

MOEBIUS series

High life cycles Snap-on Interface



OVERVIEW

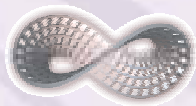
Moebius interface is designed to be used as an antenna connection for handheld and mobile computing devices. The switching connector achieves high RF performance and extremely high durability and reliability while providing Snap-on connection.

FEATURES

- **Frequency range**
DC-6 GHz
- **Durability**
25 000 life cycles
- **Low insertion loss**
0.03 dB typical at 1 GHz
0.09 dB typical at 3 GHz
- **User friendly**
No risk to be damaged by end user
Snap-on connection
- **Space-saving design**
4.8 * 4.5 mm
- **Light weight**
0.38 g
- **Pick and Place**
Packaged on Tape-and-reel
- **RoHS Compliant**

Designed for life

We choose Moebius in reference to Möbius strip the origin of the infinity symbol. A Möbius band (or strip) is an intriguing shape having a continuous looped surface with **ONLY ONE SIDE** and **ONE EDGE**. A strip with a non-orientable surface.



APPLICATIONS

- Wireless communication (Bluetooth, WLAN, WiFi, WiMax, ZigBee)
- Handheld, Notebook, PCMCIA Card, Express Card, PDA, GPS, and any low power wireless equipment requiring transmission re-direction

PRODUCT SPECIFICATIONS

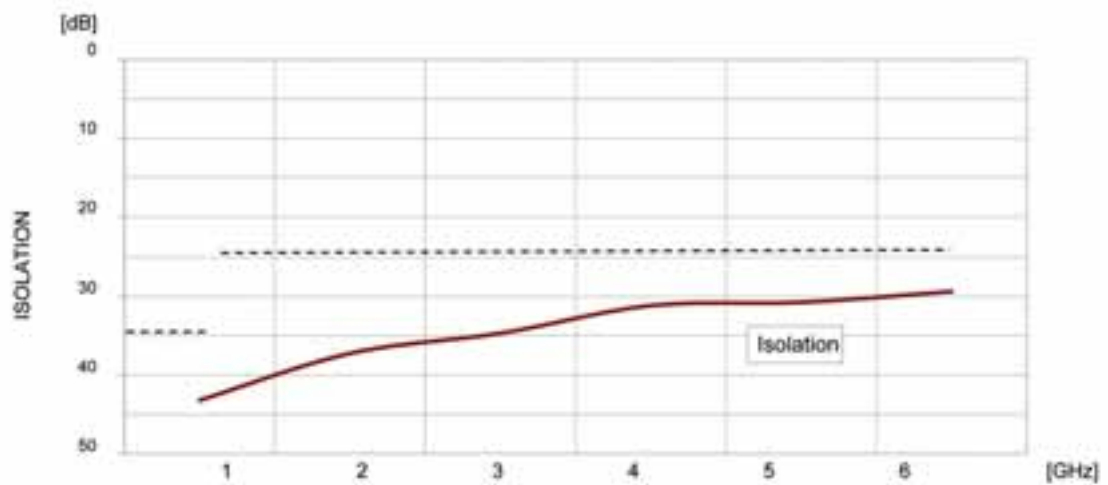
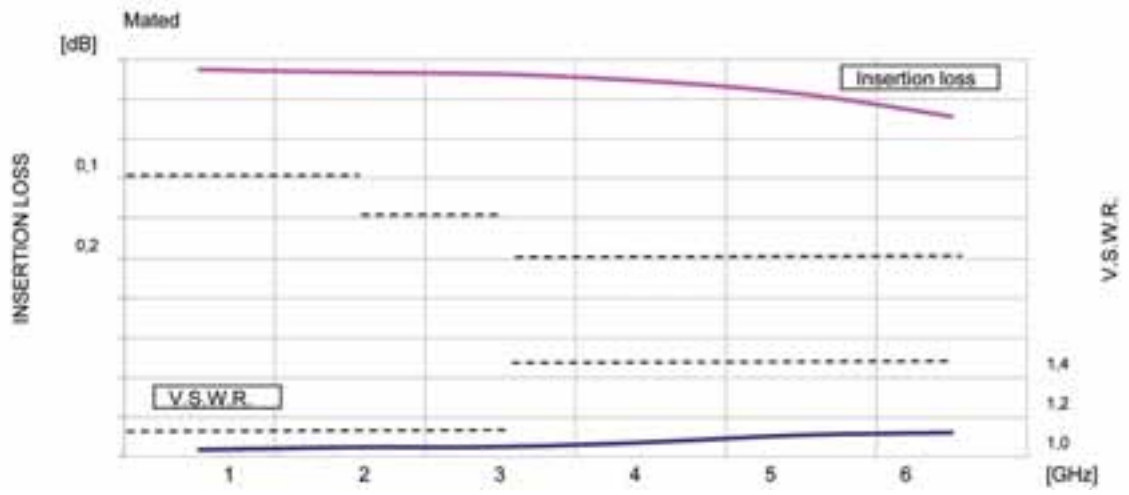
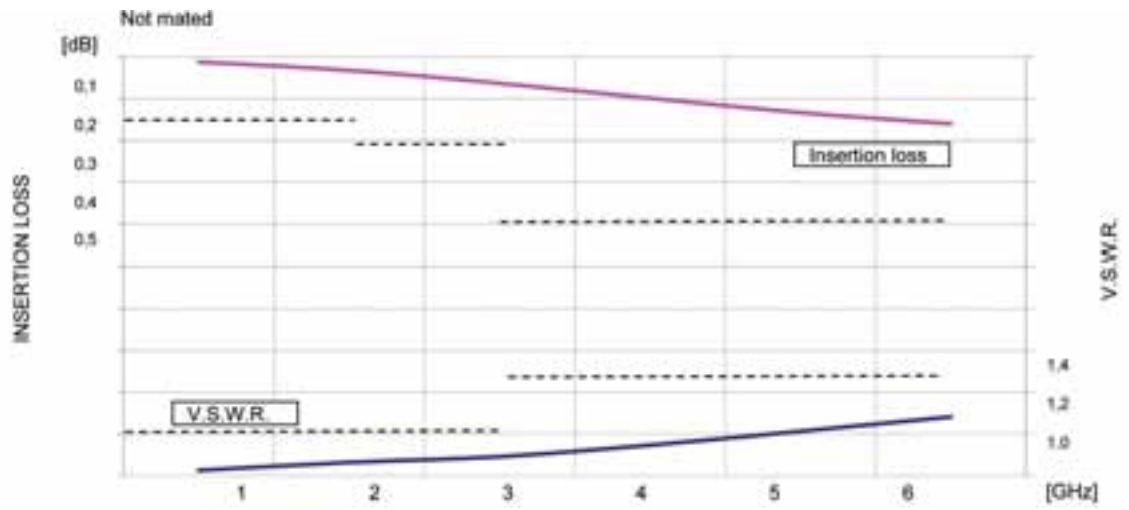
	Not mated	Mated
Operating temperature range	-40 °C to + 110 °C	
Rated power	10 W / 900 MHz	
DC Current Withstanding	1 A max	
Frequency range	DC to 6 GHz	
V.S.W.R.	1,20 max DC to 3 GHz 1,50 max 3 to 6 GHz	1,15 max DC to 3 GHz 1,25 max 3 GHz to 6 GHz
Insertion loss	0,15 dB max DC to 2 GHz 0,20 dB max 2 GHz to 3 GHz 0,40 dB max 3 GHz to 6 GHz	0,10 dB max DC to 2 GHz 0,15 dB max 2 GHz to 3 GHz 0,20 dB max 3 GHz to 6 GHz
Isolation loss	- - -	35 dB min DC to 1 GHz 25 dB min 1 GHz to 3 GHz 25 dB min 3 GHz to 6 GHz

Item	Specification	Conditions
Contact resistance	200 mOhm max	100 mA
Insulation resistance	3000 MOhm min	250 V DC
Withstanding voltage	No flashover or insulation breakdown	250 V rms
Vibration	No discontinuities > 1µs under 100mA	Sinus : 5-500Hz / displacement 0,75 peak / acceleration 10 g duration 2h in each direction Random : 5-1000Hz / displacement 0,75 peak / acceleration 3,3 g duration 1h in each direction
Shock	No discontinuities > 1µs under 100mA	acceleration 50 g / duration pulse 11 ms / waveform pulse half sinus / number of shocks 3 per direction
Free fall	Center contact resistance RF measurements No discontinuities > 1ms under 100mA	NFC 20732 method 1 Test area concrete / fall height 1 m / duration 2*2 falls
Temperature life	Center contact resistance RF measurements	T + 90 °C / duration 1000 h / 40% HR
Thermal shock	Center contact resistance RF measurements	T -40 °C to + 90 °C Exposure 15mn / transfert time < 10 s / 100 cycles
Damp heat	Center contact resistance RF measurements	40 °C / 93 % / 21 days
Retention Force Insertion Force - mating Extraction Force - unmating	9 N 12 N	Initial
Durability	Mating – unmating force Center contact resistance RF measurements	25,000 cycles

MATERIALS

Part	Material	Finish
Body	Brass	NPGR (*)
Center contact	Brass	NPGR (*)
Outer contact	Brass	NPGR (*)
Insulator	PTFE / nc	
Others parts	Beryllium copper	NPGR (*)

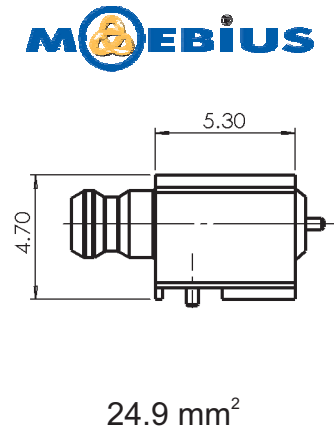
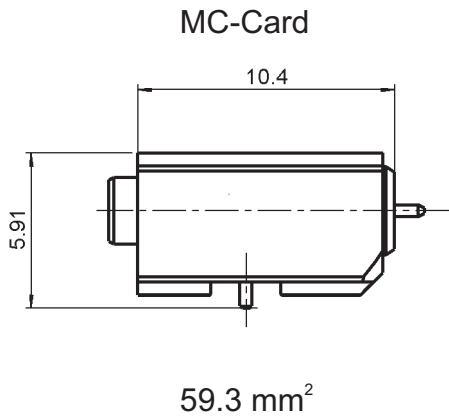
(*) Nickel Phosphorus Gold Radiall



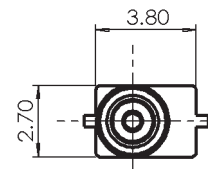
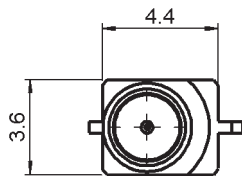
All values are typical

MOEBIUS VS MC-CARD

Footprint

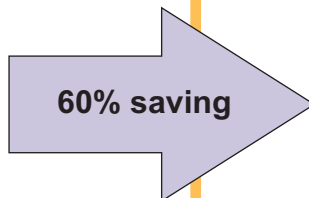


Height



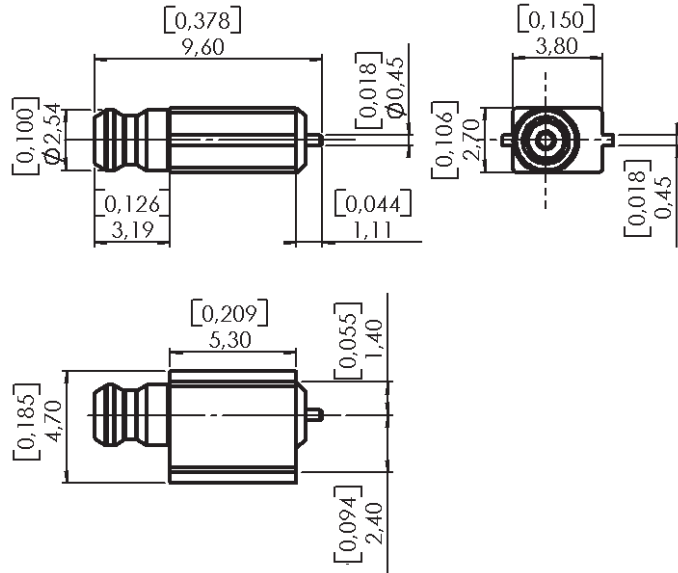
Weight

0.98 g



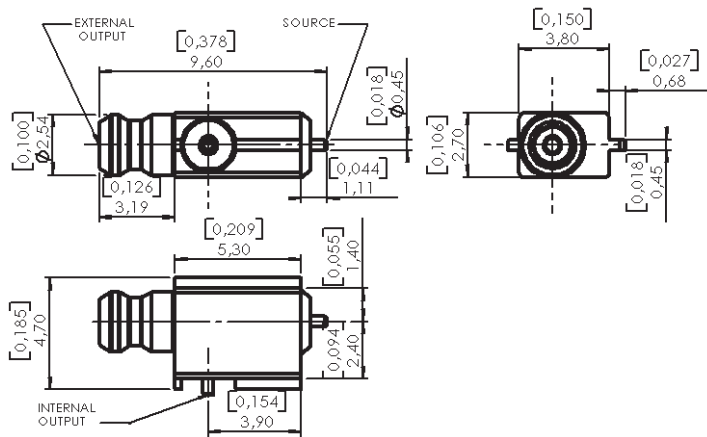
0.38g

RECEPTACLE

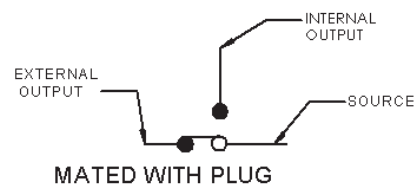
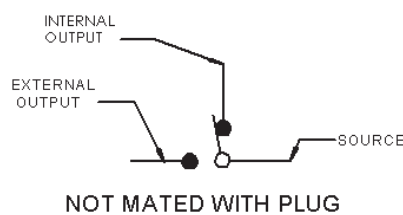


Part Number	Packaging	RoHS
R199 006 403	2.800 pieces/reel	YES
R199 006 413	100 pieces/reel	
R199 006 413W	Unit	

SWITCHING CONNECTOR



Part Number	Packaging	RoHS
R199 006 803	2.800 pieces/reel	YES
R199 006 813	100 pieces/reel	
R199 006 813W	Unit	



PLUGS

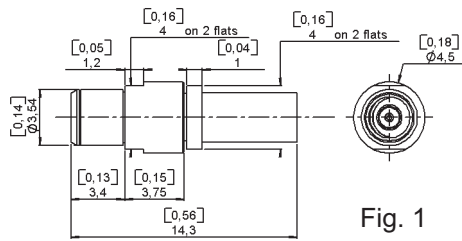


Fig. 1

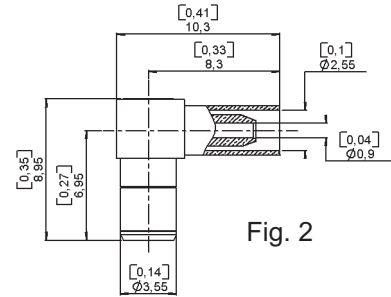


Fig. 2

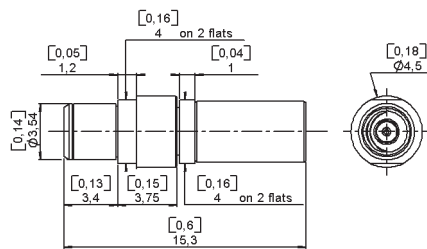


Fig. 3

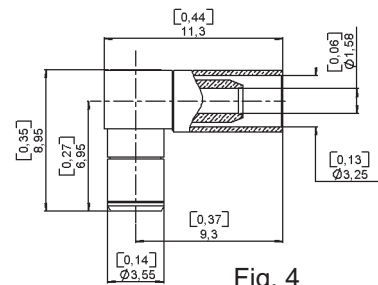
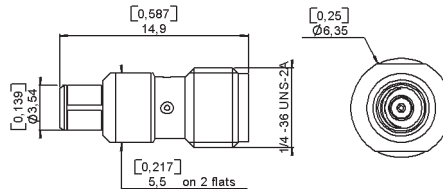


Fig. 4

Cable group	Part Number	Fig	Packaging	RoHS
2/50	R199 006 203	1	100/Box	YES
2/50	R199 006 213	2		
2.6/50	R199 006 263	3		
2.6/50	R199 006 273	4		

Add "W" for unit packaging

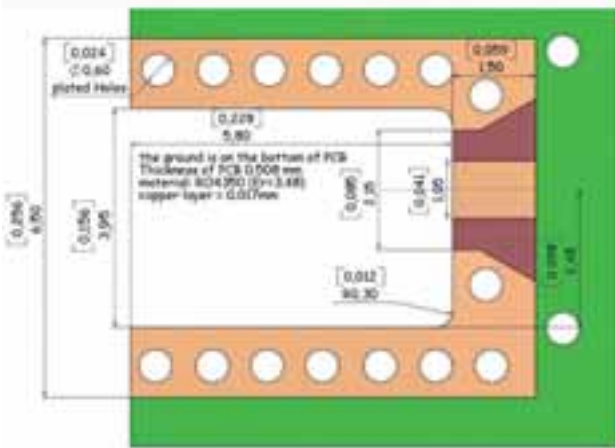
SMA ADAPTER



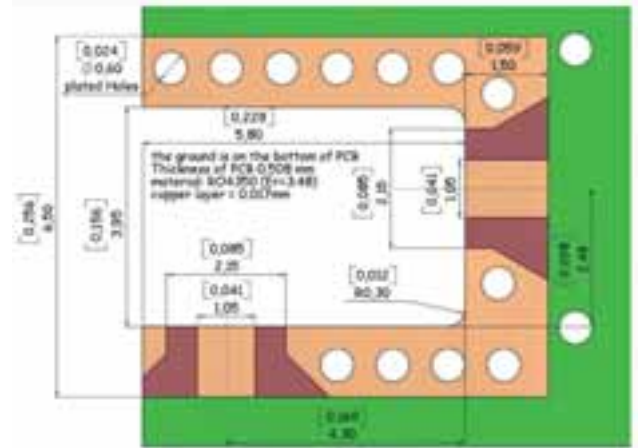
Part Number	Packaging	RoHS
R191 857 000	Unit	YES

PCB MOUNTING PATTERN

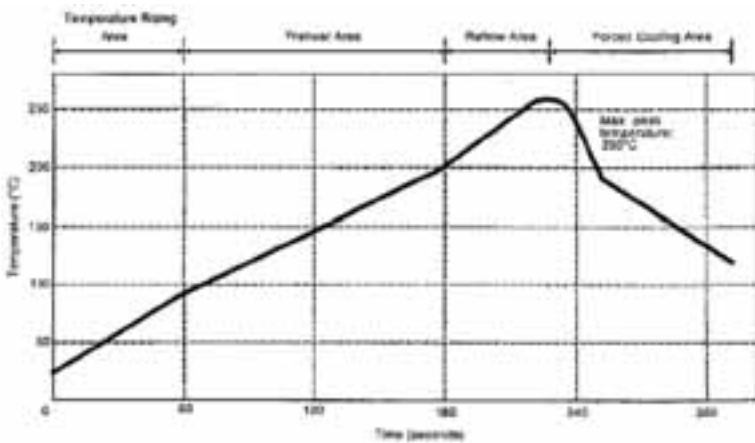
Receptacles



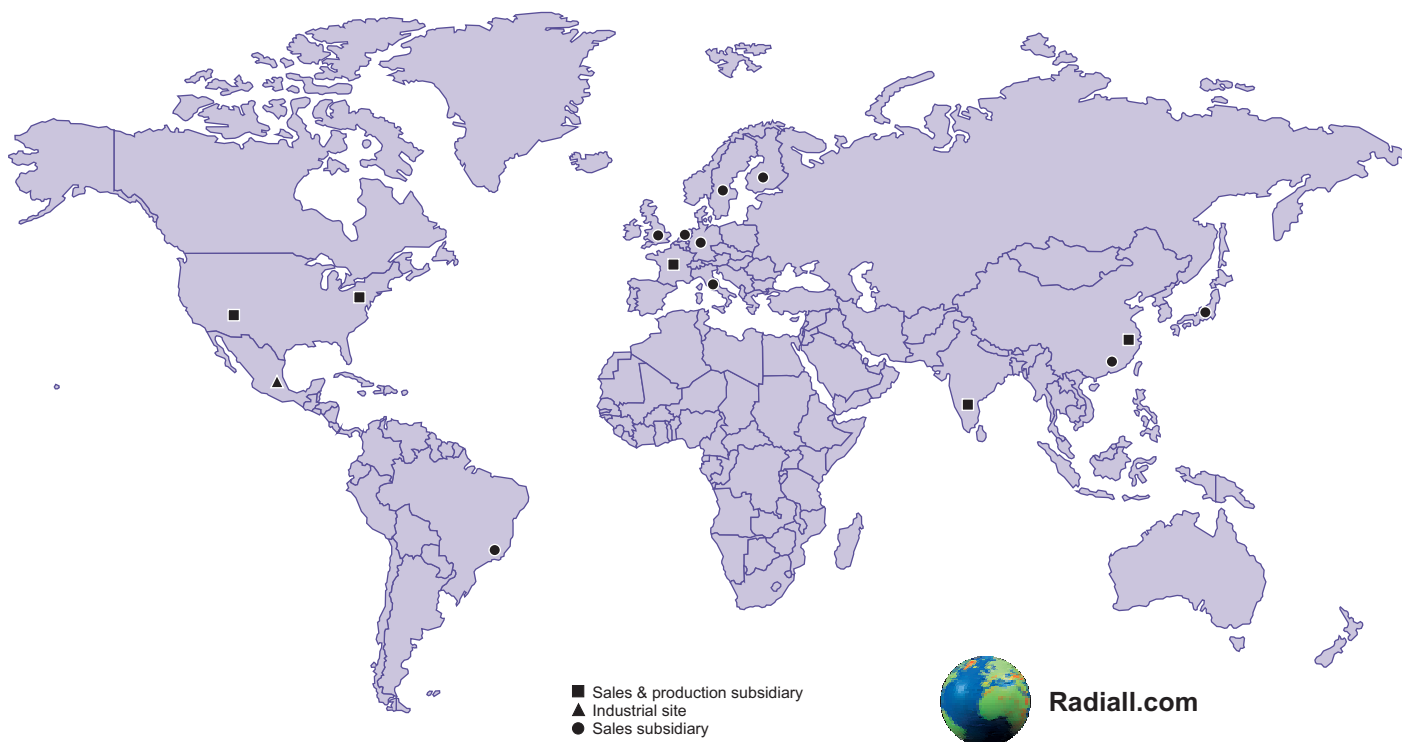
Switching Connectors



RECOMMENDED TEMPERATURE PROFILE



Parameter	Value	Unit
Temperature rising Area	1-4	°C/sec
Max Peak Temperature	260	°C
Max dwell time @ 260°C	10	sec
Min dwell time @ 235°C	20	sec
Max dwell time @ 235°C	60	sec
Temperature drop in cooling Area	-1 to -4	°C/sec
Max dwell time above 100°C	420	sec



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