



Marketing Department
Product Specification

Product Name: Ka-band Tx256 Single-beam Phased Array Antenna

1 Product Description

The Ka-band Single-Beam Transmit array is designed to meet communication requirements for both GEO and LEO satellites, featuring compact size and high EIRP, making it suitable for airborne, shipborne, and vehicular platforms.

2 Technical features

- 1) Independent beam regulation and switching;
- 2) 2D Scalable Architecture
- 3) Dual-Axis (2D) Subarray Scanning
- 4) Polarization Reconfigurability

3 Technical Parameters

| S/N | Items | Technical Parameters | Remarks |
|-----|-----------------------------------|--|---------|
| 1 | Working Frequency | 27.5GHz ~ 30GHz | |
| 2 | Polarization | LHCP/RHCP, switchable | |
| 3 | Layout | Elements: $N_x \times N_y = 256$ | |
| | | Arrangement: rectangular grid | |
| 4 | Scanning Range | $\pm 60^\circ$ | |
| 5 | EIRP | $\geq 67\text{dBm @}27.5\text{GHz}$ (Normal direction) | |
| 6 | Scanning Loss @ 27.5GHz | Off-axis angle 30° : $\leq 2\text{dB}$; | |
| | | Off-axis angle 45° : $\leq 4\text{dB}$; | |
| | | Off-axis angle 60° : $\leq 6\text{dB}$; | |
| 7 | Sidelobe Suppression @ 27.5GHz | Normal direction: $\leq 10\text{dB}$; | |
| | | Off-axis angle 30° : $\leq 9\text{dB}$; | |
| | | Off-axis angle 45° : $\leq 8\text{dB}$; | |
| | | Off-axis angle 60° : $\leq 7\text{dB}$; | |

| | | | |
|----|--------------------------|--|--------------|
| 8 | Axial Ratio @ 27.5GHz | Normal direction: $\leq 2\text{dB}$; | |
| | | Off-axis angle 30°: $\leq 4\text{dB}$; | |
| | | Off-axis angle 45°: $\leq 5\text{dB}$; | |
| | | Off-axis angle 60°: $\leq 6\text{dB}$; | |
| 9 | VSWR | ≤ 2.0 | |
| 10 | P1dB | $\leq 10\text{dBm}$ | |
| 11 | Operating Voltage | 12V | |
| 12 | Power Consumption | $\leq 150\text{W}$ | |
| 13 | Working Temperature | $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ | |
| 14 | Dimensions | 73.6mm*73.6mm*30mm | |
| 15 | Interface Requirements | RF input | SSMP-JWHD9-L |
| 16 | Weight | $\leq 0.4\text{Kg}$ | |

Note: The above indicators do not consider the complete radome.

4 Product Photo



