



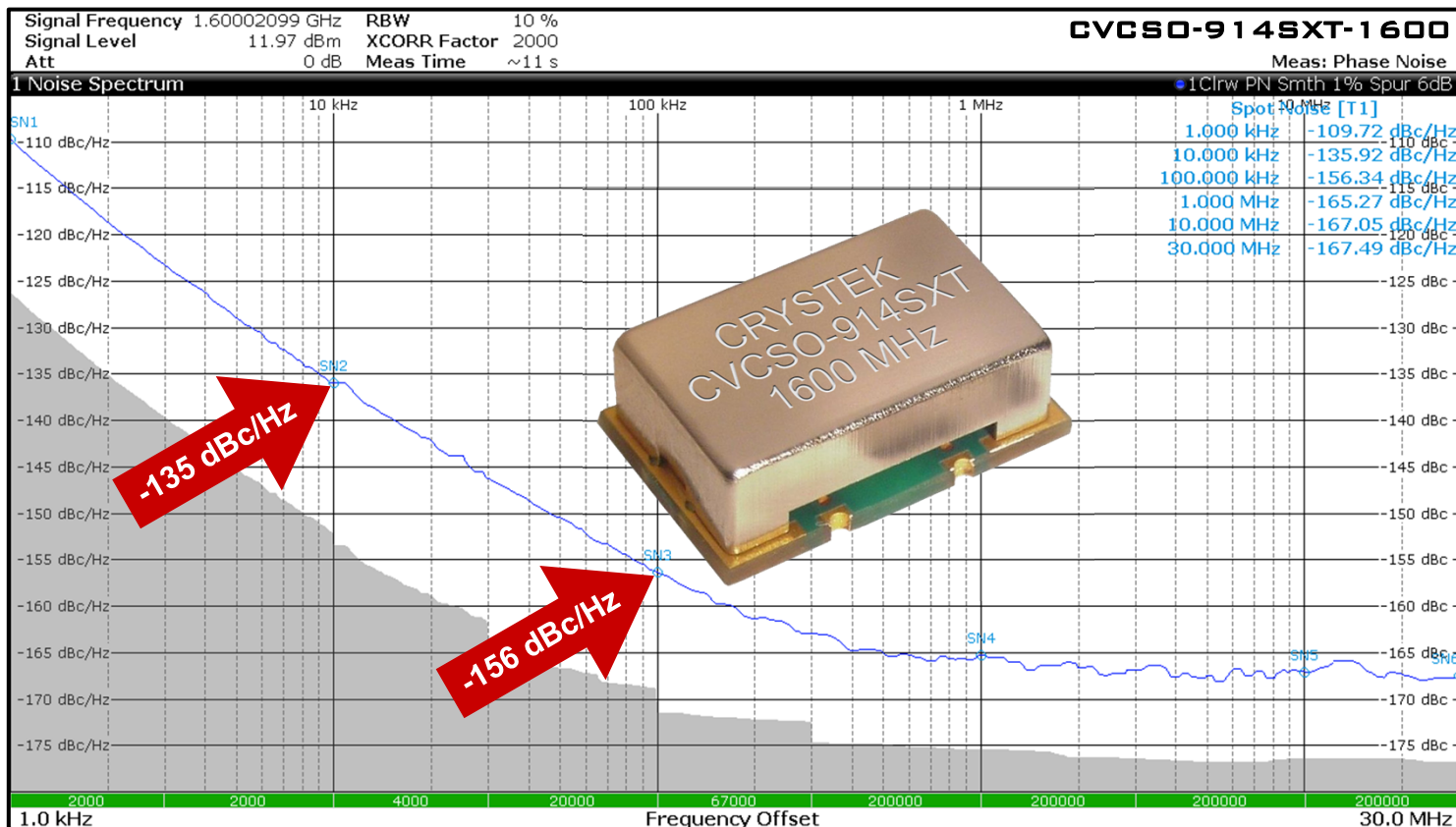
CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION



Ultra-Low Phase Noise Frequency Doubling SAW Based VCSO

CVCSO-914SXT Model

9×14 mm SMD, 5.0V, SineWave



Model CVCSO-914SXT is a voltage-controlled SAW (surface acoustic wave) Clock Oscillator (VCSO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -133 dBc/Hz phase noise at 10 kHz offset at 1.6 GHz, 5V input voltage, and 9×14 mm SMT package. The oscillator's second harmonic is typically -20 dBc.

Applications include PLL frequency translation, test and measurement, avionics, point-to-point radios, and multi-point radios.

Rev: Q

Date: 25-Apr-2024

Page 1 of 4



CRYSTEK
CORPORATION

16850 ORIDLE ROAD • FORT MYERS, FLORIDA 33912
PHONE: 239-561-3311 • 800-237-3061
WWW.CRYSTEK.COM



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION



Ultra-Low Phase Noise Frequency Doubling SAW Based VCSO

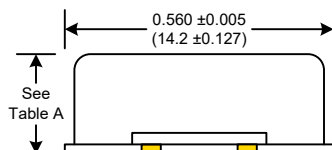
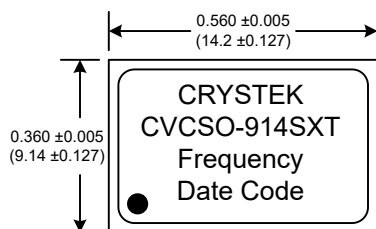
CVCSO-914SXT Model

9×14 mm SMD, 5.0V, SineWave

Frequency Range: 1244.160 MHz to 2000 MHz
Temperature Range: 0°C to +70°C
CVCESO-914SXTE option 0°C to +85°C
CVCESO-914SXTX option -40°C to +85°C
Storage: -40°C to 90°C
Input Voltage: 5.0V ±0.25V
Control Voltage Range: 0V to 5.0V
Tuning Sensitivity (Kv): +120 ppm/V Typical
Settability At Nominal (25°C): 1.5V +0.5V -1.0V
Frequency vs Temperature: ±200ppm Typical
Input Current: 60mA Typical, 70mA Max



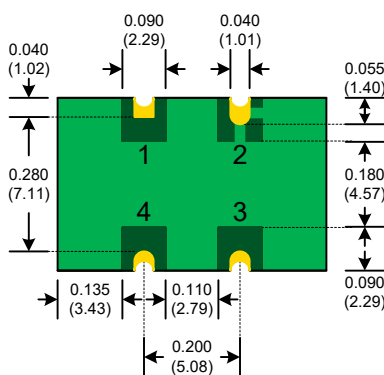
Output: True SineWave
Pullability APR: ±50ppm Min
CVCESO-914SXTE option ±40ppm Min
Linearity: ±20% Max
Output Power: +8dBm Min into 50 Ω Load
Start-Up Time: 2ms Typical, 10ms Max
2nd Harmonic: -20dBc Typical
(Nominal Frequency)/2: -15dBc Max
Modulation BW: >20kHz @ -3dB
Phase Noise (2 GHz): -130dBc/Hz Typical, -125dBc/Hz Max
10kHz 0.9×10⁻⁹ per G
G-sensitivity: 0.816 g
Weight: 0.816 g



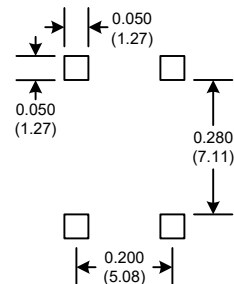
Package Height Options (Max)

	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



SUGGESTED PAD LAYOUT



PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

Pad	Connection
1	Volt. Control
2	GND
3	Output
4	Vdd

Rev: Q
Date: 25-Apr-2024
Page 2 of 4



CRYSTEK
CORPORATION

16850 ORIDLE ROAD • FORT MYERS, FLORIDA 33912
PHONE: 239-561-3311 • 800-237-3061
WWW.CRYSTEK.COM



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION



Ultra-Low Phase Noise Frequency Doubling SAW Based VCSO

CVCSO-914SXT Model

9×14 mm SMD, 5.0V, SineWave

Crystek Part Number Guide

CVCSO - 914SXT E L - 2000.000

#1 #2 #3 #4 #5

#1 Crystek Voltage Control Saw Oscillator
#2 Model 914SXT
#3 Temp. Range: Blank = 0/70°C
E = 0/85°C
X = -40/85°C
#4 Height (L = 0.135") (Blank = 0.210")
#5 Frequency in MHz: 3 or 6 decimal places

Available Frequencies (MHz):

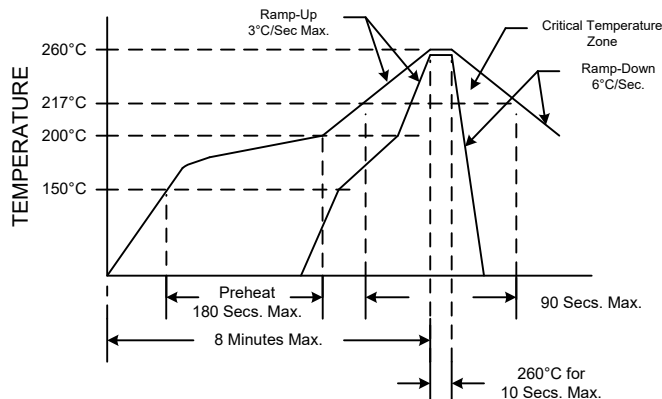
1244.160

1600

2000

Custom Frequencies Available with NRE Fee

RECOMMENDED REFLOW SOLDERING PROFILE



NOTE: Reflow Profile with 240°C peak also acceptable.

Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock	MIL-STD-883, Method 1011, Condition A
Moisture Resistance	MIL-STD-883, Method 1004

Rev: Q

Date: 25-Apr-2024

Page 3 of 4



CRYSTEK
CORPORATION

16850 ORIDLE ROAD • FORT MYERS, FLORIDA 33912
PHONE: 239-561-3311 • 800-237-3061
WWW.CRYSTEK.COM



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION



Ultra-Low Phase Noise Frequency Doubling SAW Based VCSO

CVCSO-914SXT Model

9×14 mm SMD, 5.0V, SineWave



Crystek Corporation reserves the right to make changes to its products and/or information contained herein without notice. No liability is assumed as a result of its use or application.

Rev: Q
Date: 25-Apr-2024
Page 4 of 4



CRYSTEK
CORPORATION

16850 ORIDLE ROAD • FORT MYERS, FLORIDA 33912
PHONE: 239-561-3311 • 800-237-3061
WWW.CRYSTEK.COM