



TFN CK16D Dual-Ridged Horn Antenna (1GHz-6GHz)

High-gain, broadband directional antenna suitable for EMC testing and electronic countermeasures



Product Overview

Designed for demanding applications from 1 GHz to 6 GHz . Its wide bandwidth, high gain, and exceptional performance and reliability make it an ideal solution for EMC (electromagnetic compatibility) testing and electronic countermeasures (ECM) . Whether used for precise directional signal reception or as an efficient transmitting antenna, the CK16D delivers stable and powerful performance, meeting the demanding requirements of military, industrial, and scientific research applications.

Core Features

- Ultra-wideband coverage : Covers a wide frequency range from 1 GHz to 6 GHz at one time , simplifying the testing process and eliminating the need for frequent antenna replacement.
- High-gain directional transmission : Provides stable gain of 7dBi to 13dBi , ensuring effective reception and transmission of long-distance signals, with concentrated energy and good directionality.
- Rugged and reliable design : Military green appearance, can work normally in extreme temperatures from -45°C to +65°C , and adapt to harsh environments.
- High power capacity : The average power handling capacity is up to 50W , meeting the stringent requirements of high-power transmission application scenarios.
- Standard interface and customization : Standard N-type (K-type) interface (customization supported) ensures perfect compatibility with test equipment.

Customer pain points & Product selling points

Customer pain points

The test frequency bands are scattered, requiring multiple

CK16D Solution

Wideband integrated design : Single antenna coverage from 1GHz to 6GHz significantly improves



Customer pain points

CK16D Solution

antennas, resulting in low efficiency and high cost.

test efficiency and reduces total equipment investment costs.

The signal is weak, making long-distance testing difficult

High-gain directional performance : effectively enhances signal strength to ensure a reliable link in distance and interference environments.

Industrial or outdoor environments are harsh and equipment is prone to failure

Military-grade environmental adaptability : Wide operating temperature range and heat and humidity resistance ensure stable operation in the laboratory, field, and on mobile platforms.

Antennas are easily damaged during high-power testing

50W high power capacity : Rugged and durable, it can withstand continuous high power input and its reliability far exceeds that of ordinary antennas.

Device connection interface does not match

Standard interface and customized service : We provide standard N-type connector and can customize the interface to seamlessly integrate into your existing system.

Detailed technical parameters

Parameter Category	Specifications
Frequency range	1 GHz ~ 6 GHz
Standing Wave Ratio (VSWR)	≤ 2.5
Gain	7 dBi ~ 13 dBi
Polarization	Linear polarization
Directional pattern	Directional
impedance	50 ohms



Parameter Category	Specifications
Antenna interface	N type (K type), <i>customizable</i>
Average power handling	50 W
size	165 mm × 161 mm × 200 mm
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. EMC/EMI electromagnetic compatibility testing : used as a standard transmitting or receiving antenna for radiated emission and radiated immunity testing.
2. Electronic countermeasures (ECM) : used for signal detection, analysis and directional interference emission.
3. Wireless communication testing : covers testing of multiple communication frequency bands including LTE, 5G Sub-6GHz, and Wi-Fi 2.4/5GHz.
4. Signal monitoring and intelligence gathering : Utilize its directionality to locate and monitor specific signal sources.
5. Scientific research and education : used for experiments and research in microwave technology, antenna technology and other related courses.

Why choose CK16D double-ridged horn antenna?

1. Excellent Performance : Maintains low SWR and high gain across a frequency band up to 5 GHz, ensuring reliable data.
2. Rugged and Durable : Military-grade environmental specifications ensure stable operation in harsh environments and a long lifespan.
3. Ready-to-use : Standard configurations ensure immediate integration into your test system.
4. Flexible Customization : Custom interfaces are available to meet your specific project needs.
5. Professional Choice : Optimized for EMC and electronic countermeasures, it's a valuable tool for engineers and researchers.