

Low phase noise

Frequency divider



Product profile

TFD 10-5 low noise frequency divider is an ultra-low phase noise frequency divider, with a built-in unique frequency divider and low noise signal distributor, with 5M and 1M output, which is suitable for frequency division operation as high-stable 10 MHz signals such as hydrogen clock and cesium clock. This frequency divider adopts our BDSTAR TIME Technology's standard package and interface, and can be installed in various ways.

Application area



National defense



Aerospace



Satellite communication



Test measuring equipment



Earth station



Point-to-point wireless communication

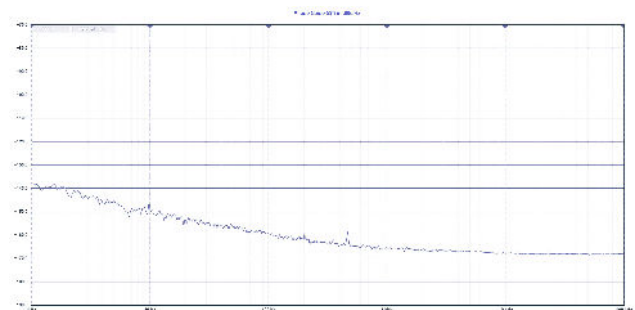


RF microwave circuit design

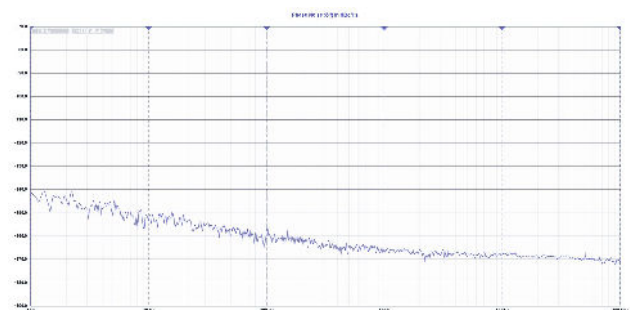
Product features

- 1-way 10 MHz input
- 2 sine wave outputs each at 5MHz and 1MHz
- Ultra low phase noise $< -135\text{dBc}/\text{Hz}@1\text{Hz}$
- $+12\sim+15\text{VDC}$ power supply

Typical curve



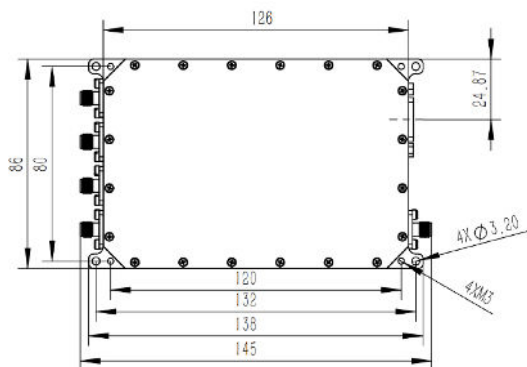
The 5 MHz output phase noise



The 1 MHz output phase noise

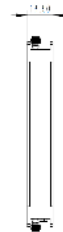
Test Item		Technical Indicators
Input frequency		10MHz
Input power		+5~+13dBm
Output frequency		5MHz and 1MHz 2 ways each, 50Ω, ≥ 8dBm
Additional frequency stability	1s	≤ 5 × 10 ⁻¹⁴
	1000s	≤ 8 × 10 ⁻¹⁵
Additional phase noise	1Hz	≤ -135dBc/Hz
	10Hz	≤ -145dBc/Hz
	100Hz	≤ -155 dBc/Hz
	1kHz	≤ -163 dBc/Hz
	10kHz	≤ -165dBc/Hz
Harmonic clutter		harmonic ≤ -30dBc, clutter ≤ -80dBc
Working temperature	Bottom plate temperature	-20°C ~+70°C
Storage temperature		-40°C ~+85°C
Power supply	±4%	+12V~+15V
Rate of work		≤ 3W
External dimension	Body size	126mm × 86mm × 19mm
	Maximum size	138mm × 86mm × 19mm
Weight		≤ 300g

External Dimension



Unit: mm

Interface Definition (DSUB9, needle) :



- PIN 1: The Ground
- PIN 6: Power supply +12~+15V
- Other: Internal testing. No wiring.