北斗邦泰
BDSTAR TIME

-CX5228A

High stability and low phase noise

Crystal Oscillators

Product profile

CX5228A is a high stability and low phase noise thermostatic crystal oscillator, which is manufactured by special high Q crystal resonator with leading-edge technology, and can operate at temperatures from-20°C to +70°C , with an aging rate of better than3E-10/day, and with a preferred phase noise of up to-126dBc/Hz at 1Hz. It is suitable for high-performance instruments for communication, navigation, radar, reconnaissance, etc., as well as for hi-end grade audio systems.

Product features

- Operating temperature range -20°C ~+70°C
- Near-end phase noise up to ⩽ -123dBc/Hz@1Hz
- Frequency stability ADEV, the lowest up to 1.2E-13/1s
- +12VDC power supply

Application area

Atomic Signal Purification Phase-Locked Loops

Detection

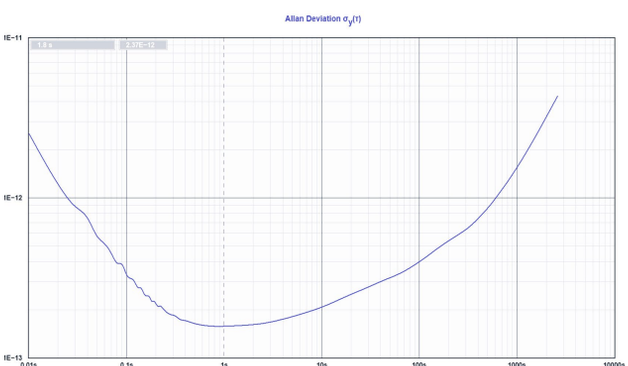
Communication

hi-end Audio clock

Measuring and testing instruments

Radar

Typical curve



Typical value of the frequency stability:

100ms:	3.5×10^{-13}	1s:	1.5×10^{-13}
10s:	2.0×10^{-13}	100s:	4.0×10^{-13}
1000s:	1.5×10^{-12}		

Typical values of the phase noise:

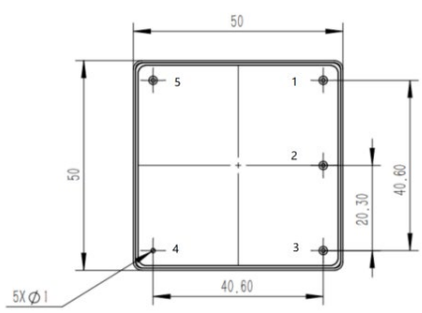
1Hz:	-121dBc/Hz	10Hz:	-148dBc/Hz
100Hz:	-163dBc/Hz	1kHz:	-169dBc/Hz
10kHz:	-170dBc/Hz	100kHz:	-170dBc/Hz

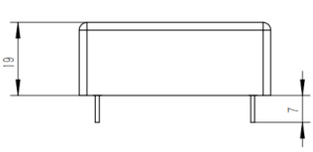
Technical Parameters

-CX5228A

Test Item		Technical Indicators			
Frequency stability	1s@10MHz	Standard	Option A1	Option A2	Option A3
		⩽ 5×10^{-13}	⩽ 3×10^{-13}	⩽ 2×10^{-13}	⩽ 1.5×10^{-13}
Phase noise dBc/Hz		Standard	OptionB1	OptionB2	OptionB3
	1Hz*	⩽ -113	⩽ -116	⩽ -118	⩽ -123
	10Hz	⩽ -140	⩽ -143	⩽ -145	⩽ -145
	100Hz	⩽ -150	⩽ -155	⩽ -155	⩽ -155
	1kHz	⩽ -155	⩽ -160	⩽ -160	⩽ -160
	10kHz	⩽ -163	⩽ -165	⩽ -165	⩽ -165
	100kHz	⩽ -163	⩽ -165	⩽ -165	⩽ -165
Aging rate (Measured after 30day of continuous aging)		Standard		OptionC1	
	1day	⩽ 5×10^{-10}		⩽ 3×10^{-10}	
	1 month	⩽ 5×10^{-9}			
	The first year	⩽ 5×10^{-8}			
	Ten years	⩽ 2.5×10^{-7}			
Frequency control	Pressure control voltage range	0~5V，Positive slope			
	Frequency regulation range	⩾ $\pm2.5\times10^{-7}$			
Temperature frequency characteristics		⩽ $\pm5\times10^{-9}$			
Voltage frequency characteristics		⩽ $\pm5\times10^{-10}$			
Load frequency characteristics		⩽ $\pm5\times10^{-10}$			
Wave shape		Sine wave			
Output power		⩾ 5dBm			
Output impedence		50Ω			
Harmonic		⩽ -40dBc			
Clutter		⩽ -80dBc			
Working temperature		-20°C ~+70°C			
Storage temperature		-40°C ~+85°C			
Power supply		+12VDC			
Electric current		⩽ 0.6A			
External Dimension		50mm×50mm×19mm			

External Dimension





Unit：mm

Pin Definition:

1: 0-5V frequency pressure control
2: + 5V reference voltage output
3: 10 MHz sine output
4: The ground
5: + 12V power supply