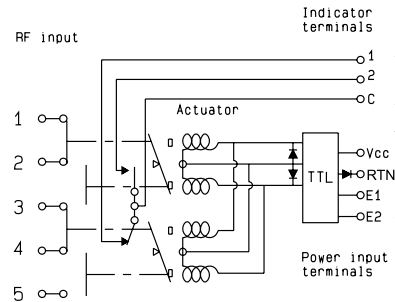
**WITH CUT-OFF**
(suppression diodes are included)
R585 -5- 000 / R585 -5- 200 / R585 -5- 400

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

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3-9

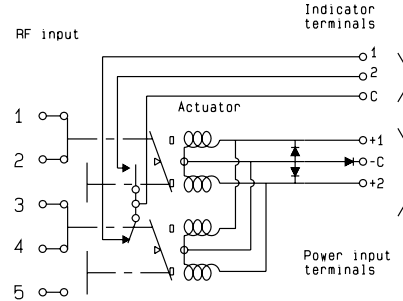**RADIALL**
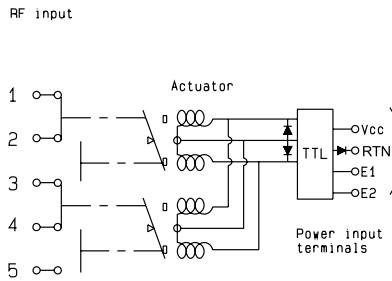The next conneXion
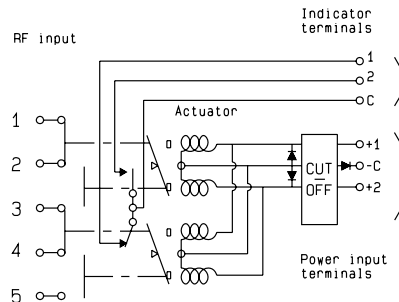
# LATCHING

**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
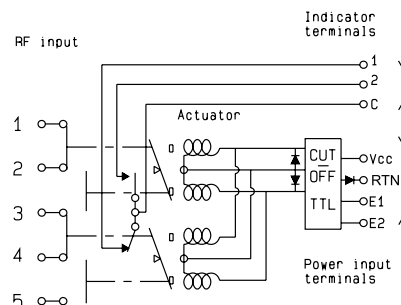
**WITH POSITIVE COMMON, NO OPTION**
R585 -3- 010 / R585 -3- 210 / R585 -3- 410
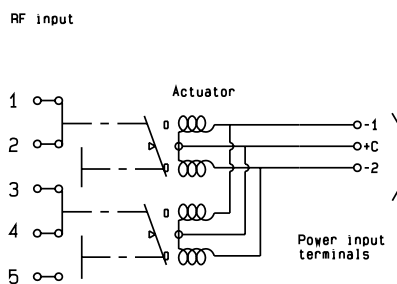
**WITH POSITIVE COMMON AND INDICATOR CONTACT**
R585 -4- 010 / R585 -4- 210 / R585 -4- 410

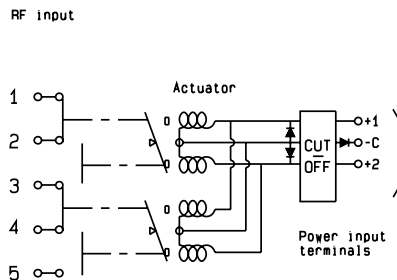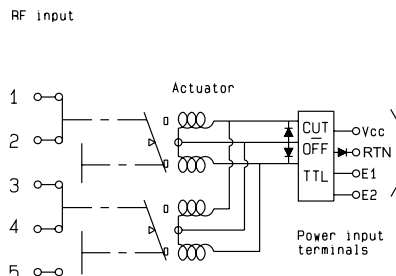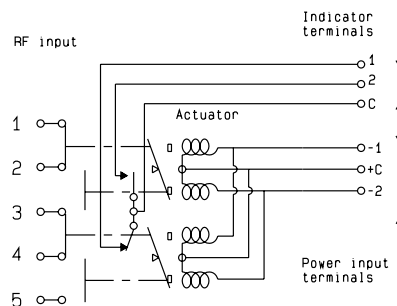**WITH POSITIVE COMMON AND SUPPRESSION DIODES**
R585 -3- 040 / R585 -3- 240 / R585 -3- 440
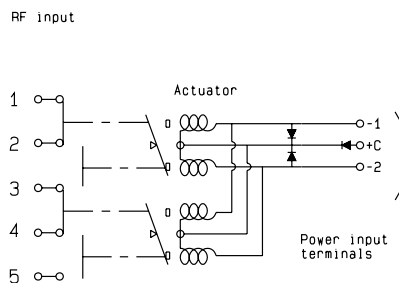
**WITH POSITIVE COMMON, SUPPRESSION DIODES AND INDICATOR CONTACT**
R585 -4- 040 / R585 -4- 240 / R585 -4- 440
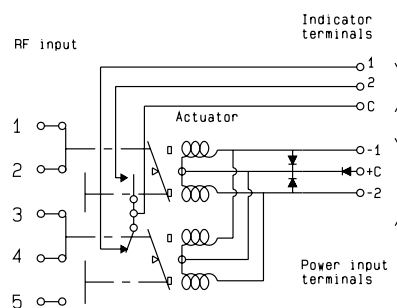
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# COAXIAL DP3T & Terminated SPDT - ELECTRICAL SCHEMATICS
## R585 Series

## 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)
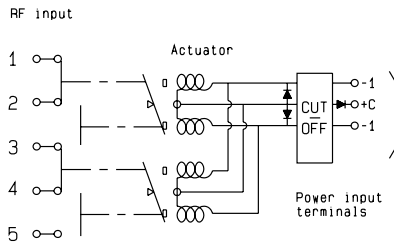R585 -6- 010 / R585 -6- 210 / R585 -6- 410



## PIN IDENTIFICATION

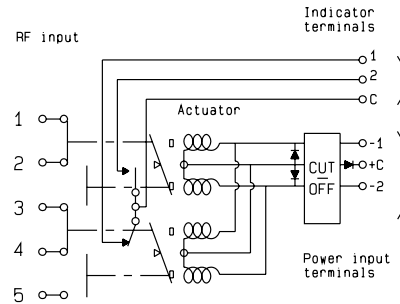| Type | PIN | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 6 | 7 | 8 |
| Failsafe | + | | – | | | | |
| Failsafe + I.C. | + | | – | | 2NO | 1NC | C |
| Failsafe + TTL | E | | RTN | VCC | | | |
| Failsafe + I.C. + TTL | E | | RTN | VCC | 2NO | 1NC | C |
| Latching<br>Latching + Cut-off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

**Bottom view**
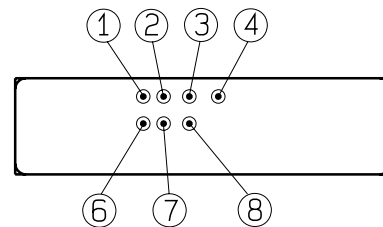


To download technical data sheets, visit www.radiall.com & enter the part number in the Search box.
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# High performance DP3T & Terminated SPDT up to 26.5 GHz
## SMA

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 & enter the part number in the Search box.
For more detailed technical information please consult Radiall customer support.

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# High performance DP3T & Terminated SPDT up to 26.5 GHz
SMA

## GENERAL SPECIFICATIONS

| Operating mode | | Latching | |
|---|---|---|---|
| Nominal operating voltage (across operating temperature) | Vdc | 24 (20 to 32) | 15 (12 to 20) |
| Coil resistance (+/-10%) | Ω | 175 | 60 |
| Operating current at 23°C | mA | 140 | 250 |
| Average Power | | RF Path | Cold switching: see Power Chart on **page 3-21** Hot switching: 1 Watt CW | |
| | | Internal terminations | 1 Watt average into 50 Ohms |
| TTL input | High level | 3 to 7 Volts: 800µA max at 7 Volts | |
| | Low level | 0 to 0.8 Volts: 20µA max at 0.8 Volts | |
| Switching time (max) | ms | 15 | |
| Life (min) | | 10 million cycles | |
| Connectors | | SMA | |
| Actuator terminal | | D-Sub 9 pin female 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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# High performance DP3T & Terminated SPDT up to 26.5 GHz
## SMA

## 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 (up to 10 million cycles mesured at 25℃) | | 0.03 dB maximun | | | | |

## TYPICAL RF PERFORMANCES

### Insertion Loss and Isolation
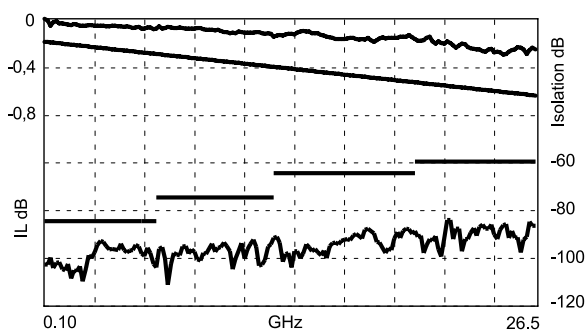


### V.S.W.R.

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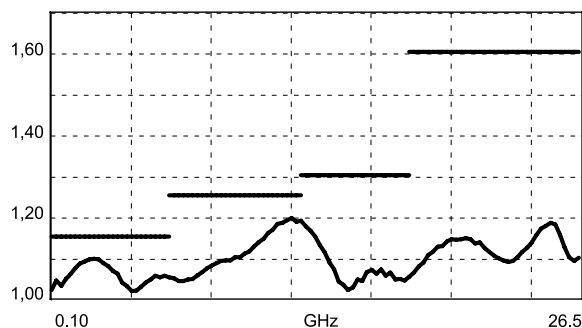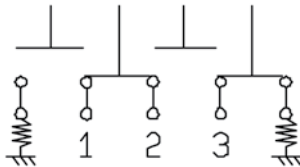For more detailed technical information please consult Radiall customer support.

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COAXIAL DP3T
RELAYS

**High performance DP3T & Terminated SPDT up to 26.5 GHz**
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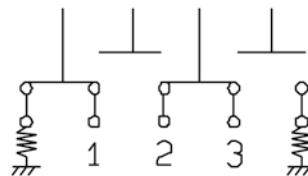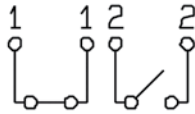PLATINUM Series

DP3T

# SWITCH MODEL: TERMINATED SPDT SWITCH

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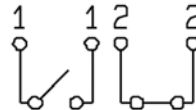This switch is "break before make".

## RF SCHEMATIC DIAGRAM



POSITION E1

POSITION E2

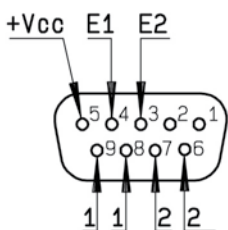## POSITION INDICATORS



STATE "11"

STATE "22"

### 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).
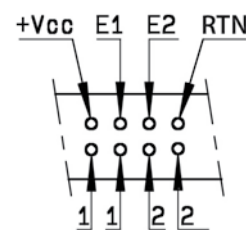


D-Sub connector      Solder pins
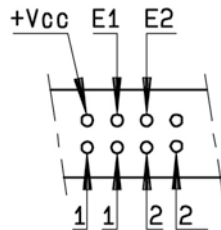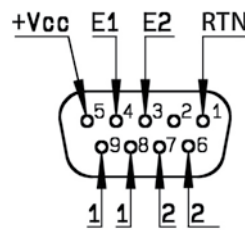
D-Sub connector      Solder pins

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## SWITCH MODEL: TERMINATED SPDT SWITCH

**With D-Sub connector**

**With solder pins**



**All dimensions are in inches/millimeters**

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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".
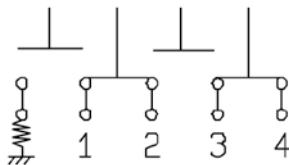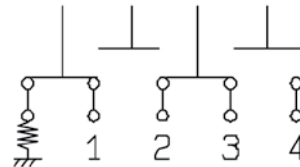
## RF SCHEMATIC DIAGRAM



POSITION E1

POSITION E2

## POSITION INDICATORS
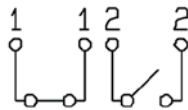


STATE "11"
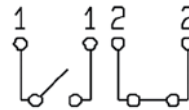
STATE "22"

**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).



+Vcc  E1  E2

D-Sub connector

Solder pins

+Vcc  E1  E2  RTN

D-Sub connector
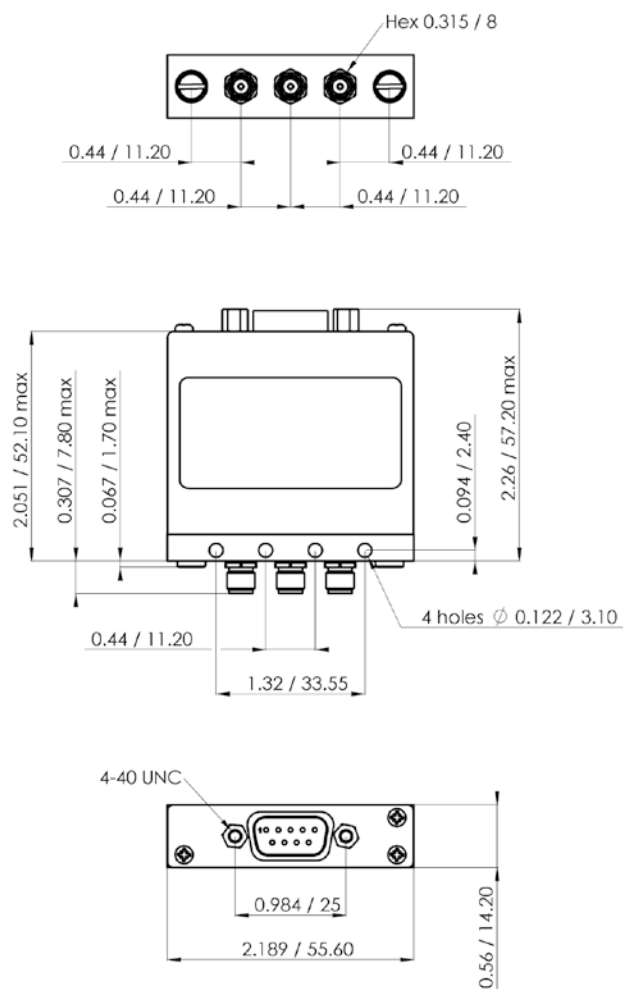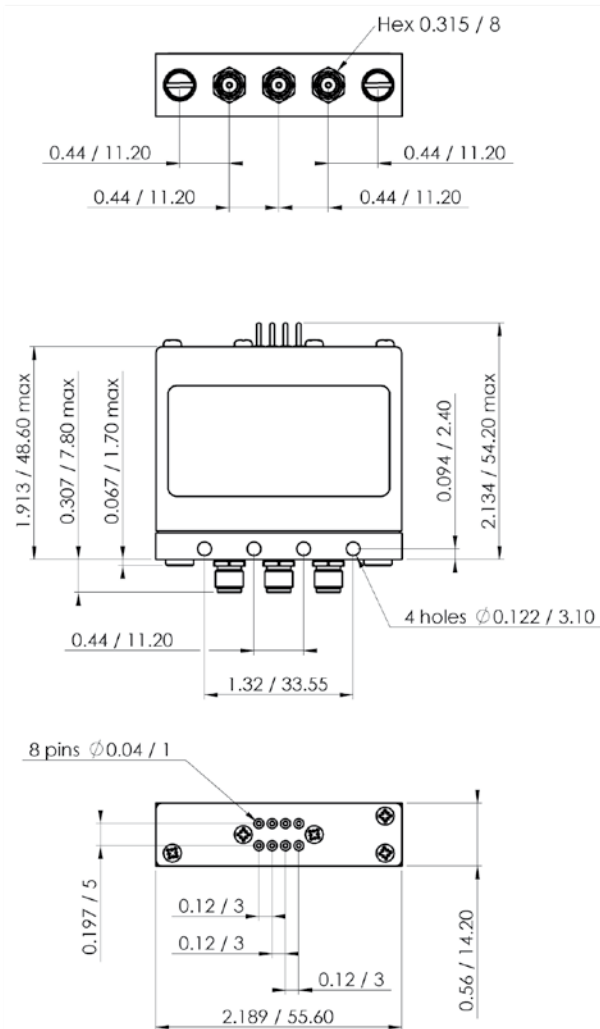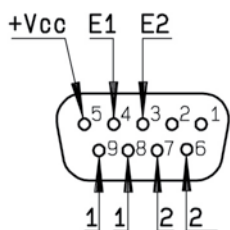
Solder pins

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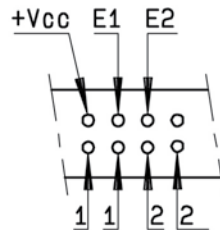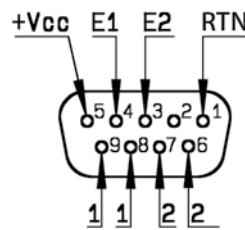
## SWITCH MODEL: TERMINATED 4 PORT BYPASS SWITCH

**With D-Sub connector**

**With solder pins**

Hex 0.315 / 8

0.44 / 11.20    0.44 / 11.20
0.44 / 11.20    0.44 / 11.20

Hex 0.315 / 8

0.44 / 11.20    0.44 / 11.20
0.44 / 11.20    0.44 / 11.20

2.051 / 52.10 max
0.307 / 7.80 max
0.067 / 1.70 max
0.094 / 2.40
2.26 / 57.20 max

1.913 / 48.60 max
0.307 / 7.80 max
0.067 / 1.70 max
0.094 / 2.40
2.134 / 54.20 max

0.44 / 11.20    4 holes ⌀ 0.122 / 3.10
1.32 / 33.55

0.44 / 11.20    4 holes ⌀0.122 / 3.10
1.32 / 33.55

4-40 UNC

0.984 / 25
2.189 / 55.60
0.56 / 14.20

8 pins ⌀0.04 / 1

0.197 / 5
0.12 / 3
0.12 / 3
0.12 / 3
2.189 / 55.60
0.56 / 14.20

**All dimensions are in inches/millimeters**

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# 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 E1

POSITION E2

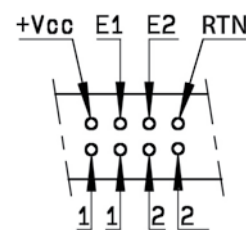## POSITION INDICATORS

STATE "11"

STATE "22"

**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).
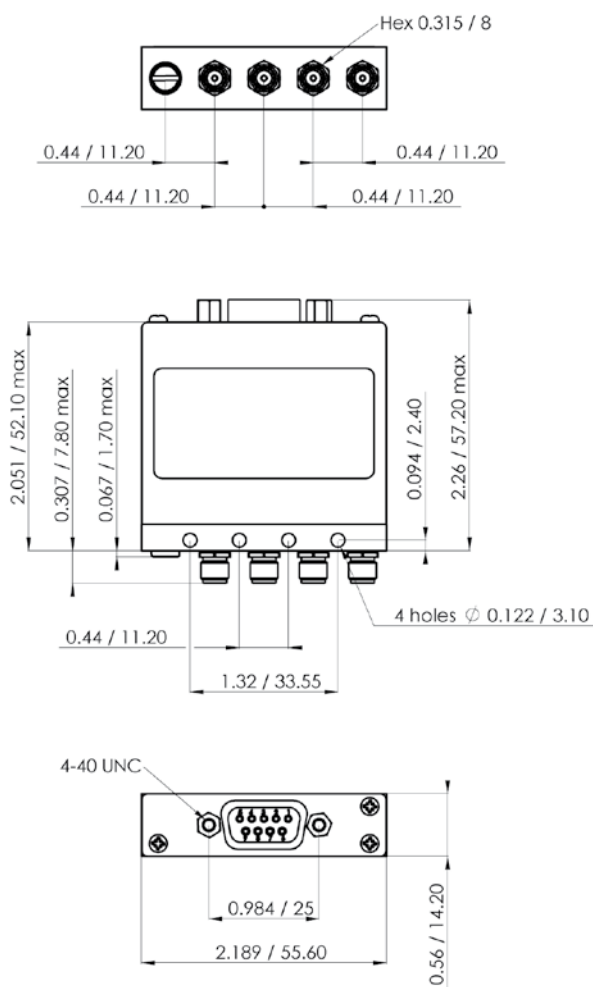
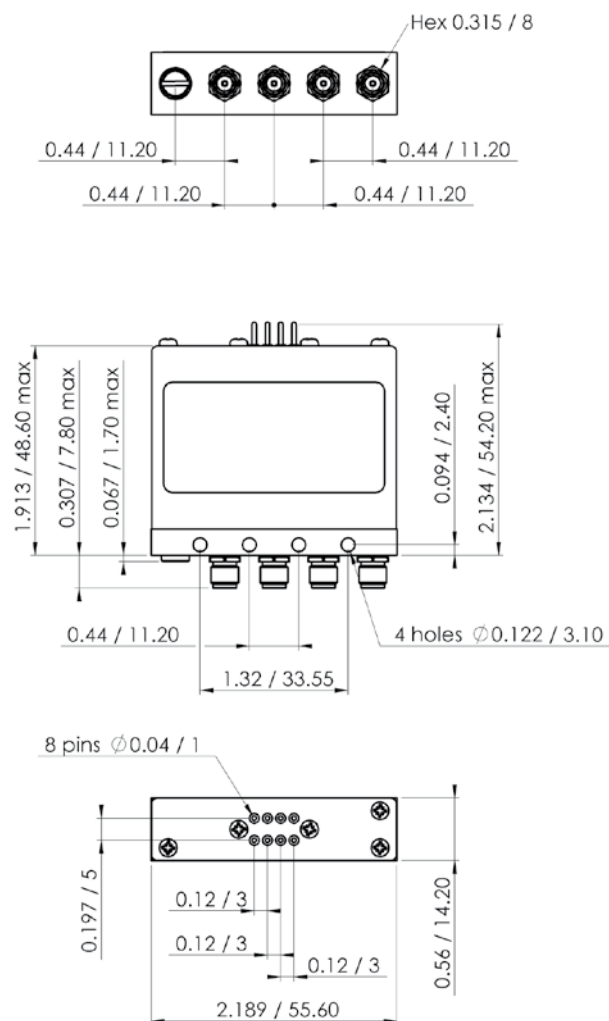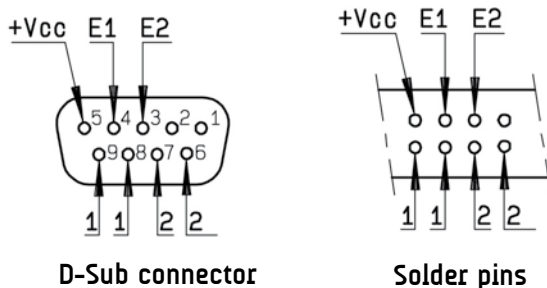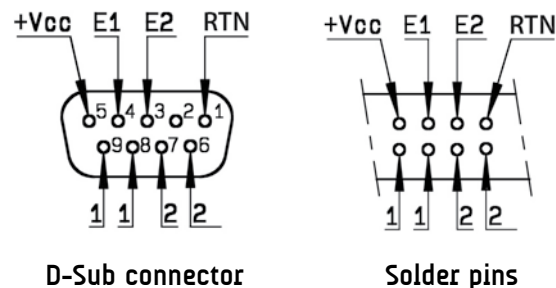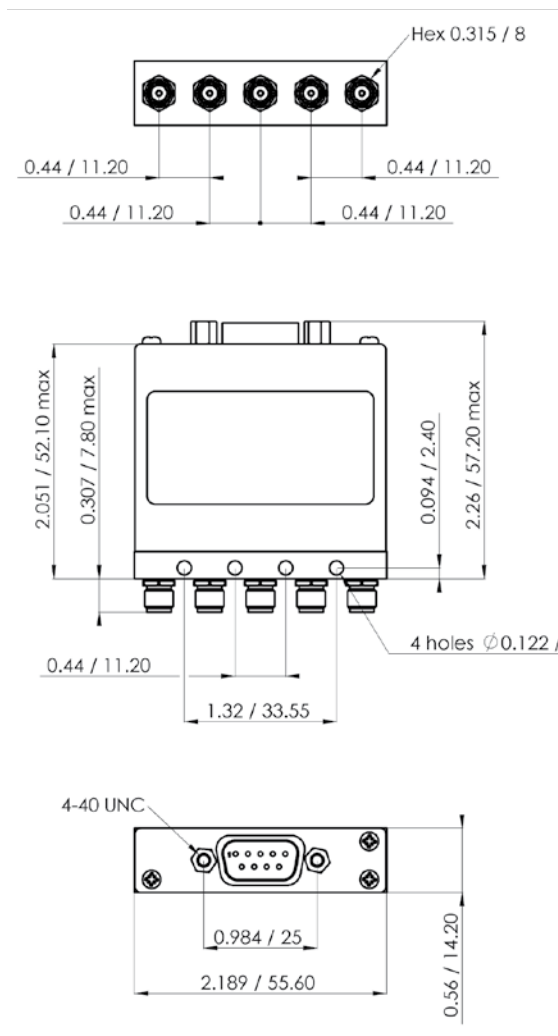D-Sub connector          Solder pins          D-Sub connector          Solder pins

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## SWITCH MODEL: 5 PORT DP3T SWITCH

### With D-Sub connector

Hex 0.315 / 8

0.44 / 11.20    0.44 / 11.20

0.44 / 11.20    0.44 / 11.20

2.051 / 52.10 max

0.307 / 7.80 max

0.094 / 2.40

2.26 / 57.20 max

4 holes ⌀0.122 /

0.44 / 11.20

1.32 / 33.55

4-40 UNC

0.984 / 25

2.189 / 55.60

0.56 / 14.20

### With solder pins

Hex 0.315 / 8

0.44 / 11.20    0.44 / 11.20

0.44 / 11.20    0.44 / 11.20

1.913 / 48.60 max

0.307 / 7.80 max

0.094 / 2.40

2.134 / 54.20 max

4 holes ⌀0.122 / 3.10

0.44 / 11.20

1.32 / 33.55

8 pins ⌀ 0.04 / 1

0.197 / 5

0.12 / 3

0.12 / 3

0.12 / 3

2.189 / 55.60

0.56 / 14.20

**All dimensions are in inches/millimeters**
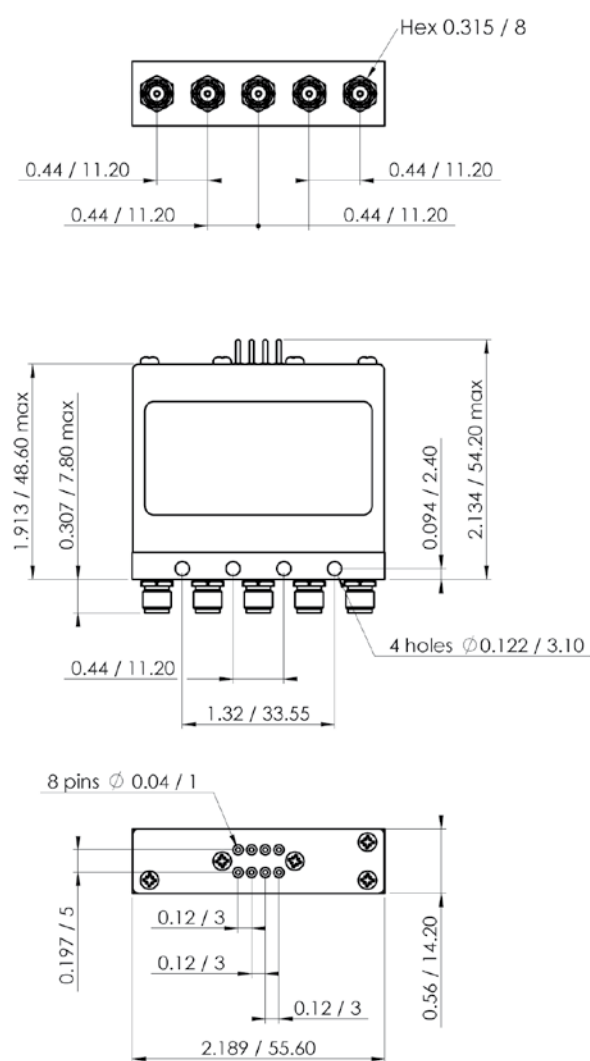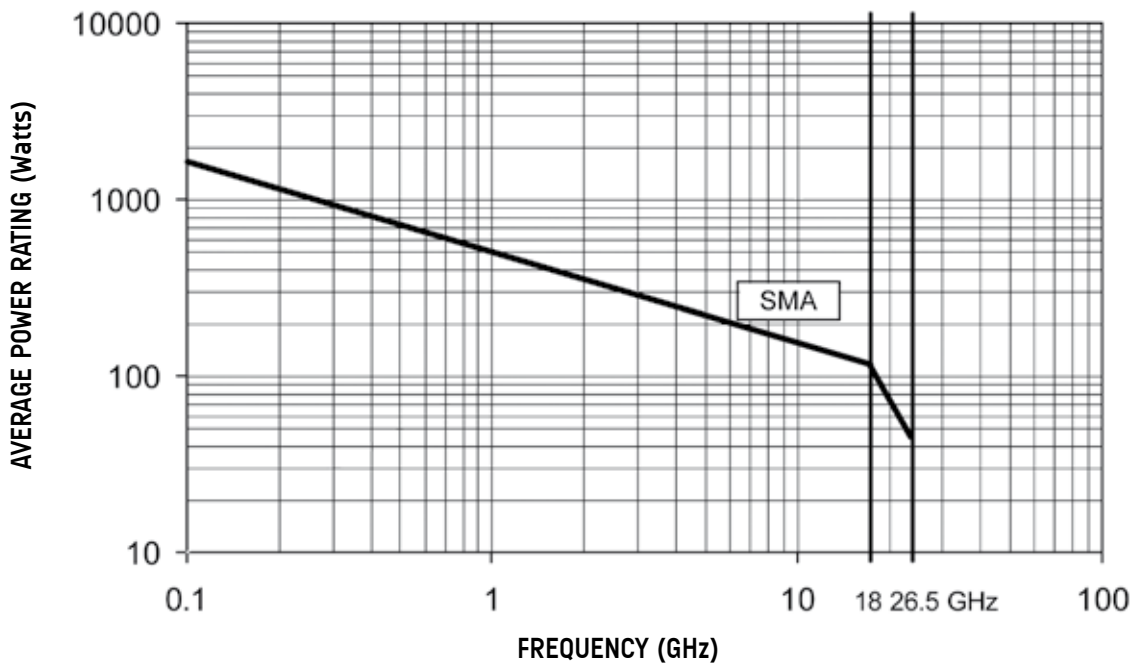
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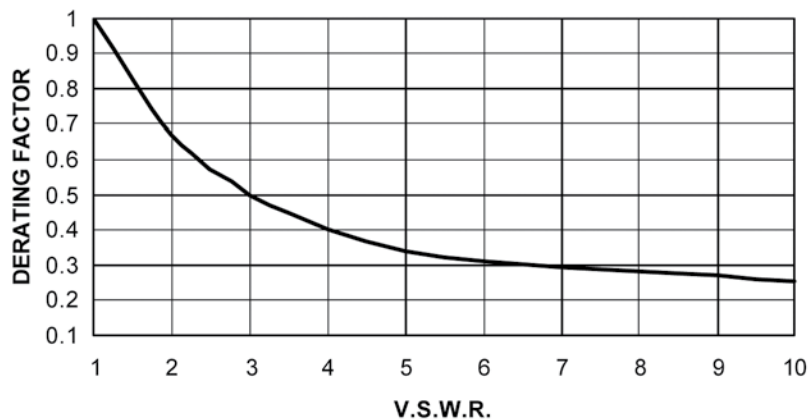**High performance DP3T & Terminated SPDT up to 26.5 GHz**
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# POWER RATING CHART

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



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3-21

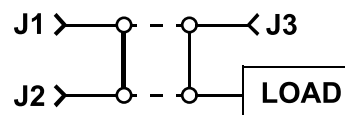www.radiall.com

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# Optional features for DP3T switches

## 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 Teminated 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.

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