



frequency control solutions

N623

ULTRA-LOW PHASE NOISE

VCXO

Product Description

Greenray Industries' N623 VCXO offers ultra-low phase noise and low g-sensitivity performance in a compact, SMD package.



Features

- 9.1 x 14.2 mm, SMD package
- 5.0 VDC Supply
- Frequency: 100 MHz (other frequencies & options available)
- Sine Wave output
- Random Vibration per MIL-STD-202, Method 204
- Shock per MIL-STD-202, Method 213
- RoHS compliant

Applications

- Telecommunications
- High-shock electronics
- Mobile radio
- Mobile instrumentation
- Airborne communications
- Wireless communications
- Microwave receivers

Rev. E



ISO 9001
Quality

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AS9100
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Electrical Characteristics

Frequency Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency	25°C set point		100		MHz	
Frequency Stability	-40°C to +85°C		± 15		ppm	
Absolute Pull Range	All condition 7 years	-10		10	ppm	
Aging	1 st year			± 1	ppm	
Frequency vs Voltage	± 0.25V		± 1		ppm	
Electronic Frequency Control (EFC)	EFC = 0 to V _{DD} -0.5 Positive slope		± 30		ppm	
EFC vs Freq Pull	EFC = 0.5 to V _{DD} -0.5			10	%	
Phase Noise Performance						
Parameter	Frequency Offset (Hz)	Min	Typical	Max	Units	Ordering Code
Phase Noise (static) @ 100 MHz nominal Frequency	10		-85	-80	dBc/Hz	
	100		-115	-110	dBc/Hz	
	1k		-140	-135	dBc/Hz	
	10 k		-162	-158	dBc/Hz	
	100 k		-173	-170	dBc/Hz	
	1 M		-175	-173	dBc/Hz	
DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage (V _{DD})		4.75	5.0	5.25	VDC	
Supply Current	10 MHz Freq.			30	mA	
RF Output: Sinewave						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Load			50		Ω	
Power Level	At 25°C	+9.5	+12	+14.5	dBm	
Harmonics				-30	dBc	



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Environmental and Mechanical Specifications

Screenings			
Screening	Standard	Method, Condition	Description
Vibration	MIL-STD-202	204, Cond A	10 g peak, 10 and 500 Hz
Shock	MIL-STD-202	213, Cond C	100 g, 6 ms half-sine, 12.3 ft/sec

Ordering Example

N623 - **100.0MHz** - **E**

Model	Frequency in MHz	Termination finish Code
		E: Gold plated (RoHS), Standard PB: SnPb 63/37 (non-RoHS)

Recommendation and General Information

Conditions	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-45°C to +95°C
Terminal Finish	Gold plating (RoHS) is standard (E). SnPb 63/37 also available
Package Weight	3 grams
Soldering Instruction	Reflow solder
Shipping	Tray
Marking	Line 1: Greenray logo + Model Line 2: Frequency Line 3: Serial Number + Data Code (YYWW)



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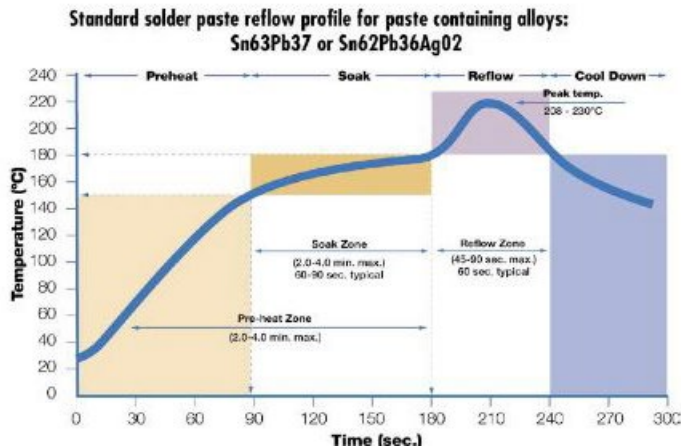
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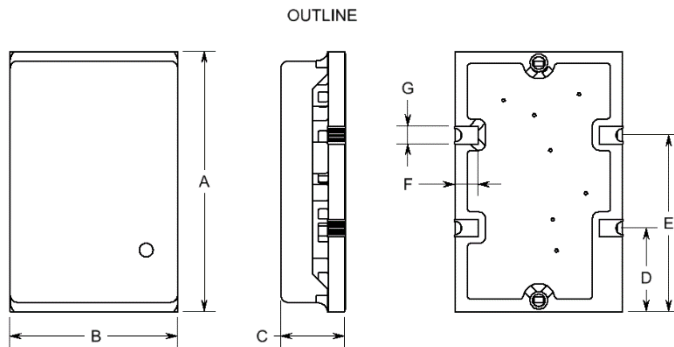
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Recommended Solder Reflow Profiles



Package dimensions and Pad Connections



PAD CONNECTIONS:

1. EFC
2. GND
3. OUTPUT
4. VDD

DIMENSIONS

DIM.	TYP.		MAX.	
	inches	mm	inches	mm
A	0.560	14.22	0.570	14.47
B	0.360	9.14	0.370	9.39
C	0.136	3.45	0.146	3.70
D	0.180	4.57	0.190	4.82
E	0.380	9.65	0.390	9.90
F	0.050	1.27	NA	NA
G	0.038	0.97	NA	NA



ISO 9001 Quality

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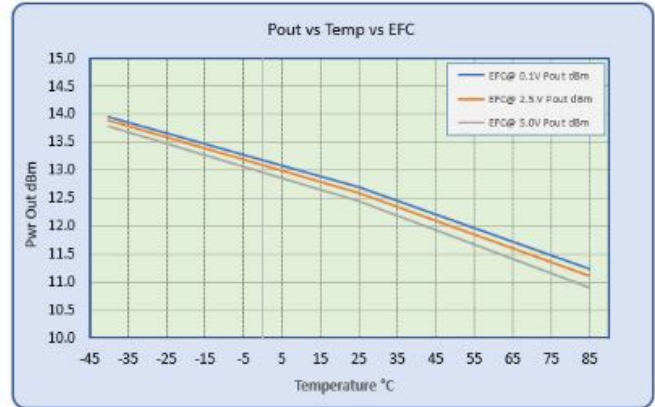
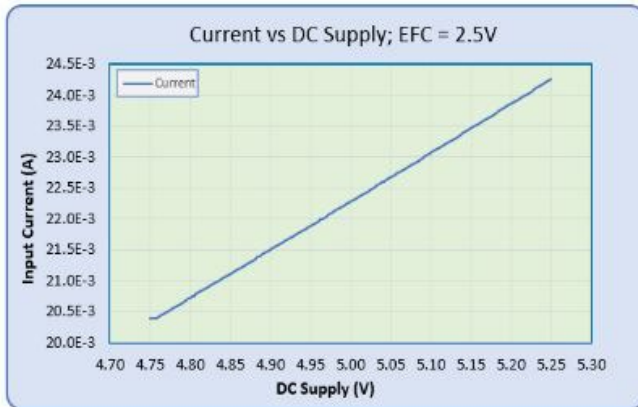
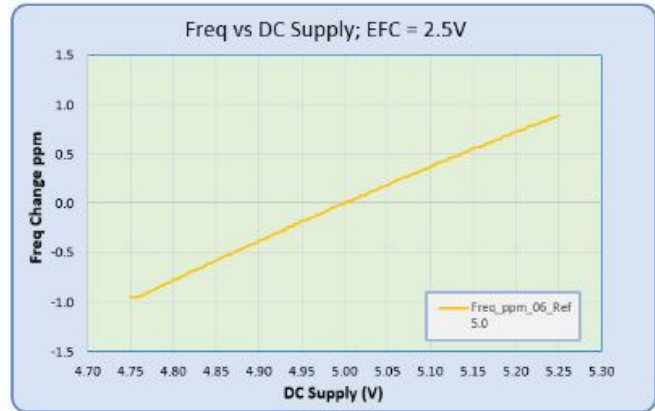
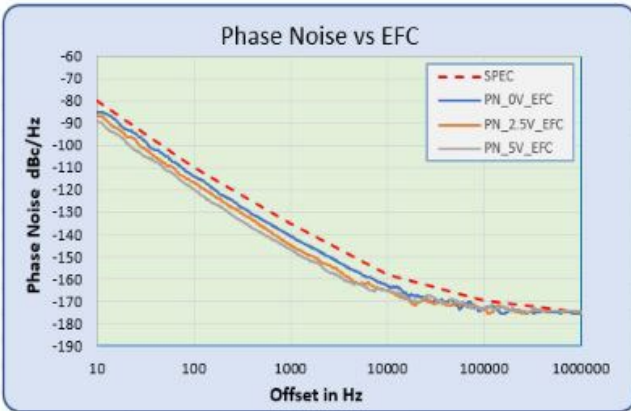
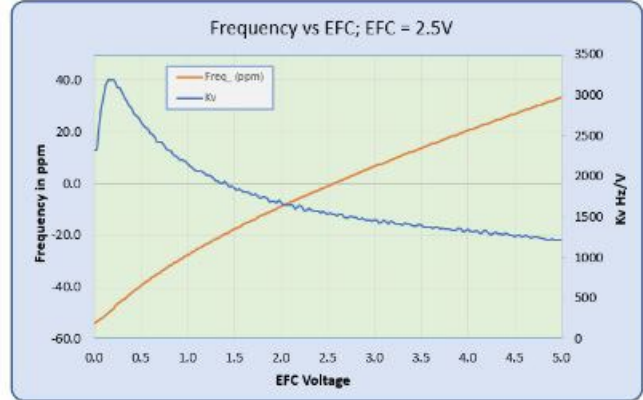
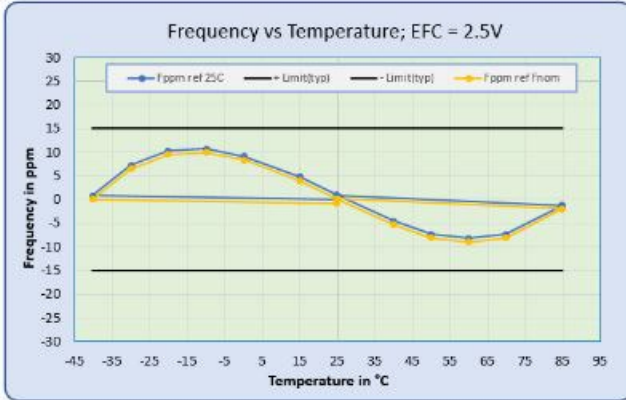
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Typical Electrical Performance Plots

VEXO



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