

Space Coaxial VHP TNC Connectors

High Power Solution for Space Applications

The space market expects more and more equipments resisting to high power with better performance. In order to answer to these needs, Radiall developed and qualified a new range of space coaxial Very High Power TNC connectors, in collaboration with the CNES and the ESA.



Until recently only waveguide products were able to support high power applications within the space market. Now, Radiall offers a Very High Power TNC connector solution that meets cost requirements and can be used for situations where it is difficult to integrate into equipment.

There are 14 variants of space coaxial Very High Power TNC connectors available and 1 hermetic adapter for thermal vacuum chamber.

Flexible cable assemblies (SHF8MS) with:

- Straight plug
- Right Angle plug
- Straight jack
- Right Angle jack

Semi-Rigid cable assemblies (0.250") with:

- Straight plug: R143054604
- Straight jack: R143228604

Adaptors:

- Straight Male-Male: R143703604
- Straight Female-Female: R143704604
- Straight Male-Female: R143705604
- Right Angle Male-Female: R143770604
- Right Angle Male-Male: R143771604
- Right Angle Female-Female: R143772604

Connectors for equipment:

- Square Flange receptacle Female: R143416604
- Square Flange receptacle Female for pin Ø: R143417604

Connector for Thermal Vacuum chamber:

- Female/Female Straight Hermetic adapter: R143753604



The new range of Very High Power TNC connectors offer reliability in critical applications within the space market.

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Parameters	Maximum Ratings		Unit
Frequency	1-2	4-8	GHz
Power handling CW (up to 100°C)	400	300	WCW
Multipactor peak	>2000		Wpp
Corona	120	100	W

Note: except for Semi Rigid .250" cable variants

Features & Benefits

- Reduction of global costs compared with waveguide solutions
- Easier to integrate in equipments
- No multipactor breakdown (tested at hot and cold temperatures)
- Fully qualified: ESA QPL
- Fully compatible with current TNC series, with restriction of RF power performances

Applications

- Space payloads
- Thermal vacuum chambers