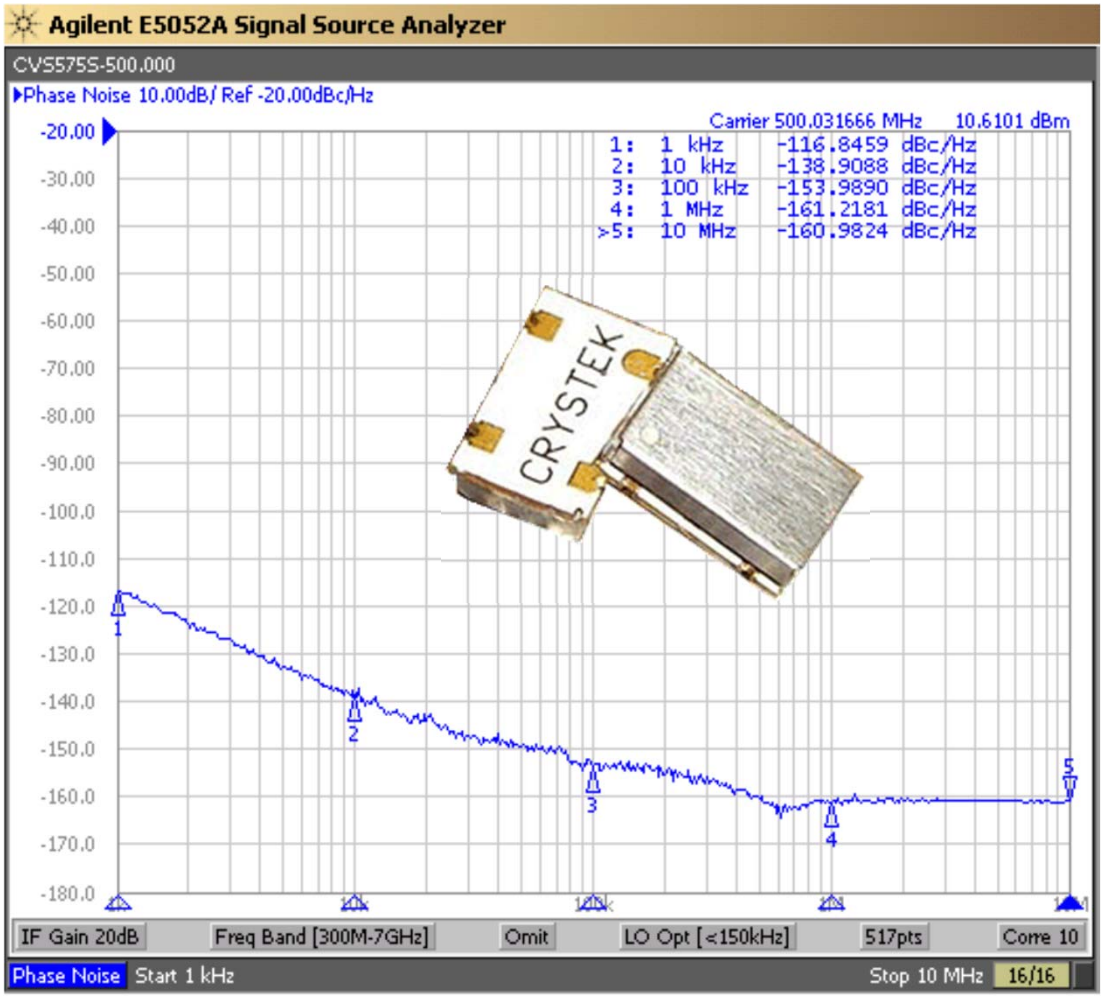
CRYSTEK CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CVS575S-500.000
SineWave
SAW Based VCSO
5×7.5mm SMD
3.3 Volts

RoHS Compliant



Model CVS575S-500 is a 500 MHz voltage-controlled SAW (surface acoustic wave) oscillator (VCSO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -135 dBc/Hz phase noise at 10 kHz offset, 3.3 V input voltage, 0°C to +70°C operating temperature, and 5×7.5 mm SMT package. The oscillator has no sub-harmonic and the second harmonic is typically -14 dBc.

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

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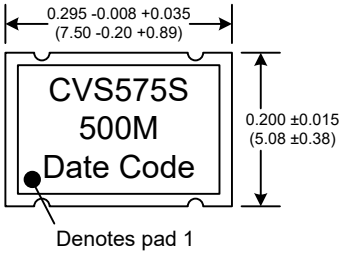
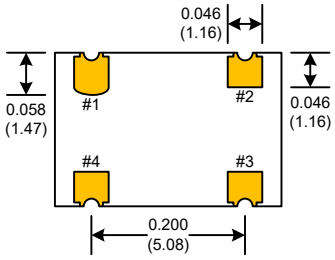
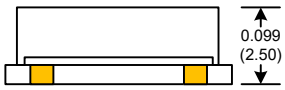
Frequency:	**500 MHz**
Operating Temperature Range:	**0°C to 70°C**
Storage Temperature Range:	**-45°C to 90°C**
Input Voltage:	**3.3V ±0.15V**
Control Voltage Range:	**0V to 3.3V**
Settability At Nominal (25°C):	**0.5V to 2.0V**
Freq. vs Temperature:	**+100ppm, -150ppm Typical**
Input Current:	**20mA Typical, 25mA Max**
Output:	**SineWave**
Pullability APR:	**±50ppm Min**
Linearity:	**±20% Max**
Output Power:	**+7dBm Min into 50 Ω Load**
Start-up time:	**2ms Typical, 10ms Max**
2nd Harmonic:	**-14dBc Typical, -10dBc Max**
Sub-harmonics:	**None**
Modulation BW:	**>20 kHz @ -3dB**
Phase Jitter: 12 kHz~80 MHz	**<1ps RMS (1-sigma) Max**



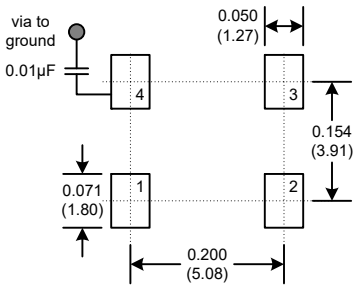


PIN	Function
1	Volt Control
2	GND
3	OUT
4	Vdd

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



SUGGESTED PAD LAYOUT



Dimensions inches (mm)
All dimensions are Max unless otherwise specified.

Rev: M
Date: 02-Oct-2017

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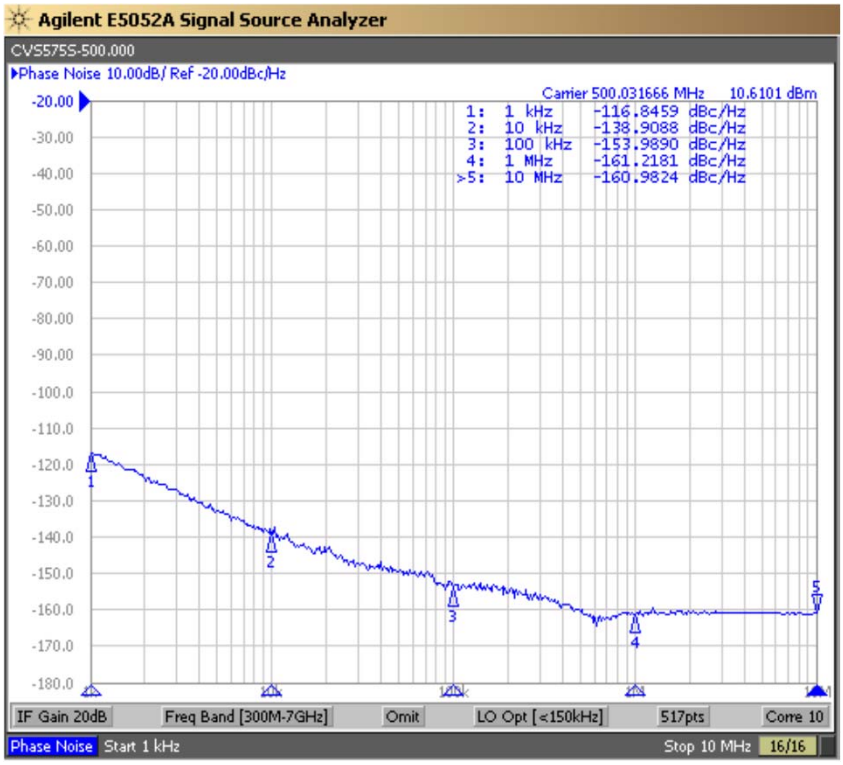
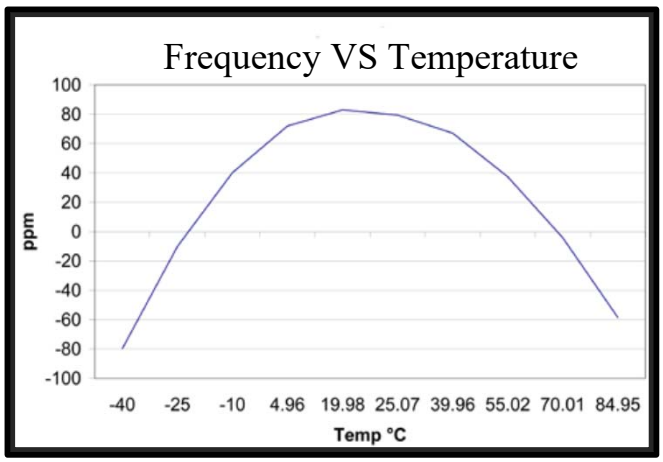
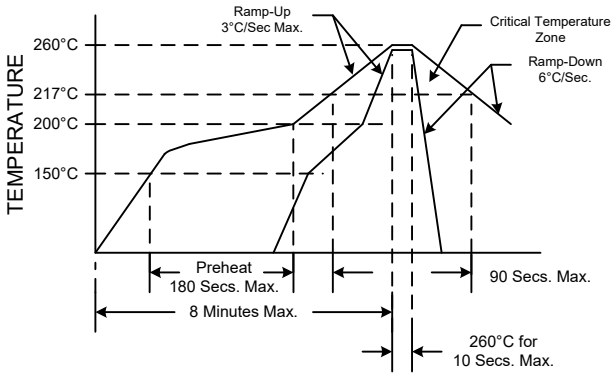




RECOMMENDED REFLOW SOLDERING PROFILE



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
Resistance to Solvents	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