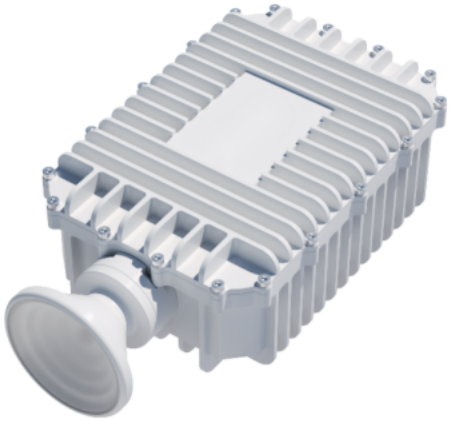
Ka 3W Transceiver



➢ Product features

Ka-band transceiver integrates transmit channel, power amplifier, receiving channel, low-noise amplifier, local oscillator circuit, and waveguide duplexer; the intermediate frequency signal is up-converted to Ka-band power amplification and then transmitted to the satellite, while the K-band signal from the satellite is transmitted to the satellite. Down-converted to L-band after low-noise amplification. The input waveguide port of the low noise amplifier and the output waveguide port of the power amplifier are connected to the antenna feed source through the waveguide duplexer, and the IF is externally connected to the modem. The product is characterized by broadband and low power consumption, and can be applied to the China Star 16 satellite ground terminal.

Circular polarization; integrated OMT, BUC, LNB; high-performance feed horn; compact structure; performance indicators reach the international advanced level.

➢ Main indicator parameter

Parameter name	Typical value
Model	SP-K29-46
Launch main parameters	
RF frequency	29GHz~30GHz
IF frequency	1400MHz-2400MHz
Output power P1dB	34dBm
Gain	55dB typ., 52dB min

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IMD3	-20dBc@34dBm
local oscillator frequency	27.6GHz
Receive main parameter indicators	
RF frequency	17.8GHz~20.2GHz （local oscillator16.85GHz/18.05GHz）
IF frequency	950MHz-2150MHz
Noise figure	1.2dB typ.
Receive gain range	56 ±6 dB
General indicators	
Phase noise	≤-60dBc/Hz@ 100 Hz;
	≤-70dBc/Hz@ 1kHz;
	≤-80 dBc/Hz@ 10kHz;
	≤-90dBc/Hz@ 100 kHz;
IF interface	F(F)-75
Horn polarization	Circular polarization, transmit and receive orthogonal polarization
Polarization isolation	TX 25dB RX 20dB
Powered by	18~50VDC
Volume	208mm×100mm×49mm
Weight	1.1Kg
Operating temperature	-40℃~60℃

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