

High Power Solution for Space Applications

Today, the space market requires more and more equipment to resist high power and offer exceptional performance. To meet this need, 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.

Now available are 14 variants of Space Coaxial TNC VHP connectors and 1 hermetic adapter for thermal vacuum chambers.

Flexible cable assemblies (SHF8MS) with:

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

Semi-Rigid cable assemblies (0.250") with:

- Straight plug
- Straight jack

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

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

Applications

- Space payloads
- Thermal vacuum chambers

