

The ever increasing miniaturisation and expansion of surface mount technology in today's telecommunication RF systems has led RADIALl to develop the **MMT** microminiature coaxial connector system.

The **MMT** series complies the IEC standard 46 D-291-NT.

This connector series has been designed to be totally compatible with the surface mounting processes, used to mount active and passive components to the printed circuit board.

The **MMT** snap-on mating system ensures a correct positive connection each time.

The **MMT** series allows a space saving on PCB with a height of 6.8 mm mated connectors.

MMT receptacles have a multi-directional cable entry which allows a 360° cable rotation.

The design of the receptacle gold plated leads ensures always correct lead strength vs shear-off and extraction forces, low electrical resistance, good solderability, and allows easy cleaning, inspection and simple repair.

Industry standard tape and reel packaging ensure that the receptacles are fully compatible with automatic pick and place machines.

The materials used **MMT** receptacles provide resistance to deformation from heat during reflow soldering and ensure specified electrical performance characteristics are maintained.

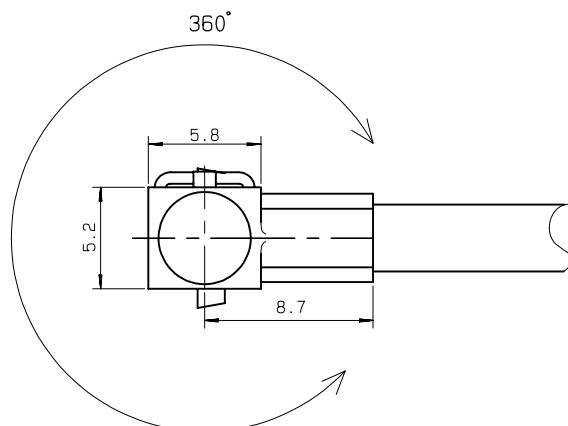
A perfect final position of the component is guaranteed by using the video shadow plus automated pick and place machinery.

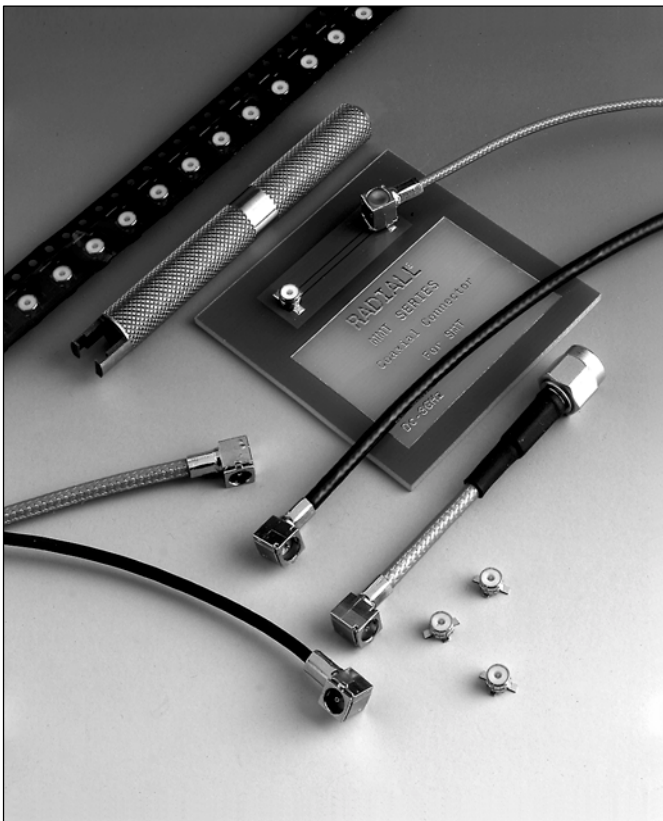
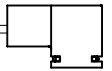
The **MMT** right angle plug features a retention spring which is integral to the plug body. This spring provides a high level of resistance to unmating during vibration and gives high interface retention when the plug is mated with the receptacle.

A wide choice of **MMT** cable connectors for a wide range of standard 50 and 75 Ω cables allows complete cable assemblies or pigtailed to be specified to suit a large range of applications.

The **MMT** series offers high electrical and mechanical performance in a very low profile and combines ease of manufacture with competitive pricing.

Cable rotation





50 Ω	DC - 8 GHz
75 Ω	DC - 1 GHz

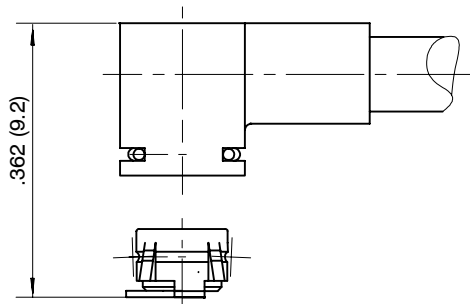
GENERAL

- Microminiature coaxial connectors
- 6.8 mm mated pair
- Surface mount receptacle
- Fully compatible with automated pick and place machines
- Snap-on mating
- 360° cable rotation
- High RF performance : VSWR = 1.09 at 2 GHz
- High mechanical reliability : 10 N extraction force
- Plugs have female contacts
- Receptacles have male contacts
- Applicable standard IEC 46D-291-NT

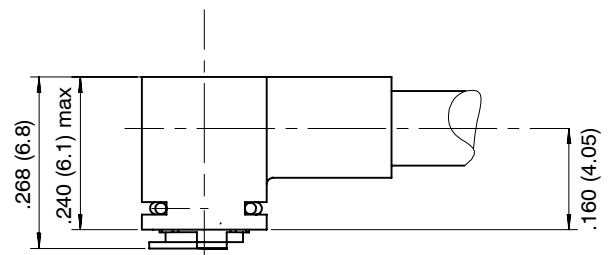
APPLICATIONS

- Base stations and hand-sets for :
 - cellular telephones
 - cordless telephones
- Satellite reception terminals (GPS, . . .)
- Instrumentation
- Wireless datacom networks
- Automated payment systems
- Videocommunications
- Other general electronics

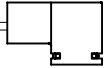
PROFILE



Unmated



Mated



	TEST STANDARD	RESULTS
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ELECTRICAL CHARACTERISTICS

Impedance		50 Ω and 75 Ω
Frequency range		DC - 8 GHz (for 75 Ω DC - 1 GHz)
Typical V.S.W.R. (mated pair)	IEC 1169-1	1.05 at 1 GHz 1.10 at 2.5 GHz 1.15 at 6 GHz
Insertion loss	IEC 1169-1	≤ 0.2 √ F (GHz)
RF leakage (mated pair)	IEC 1726	-42 dB at 500 MHz -38 dB at 1 GHz -30 dB at 3 GHz
Outer contact resistance	IEC 1169-1 (I=40 mA eff.)	Initial 2.5 mΩ max Final 12.5 mΩ max
Center contact resistance	IEC 1169-1 (I=40 mA eff.)	Initial 5 mΩ max Final 15 mΩ max
Insulation resistance	IEC 1169-1	≥ 5000 MΩ under 500 Vcc
Working voltage		170 V eff.
Testing voltage	IEC 1169-1	500 V eff.

MECHANICAL CHARACTERISTICS

Durability	IEC 1169-1	500 matings
Force to engage/disengage	IEC 1169-1	Ins ≤ 18 N Ext > 7 N
Shocks	IEC 68-2-27	passed
Vibrations	IEC 68-2-6	passed
Bumps	IEC 68-2-29	passed
Cable retention force	IEC 1169-1	∅ 2 mm = 20 N - ∅ 2.6 mm = 60 N
Solderability	IEC 68-2-29	passed

ENVIRONMENTAL CHARACTERISTICS

Temperature range		55°C / 100°C
Damp heat	IEC 68-23	passed
Thermal shocks	IEC 68-2-14 / Test NA	passed

MATERIALS

Plugs body / in-series adaptor	Die cast zinc / brass
Receptacles body	CuSn9p
Plugs center contact	Cube2
Receptacles center contact	Brass
Insulators	PTFE

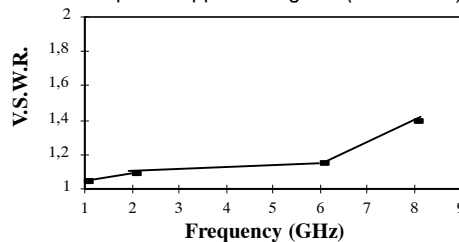
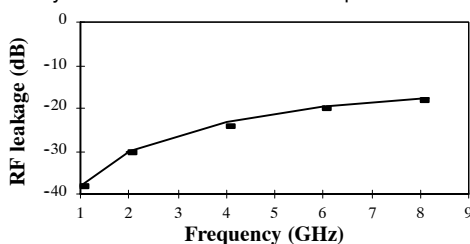
PLATING

Plugs body / in-series adapter	Nickel / BBR (<i>non magnetic plating, see our BBR application guide : D1 030 DE</i>)
Receptacles body	Gold
Plugs center contact	Gold
Receptacles center contact	Gold

POWER RATING

Example : P = 23 W at F= 1.8 GHz, T = 40°C, V.S.W.R. = 1.1

For any further information about the power handled, please see our power application guide (**D1 033 DE**).



All dimensions are given in mm.