

**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, -20°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.**

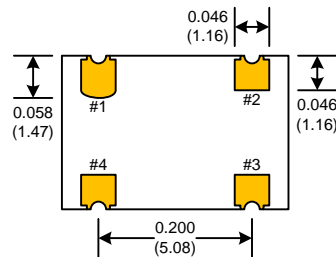
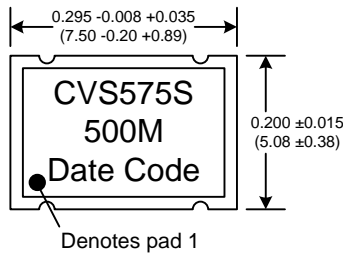
**Applications include PLL frequency translation, test and measurement, avionics, point-to-point radios, and multi-point radios.**



**Frequency:** 500 MHz  
**Temperature Range:** -20°C to 70°C  
 CVS575S-500.000  
 -40°C to 85°C  
 CVS575SX-500.000  
 -45°C to 90°C  
**Storage:**  
**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

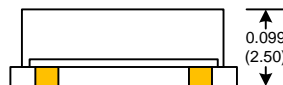
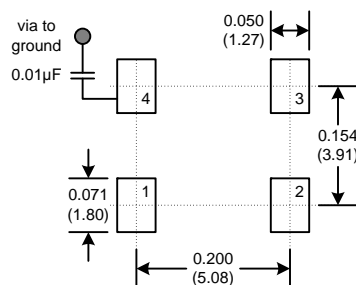


**Output:** True SineWave  
**Pullability APR:** ±50ppm Min  
**Linearity:** ±20% Max  
**Output Power:** +7dBm Min into 50 Ω Load  
**Start-up time:** 2ms Typical, 10ms Max  
**2nd Harmonic:** -14dBc Typical, -10dBc Max  
**Sub-harmonics:** None  
**Modulation BW:** >20 kHz @ -3dB  
**Phase Jitter:** 12 kHz~80 MHz <1ps RMS (1-sigma) Max



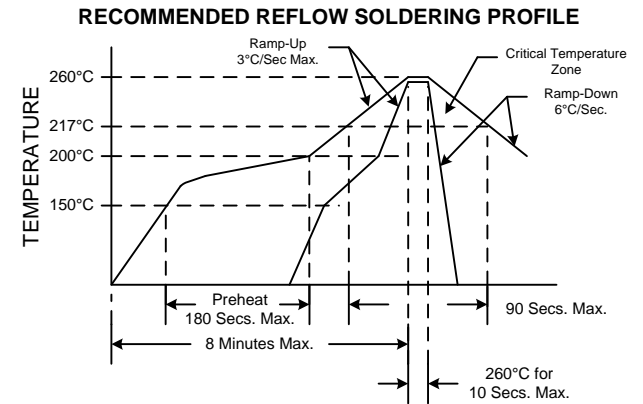
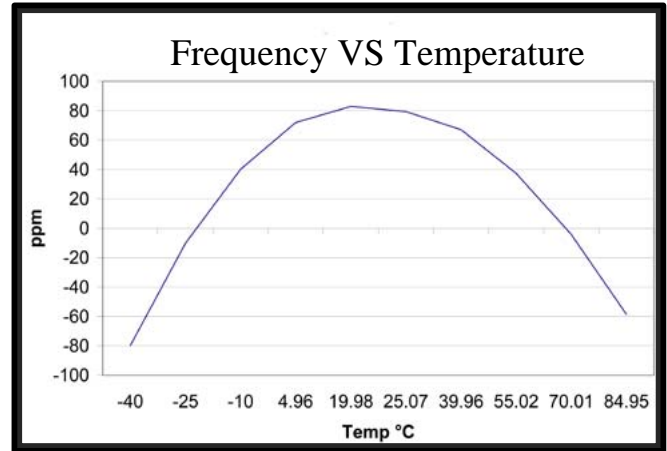
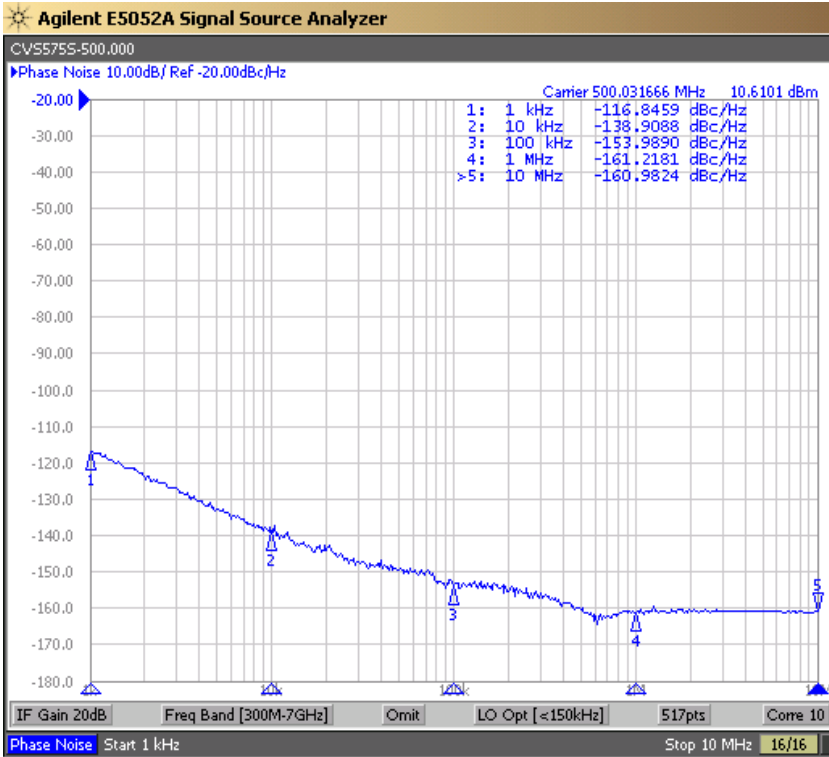
| PIN | Function     |
|-----|--------------|
| 1   | Volt Control |
| 2   | GND          |
| 3   | OUT          |
| 4   | Vdd          |

**SUGGESTED PAD LAYOUT**



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

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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                  |

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