



frequency control solutions

N623

ULTRA-LOW PHASE NOISE
LOW G-SENSITIVITY

Product Description

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



VCXO

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. F



Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
www.greenrayindustries.com

Greenray Proprietary Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2022 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.



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 Linearity	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	100 MHz Freq.		30	50	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	



frequency control solutions

N623 SERIES
100 MHz



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)



Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
 TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
 www.greenrayindustries.com

Greenray Proprietary Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2022 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.

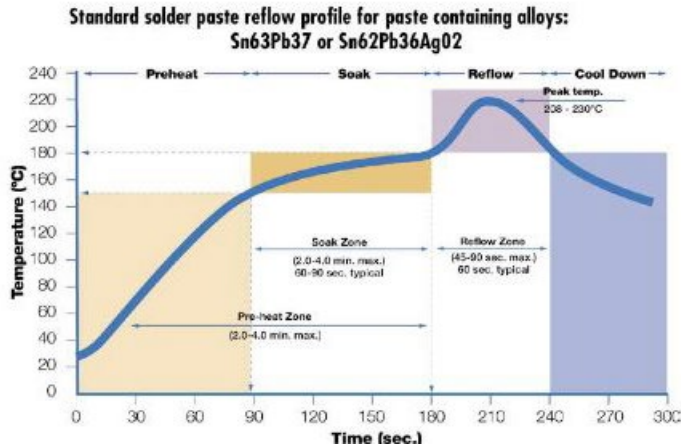


frequency control solutions

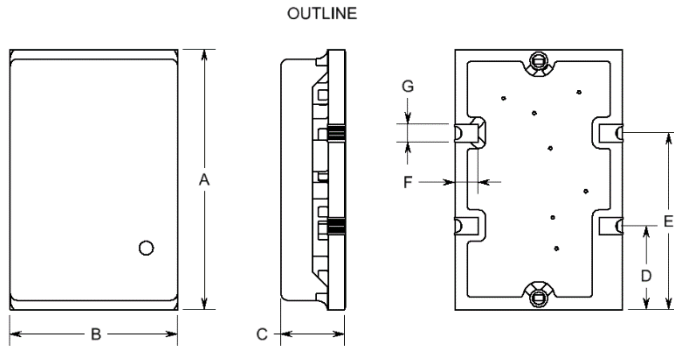
N623 SERIES
100 MHz

VCXO

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



Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
 TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
 www.greenrayindustries.com

Greenray Proprietary Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2022 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.

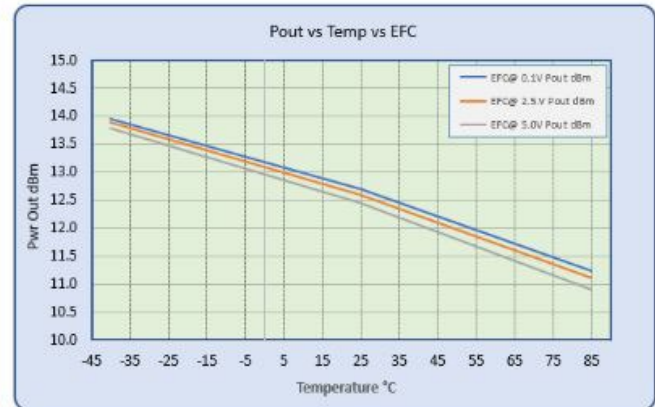
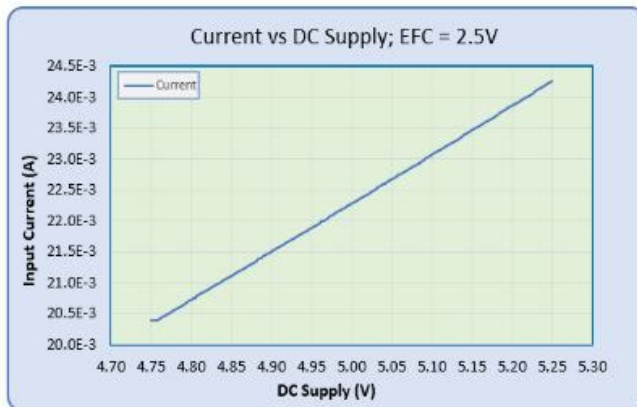
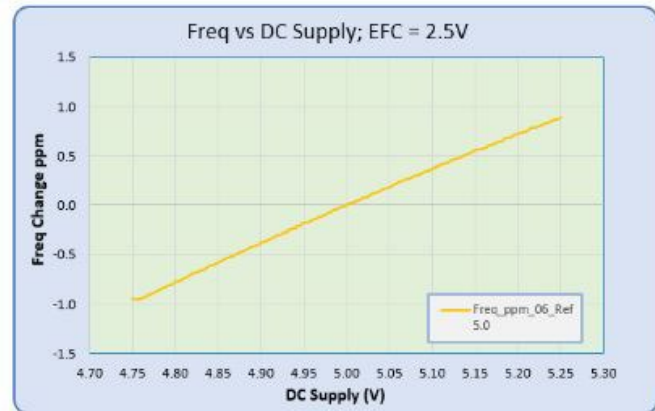
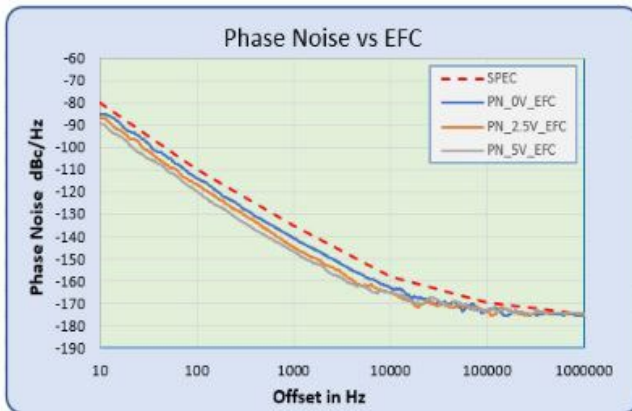
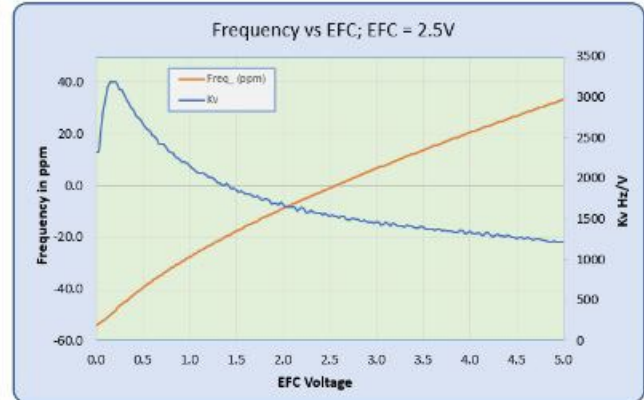
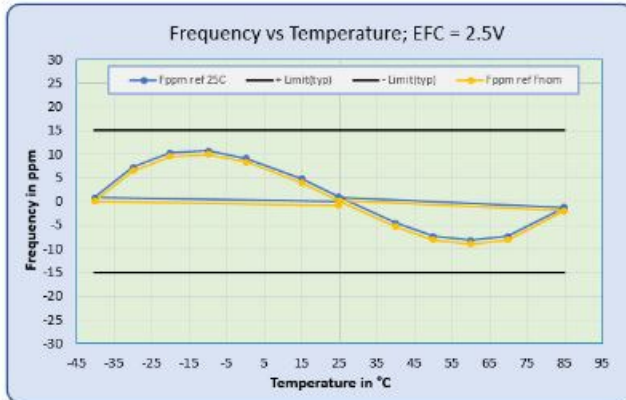


frequency control solutions

N623 SERIES
100 MHz

VCXO

Typical Electrical Performance Plots



Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
www.greenrayindustries.com

Greenray Proprietary Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2022 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.