RF microwave components

RADIALL
The next conneXion

A WIDE FIELD OF ACTIVITY

Specialized in passive microwave components, the RADIALL engineering staff develops and manufactures a wide range of coaxial standard devices including terminations, attenuators, couplers, coaxial detectors, coaxial switches, lightning protectors, rotary joints, covering a wide frequency spectrum from DC to 40 GHz.

CAPACITIES AND FACILITIES

The association inside the same plant of all the technical skills : R&D, industrialization, manufacturing and quality control enable RADIALL to produce a range of high performance and low cost devices for industrial applications as well as high reliability components for severe requirements in military and space fields.

EXPERIENCE

Owing to its 50 years experience, its high level of quality and its constant effort in R&D, RADIALL has become the EUROPEAN N°1 in coaxial connectors. Supported by its position, RADIALL has excelled in passive microwave components fields for more than 40 years.

RESEARCH AND DEVELOPMENT

The increasing complexity of microwave systems requires more and more high performance components. To meet these requirements, the R&D department is constantly engaged in the development of new products as well as improvement on present products. Fitted out with microwave and mechanical CAD and with the latest generation of microwave test equipment up to 65 GHz, RADIALL uses state-of-the-art technology to optimize its products and to give the fastest response to the specific customer requirements.

QUALITY AND RELIABILITY

RADIALL has been committed to these two major requirements of passive microwave components for years. The ISO 9000 label awarded by BVQI is the best evidence of Quality Assurance interfaces at every stage of the product from designing to manufacturing.

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COAXIAL TERMINATIONS

Low power

Average power : 0.5 to 3 Watts
Connectors : SMA, SMB, SMC, SMZ, BMA, QMA, SSMA, BNC, N, TNC, QN, 7/16
Frequency range : From DC up to 40 GHz

Medium power

Average power : 6 to 50 Watts
Connectors : SMA, BNC, N, TNC, 7/16
Frequency range : From DC up to 18 GHz
Impedance : 50 Ω

High power

Average power : 80 to 120 Watts
Connectors : SMA, N, TNC, 7/16
Frequency range : From DC up to 4 GHz
Impedance : 50 Ω

Cable load

Average power : 100 Watts
Connectors : SMA
Cable : .141 conformable
Frequency range : From DC up to 3 GHz
Impedance : 50 Ω

COAXIAL ATTENUATORS

Low power

Average power : 1 to 3 Watts
Connectors : SMA, SMB, SMC, BNC, N, TNC, QMA, 7/16
Frequency range : From DC up to 40 GHz
Attenuation : 0 to 60 dB (1 dB step up to 20 dB)

Medium power

Average power : 10 to 50 Watts
Connectors : SMA, BNC, N, TNC, 7/16
Frequency range : From DC up to 18 GHz
Attenuation : 3, 6, 10, 20, 30 dB

High power

Average power : 80 to100 Watts
Connectors : SMA, N, TNC, 7/16
Frequency range : From DC up to 2 GHz
Attenuation : 3, 6, 10, 20, 30 dB

COAXIAL SWITCHES

Coaxial SPDT

Connectors	:	SMA, SMA 2.9, QMA, SMB, SMC, 1.6/5.6, N, TNC, BNC
Frequency range	:	From DC up to 40 GHz
Life	:	10 000 000 cycles with SMA connectors
Configuration	:	Failsafe or Latching, 12-28 Volts, Self-Cut-Off, TTL Driver, Indicator contact

Coaxial SPDT reduced size

Connectors	:	SMA, SMA 2.9, QMA, SMB, SMC, 1.6/5.6
Frequency range	:	From DC up to 40 GHz
Life	:	2 500 000 cycles with SMA connectors
Configuration	:	Failsafe or Latching, 12-28 Volts

Coaxial DPDT/Transfer relay

Connectors	:	SMA, SMA 2.9, QMA, SMB, SMC, 1.6/5.6, N, TNC, BNC
Frequency range	:	From DC up to 40 GHz
Life	:	2 500 000 cycles with SMA connectors
Configuration	:	Failsafe or Latching, 12-28 Volts, Self-Cut-Off, TTL Driver, Indicator contact

Coaxial DP3T/Terminated SPDT

Connectors	:	SMA, SMA 2.9,
Frequency range	:	From DC up to 40 GHz
Life	:	10 000 000 cycles with SMA connectors
Configuration	:	Failsafe or Latching, 12-28 Volts, Self-Cut-Off, TTL Driver, Indicator contact

Coaxial SPnT Switches

(3 to 12 positions)

Connectors	:	SMA, SMA 2.9, QMA, 1.6/5.6, N,TNC, BNC
Frequency range	:	From DC up to 40 GHz
Life	:	5 000 000 cycles with SMA connectors
Configuration	:	Normally open or Latching, 12-28 Volts, Self-Cut-Off, TTL Driver, BCD Coded, Indicator contact

Coaxial SPnT Switches Reduced Size

(3 to 12 positions)

Connectors	:	SMA, SMA 2.9, QMA
Frequency range	:	From DC up to 26.5 GHz
Life	:	2 500 000 cycles with SMA connectors
Configuration	:	Normally open or Latching, 12-28 Volts

Coaxial SPnT Switches Terminated (50 Ω)

(3 to 12 positions)

Connectors	:	SMA, SMA 2.9, QMA, 1.6/5.6, N, TNC, BNC
Frequency range	:	From DC up to 26.5 GHz
Life	:	2 000 000 cycles with SMA connectors
Configuration	:	Normally open or Latching, 12-28 Volts, Self-Cut-Off,

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SMT PRODUCTS

SMT Couplers

Type	:	Standard and mini size, 3 dB 90° hybrid and directional
Frequency range	:	from 0.9 to 4 GHz
Coupling	:	3, 6, 10 dB
Average power	:	40 to 100 Watts

SMT Terminations and Attenuators

Frequency range	:	from DC to 18 GHz
Impedance	:	50 Ω
Average power	:	10 to 120 Watts
Attenuation	:	Up to 20 dB

SMT Switches

Frequency range	:	from DC to 10 GHz capabilities
Type	:	failsafe or latching model
Average power	:	120 Watts DC to 1 GHz
Product range	:	grade “C” (commercial) or grade “M” (high reliability)

COAXIAL COUPLERS

Broadband Flat response octave band and directional

Connectors	:	SMA female, N female
Frequency range	:	From 0.15 up to 18 GHz
Coupling	:	6, 10, 20, 30 dB
Average power	:	20 to 500 Watts

3dB 90° Hybrid

Connectors	:	SMA female, N female
Frequency range	:	From 0.08 up to 18 GHz
Coupling	:	3 dB
Average power	:	30 to 500 Watts

Power divider / combiner

Connectors	:	SMA female
Frequency range	:	From 1 up to 18 GHz
Type	:	Wilkinson 2-Way type
Average power	:	5 Watts

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OTHER COAXIAL COMPONENTS

Lightning protector

Type	:	Quarter wave stub and gas discharge technology
Frequency range	:	DC to 2.5 GHz (GDT) - 0.9 to 6 GHz (QWS)
Connector type	:	7/16, N, QN, TNC
Surge current	:	50 and 100KA

Detectors

Connectors RF input	:	SMA male, N male
Connectors video output	:	SMB male, SMA female, SMC male, Solder pin, BNC female
Frequency range	:	From 0.01 up to 18 GHz
Polarity	:	negative or positive
Low level Sensitivity	:	> 500 mV/mW or > 1500 mV/mW

Rotary Joints

Connectors input	:	SMA female, N male
Connectors output	:	SMA female, N female
Frequency range	:	From DC up to 18 GHz

Phase Shifters

Connectors	:	SMA
Frequency range	:	From DC up to 18 GHz
Phase variation	:	0 to 180°
Models	:	Mechanical or dielectrical adjustment

DC Blocks

Connectors	:	SMA
Frequency range	:	From 0.01 up to 40 GHz
DC voltage	:	100 to 250 V

Monitor Tees

Connectors	:	SMA
Frequency range	:	From 0.01 up to 12.4 GHz
Nominal capacity	:	3.5 - 10 or 15000 pF
DC voltage	:	100V

CIVIL, MILITARY and SPACE APPLICATIONS

Mobile communications (GSM/PCN)
Broadcasting ground station
Radio communication
Civil and military communications
Measurements and tests
Instrumentations
Data communication
Radar and detection
Electronic warfare
Missiles
Avionic system
Space programs

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CUSTOM DESIGN FOR SPECIAL APPLICATIONS

DC-18 GHz, 100 W, CW with TNC connector for countermeasures airborne equipment

SMT relays mounted (DC-8GHz) on PCB fifted with UMP (Ultra Miniature Pressure) contact. Various switching configurations can be designed according to your specific request.

12 Watts, 18 GHz, miniature attenuator developed with aluminium nitride thin film technology

DC-1GHz, SPDT, N connector for Airborne military application

View of coaxial products for space use

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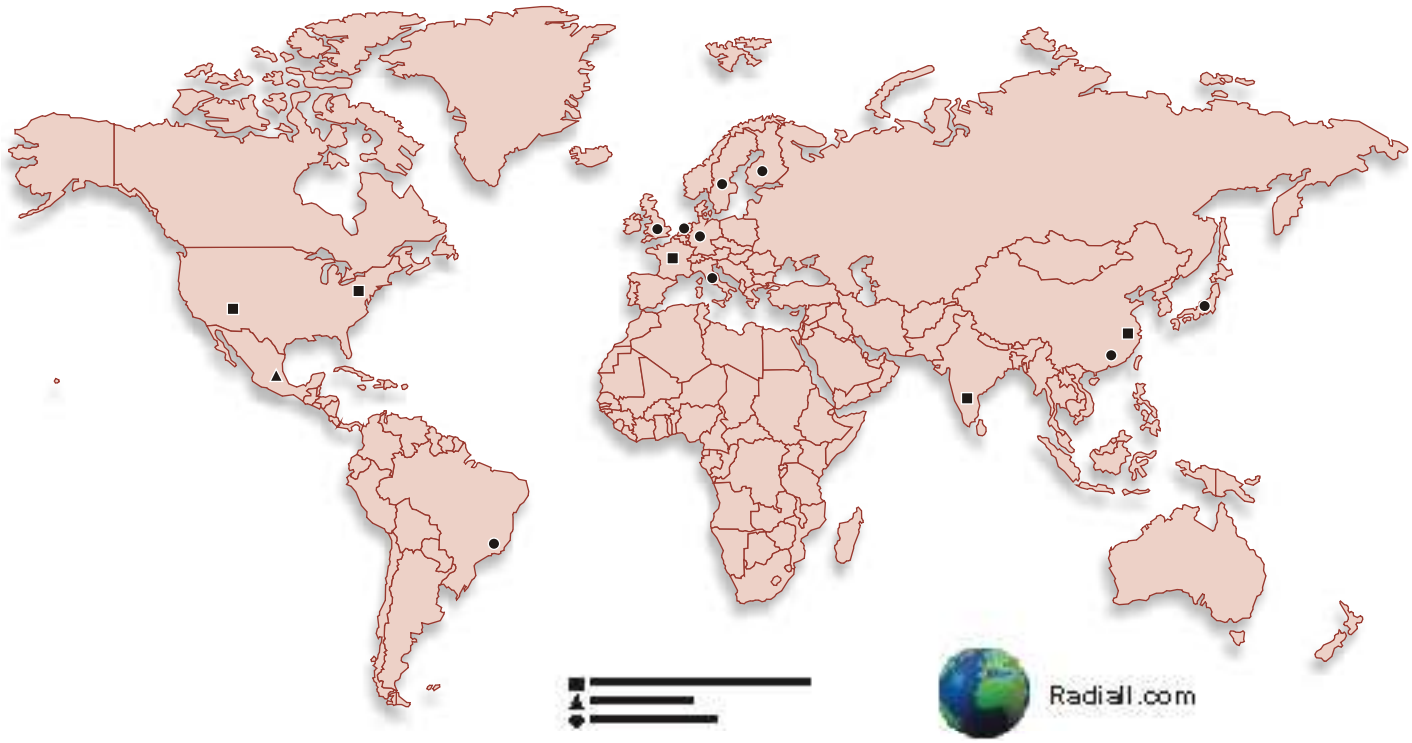

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This information is intended as a guide only. To ensure a continuing policy of product improvement, Radiall reserves the right to modify its specifications without prior notification.

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