



TFN CK618D Dual-Ridged Horn Antenna (6GHz-18GHz)

A high-band, high-gain, broadband directional antenna designed for precision testing and electronic countermeasures.



Product Overview

The CK618D double-ridged horn antenna is a professional broadband directional antenna specializing in high-frequency and microwave bands , offering excellent operating frequency coverage from 6 GHz to 18 GHz . This antenna maintains exceptionally high gain (12dBi to 16dBi) and stable performance across a wide frequency band , making it an ideal choice for high-end applications such as high-frequency EMC (electromagnetic compatibility) testing, advanced electronic countermeasures (ECM), radar, and satellite communications testing . Its compact, military-grade design ensures reliable directional signal transmission and reception in a variety of harsh environments.

Core Features

- High-frequency, wide-band coverage : Seamlessly covers the 6 GHz to 18 GHz microwave frequency band, meeting the testing requirements of cutting-edge millimeter-wave applications.
- Extremely high gain and directivity : Provides gains of up to 12dBi to 16dBi , ensuring long-distance, high-precision signal capture and transmission even when high-frequency signal attenuation is severe.
- Compact and sturdy design : Dimensions are only 112mm * 99mm * 84mm , weight is approximately 1.1KG , and the military green appearance combines portability and environmental adaptability.
- Excellent environmental adaptability : The operating temperature range is -45°C to +65°C , and it can work stably in high temperature and high humidity environments, suitable for field, airborne and vehicle-mounted platforms.
- High power and customizable interface : With an average power handling capacity of 50W , it features a standard SMA-K interface and supports customization, making it easy to integrate into various systems.

Customer pain points & Product selling points



Customer pain points

CK618D Solution

Lack of reliable test antennas covering high frequency/millimeter wave bands

Specializing in the 6GHz-18GHz frequency band :
Accurately covering microwave and millimeter wave front-end frequency bands, it is a powerful tool for high-frequency testing.

High-frequency signal path loss is large, making it difficult to detect effectively

Ultra-high gain (up to 16dBi) : Powerfully compensates for path loss, ensuring that even weak signals can be clearly captured.

The test system has strict restrictions on antenna size and weight

Compact and lightweight design : Its small size and weight make it easy to integrate into compact test platforms or automation systems.

Differences between laboratory and field environments lead to inaccurate data

Military-grade environmental stability : Stable performance in wide temperature and high humidity environments, ensuring data is accurate and reliable in any environment.

Special device interface does not match and needs to be transferred

Interface customization service : Provide interface customization to eliminate the trouble of switching and achieve optimal performance connection.

Detailed technical parameters

Parameter Category	Specifications
Frequency range	6 GHz ~ 18 GHz
Standing Wave Ratio (VSWR)	≤ 2.5
Gain	12 dBi ~ 16 dBi
Polarization	Linear polarization
Directional pattern	Directional



Parameter Category	Specifications
impedance	50 ohms
Antenna interface	SMA-K type, <i>customizable</i>
Average power handling	50 W
size	112mm × 99mm × 84mm
weight	About 1.1 KG
color	Army Green
Operating temperature	-45°C ~ +65°C
Storage temperature	-55°C ~ +70°C
Hot and humid environment	Normal operation at 40°C, 95% relative humidity

Typical application scenarios

1. High-end EMC/EMI testing : used for radiated emission and immunity testing in frequency bands above 6 GHz, meeting the latest standards.
2. Electronic Countermeasures (ECM) and Signal Intelligence (SIGINT) : used to detect, locate and counter high-frequency communications and radar signals.
3. Radar system testing and calibration : Serves as a reference antenna for radar target simulation and system performance testing.
4. Satellite communication test : Applicable to the testing and verification of some satellite uplink and downlink frequency bands.
5. Microwave relay and point-to-point communication testing : used for system installation, maintenance, and troubleshooting.
6. Colleges and universities and research institutions : used for cutting-edge research on microwave technology, antenna measurement, etc.

Why choose CK618D double-ridged horn antenna?

1. High-frequency performance expert : Optimized for the 6GHz-18GHz frequency band, it delivers exceptional performance within this frequency band, making it your key to entering the millimeter-wave field.
2. Perfect balance of gain and size : While providing extremely high gain, it maintains an astonishingly compact size, offering exceptional application flexibility.
3. Unafraid of harsh environments : Military-grade manufacturing standards ensure reliable



data even in extreme environments.

4. Plug-and-play, supporting delivery of customized standard kits, ready for out-of-the-box use, and providing interface customization services to meet special needs.

5. Professional application verification : Designed specifically for high-end fields such as EMC and electronic countermeasures, it is a trustworthy tool for engineers and researchers.

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