BOWEI

OXK581 series

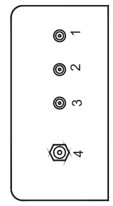
Low phase noise,Anti-vibration OCXO

BOWEI INTEGRATED CIRCUITS CO.,LTD.

Features

- Good performance under vibration
- Low phase noise
- External EMI filter
- High frequency stability
- SC cut crystal with TO-5 package

MP581



Pin function

1:Power supply
2:Ground
3:Reference voltage output or NC
4:RF output

Electrical specification

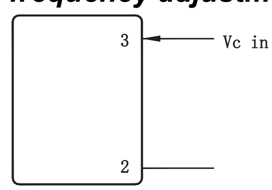
Parameter			Characteristic	
Power supply			＋12V±5%(option＋15V)	
Frequency range			10～120MHz	
Frequency stability		Vs。temperature	±0.05～±0.5ppm(see the table)	
		Vs。supply changes	±0.01ppm（Max）/Vdc±5%	
		Vs。Ageing	±0.1～±0.5ppm/1st year (Max)	
output	Sinewave	Level	+10dBm/50Ω	
		Harmonics	≤-25dBc	
		Non-Harmonic Suppression	≤-70dBc	
Phase noise 100MHz The worse axis			Static	Vibration(methodB)
		10Hz	-100 dBc/Hz	See detail method
		100Hz	-130 dBc/Hz	See detail method
		1KHz	-155 dBc/Hz	-145dBc/Hz
		10KHz	-165 dBc/Hz	-160dBc/Hz
		100KHz	-170 dBc/Hz	-165dBc/Hz
Operation temperature range			Different range(see the table)	
Input power			4W/1.8W（Max)@25℃	
Storage temperature range			-55～＋85℃	
Dimension			50mm*50mm*25mm	

Frequency temperatureStability (ppm)

	±0.05	±0.1	±0.2	±0.5
0～50℃	JP	HP	GP	FP
-10～60℃	JQ	HQ	GQ	FQ
-20～70℃	JR	HR	GR	FR
-30～70℃	JS	HS	GS	FS
-40～70℃	JT	HT	GT	FT
-40～85℃			GU	FU
-55～85℃				FW

* please contact the factory

Outside frequency adjustment



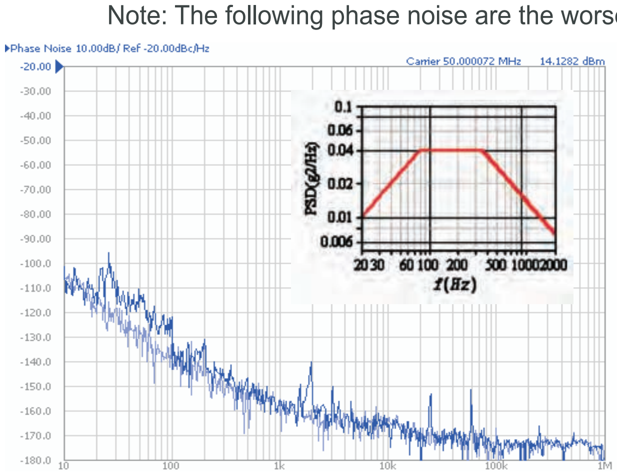
with control voltage

Absolute maximum ratings

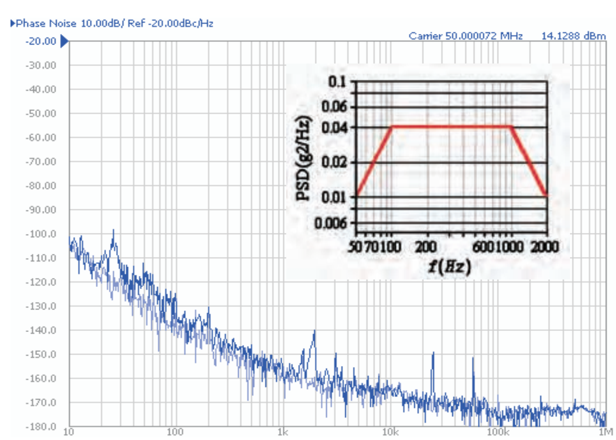
Supply voltage---＋16V

Storage temperature---＋105°C

Note: The following phase noise are the worse one among three axis at 1KHz offset frequency

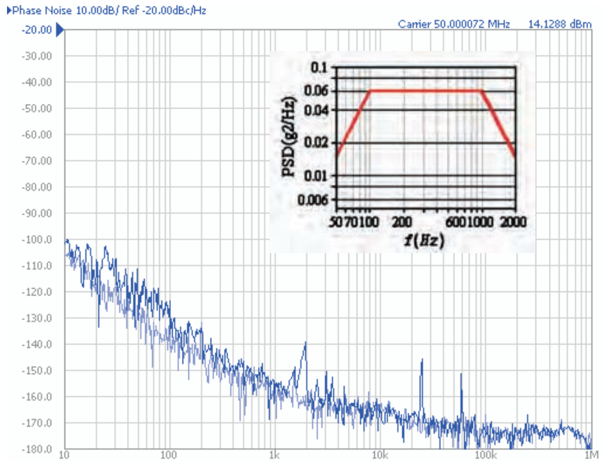


Phase noise vs. Offset frequency @50MHz/Random vibration method A RMS acceleration G_{rms}=6.06 g

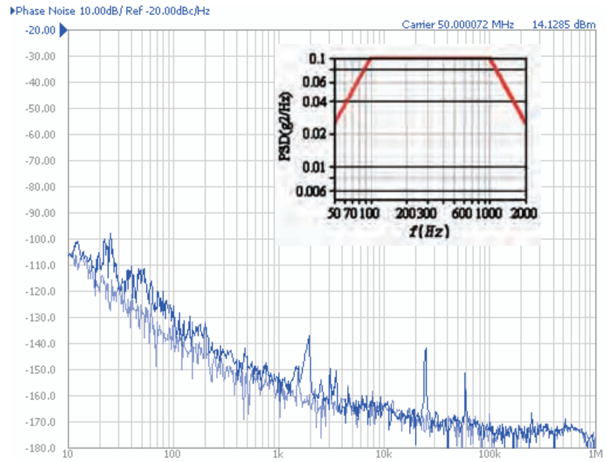


Phase noise vs. Offset frequency @50MHz/Random vibration method B RMS acceleration G_{rms}=7.56 g

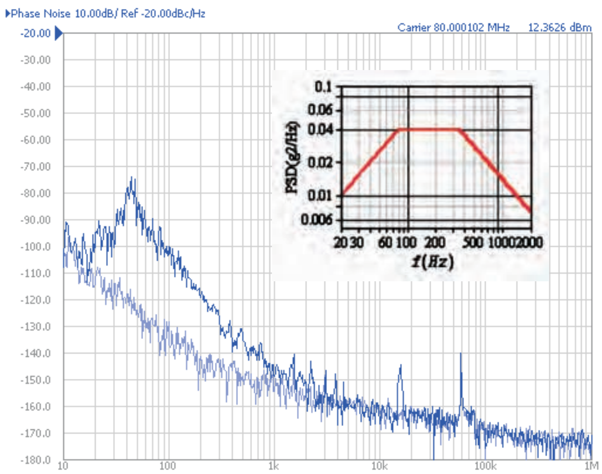
Note: The following phase noise are the worse one among three axis at 1KHz offset frequency



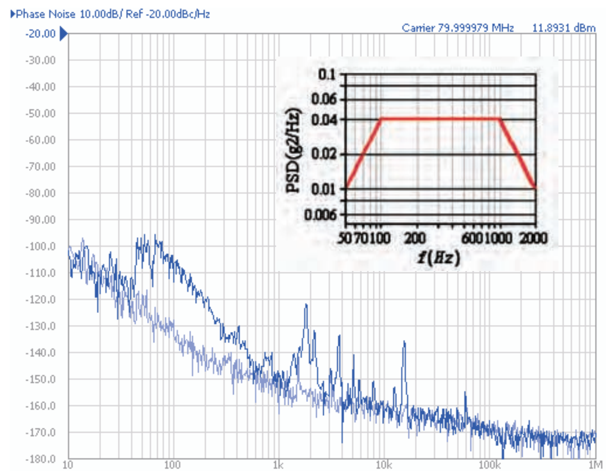
Phase noise vs. Offset frequency @50MHz/Random vibration method C RMS acceleration G_{rms}=9.26 g



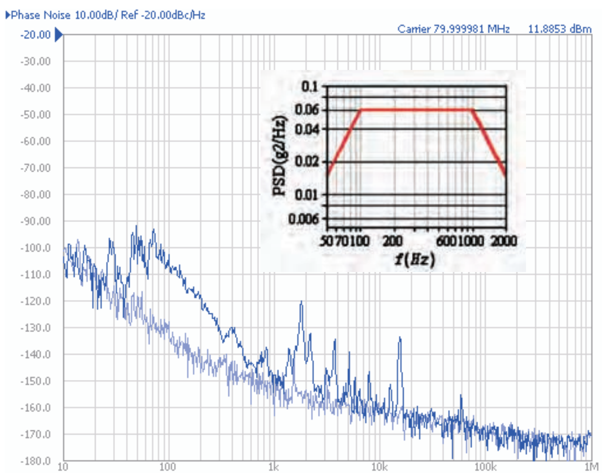
Phase noise vs. Offset frequency @50MHz/Random vibration method D RMS acceleration G_{rms}=11.95 g



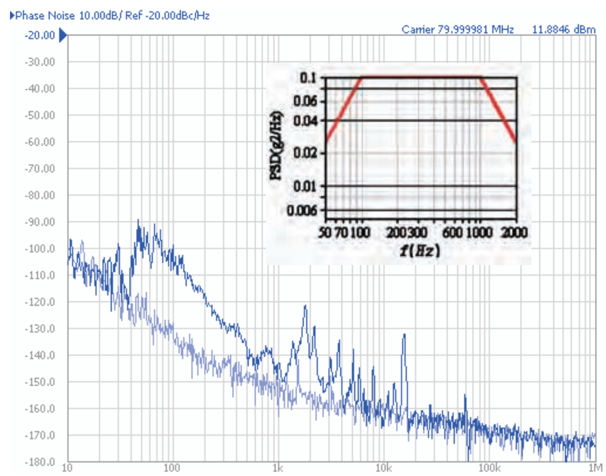
Phase noise vs. Offset frequency @80MHz/Random vibration method A RMS acceleration G_{rms}=6.06 g



Phase noise vs. Offset frequency @80MHz/Random vibration method B RMS acceleration G_{rms}=7.56 g

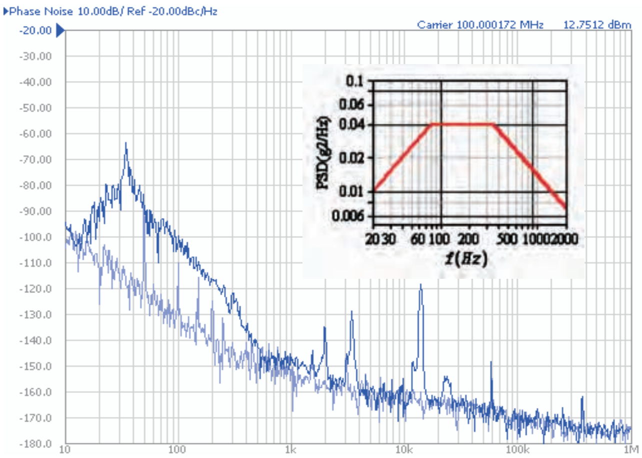


Phase noise vs. Offset frequency @80MHz/Random vibration method C RMS acceleration G_{rms}=9.26 g

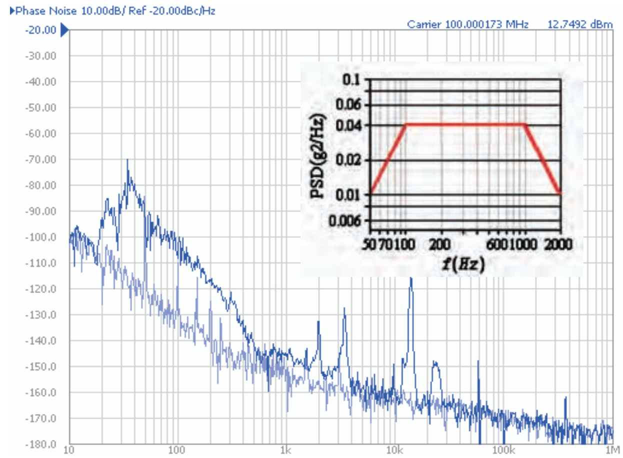


Phase noise vs. Offset frequency @80MHz/Random vibration method D RMS acceleration G_{rms}=11.95 g

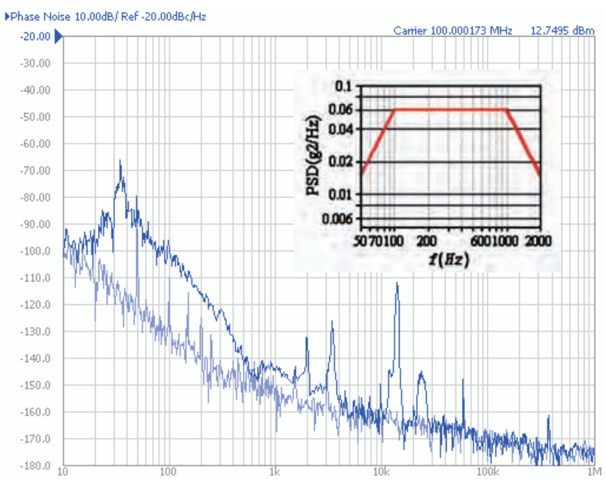
Note: The following phase noise are the worse one among three axis at 1KHz offset frequency



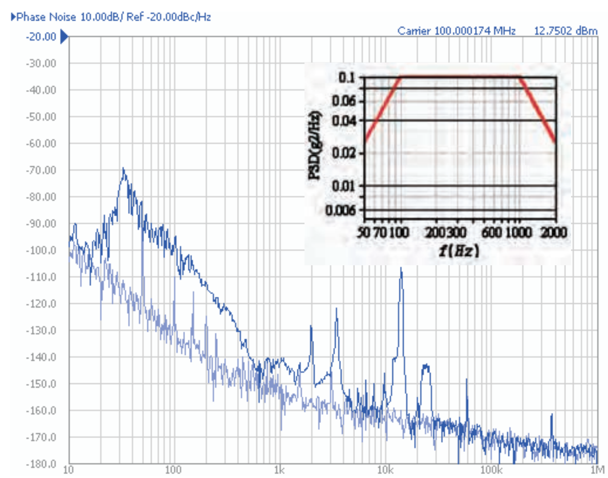
Phase noise vs. Offset frequency @100MHz/Random vibration method A RMS acceleration G_{rms}=6.06 g



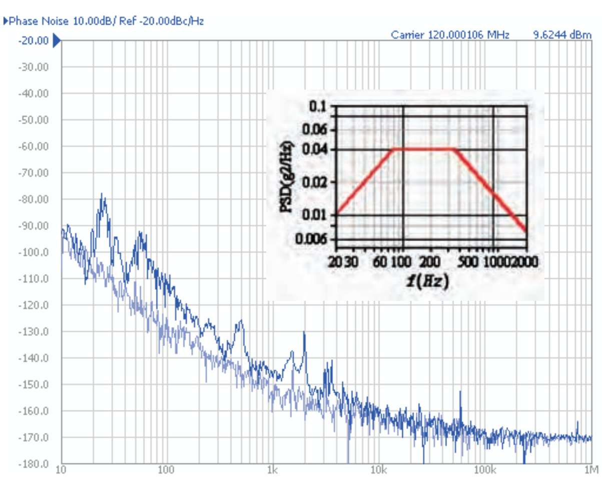
Phase noise vs. Offset frequency @100MHz/Random vibration method B RMS acceleration G_{rms}=7.56 g



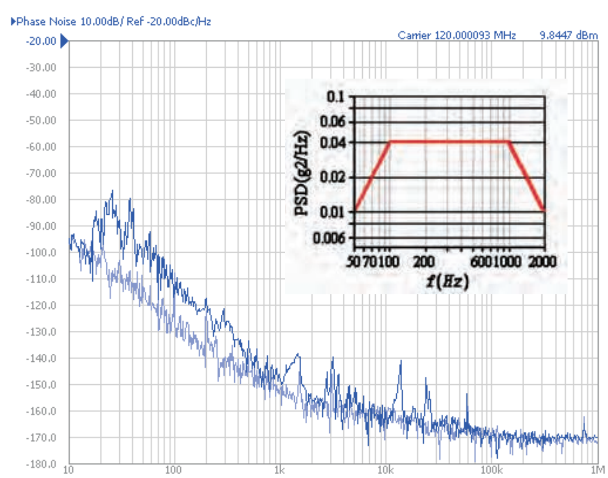
Phase noise vs. Offset frequency @100MHz/Random vibration method C RMS acceleration G_{rms}=9.26 g



Phase noise vs. Offset frequency @100MHz/Random vibration method D RMS acceleration G_{rms}=11.95 g

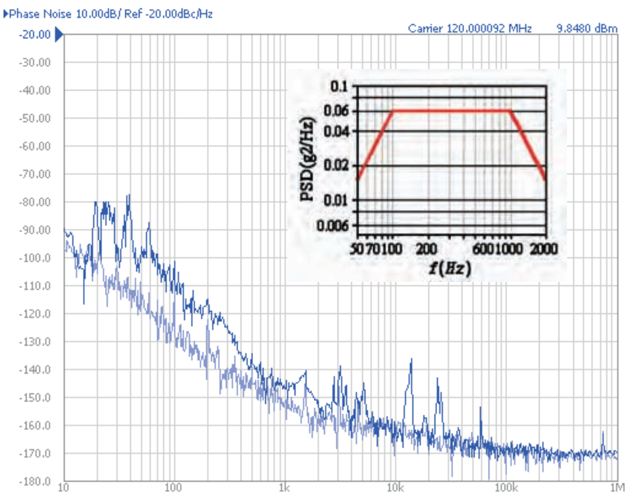


Phase noise vs. Offset frequency @120MHz/Random vibration method A RMS acceleration G_{rms}=6.06 g

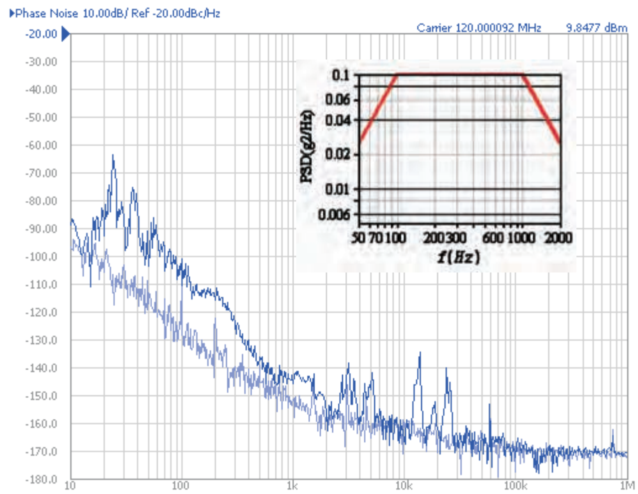


Phase noise vs. Offset frequency @120MHz/Random vibration method B RMS acceleration G_{rms}=7.56 g

Note: The following phase noise are the worse one among three axis at 1KHz offset frequency



Phase noise vs. Offset frequency @120MHz/Random vibration method C RMS acceleration G_{rms}=9.26 g



Phase noise vs. Offset frequency @120MHz/Random vibration method D RMS acceleration G_{rms}=11.95 g

Note 1.In phase noise performance curve, the upper curve is the performance under vibration the lower one is under static.

2.All phase noise curves showed above are the worse one of three axis at 1KHz offset frequency

3.Phase noise performance depend on vibration method, please give your method when order.

Random Vibration Method

	Method
A	GJB 1032 random vibration test method
B	GJB 360A method 214 condition1-B
C	GJB 360A method 214 condition1-C
D	GJB 360A method 214 condition1-D

Application Notes

1.No less than 1uF electrolytic capacitor and 0.01～0.1uF ceramic capacitor are recommended to be used on power supply.

2.Vibration absorptive material can be used outside OCXO to improve phase noise performance under vibration

3.See package section for detial information of outline drawings.