



Preliminary

XVT9009

**20 MHz
VCTCXO**

- **Voltage Controlled Temperature Compensated Crystal Oscillator**
- **Excellent Frequency Stability & Low Phase Noise**
- **7 x 5 x 2 mm Surface-Mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Nominal Frequency	F ₀			20.000000		MHz
Storage Temperature			-55		+125	°C
Operating Temperature Range			-40		+85	°C
Power Supply Voltage	V _{DD}		2.97	3.30	3.63	V
Output Voltage with Load 10 pF 10 KΩ	V _{OUT}		1.0			V _{P-P}
Output Wave form			Sinewave			
Power Supply Current	I _{DD}				8.0	mA
Control Voltage	V _{CON}			1.65 ±1.0		V
Control Voltage Input Impedance			100K			ohms
Frequency Tolerance, V _{CONTROL} =1.65 V (as received)			±2.0 ppm maximum @ 25 °C ±3 °C			
Frequency Stability versus:						
Temperature, -40 to 85 °C				±0.5		ppm
Supply Voltage, 2.97 to 3.63 V				±0.2		ppm
Load, 10 pF 10 KΩ ±10%				±0.2		ppm
Control Voltage Frequency Range (1.65 ±1.0 V)				±5		ppm
Start Up Time, 90% of final RF level in V _{P-P}					2.0	ms
First Year Aging @ 25 °C				±1		ppm
10 Year Aging @ 25 °C				±5		ppm
Harmonics					-5.0	dBc
SSB Phase Noise:						
@ 1 kHz Carrier Offset				-135		dBc/Hz
@ 10 kHz Carrier Offset				-145		dBc/Hz
@ 100 kHz Carrier Offset				-150		dBc/Hz
Standard Shipping Quantity on 180 mm (7") Reel				500		units
Lid Symbolization			9009 // YWWS			



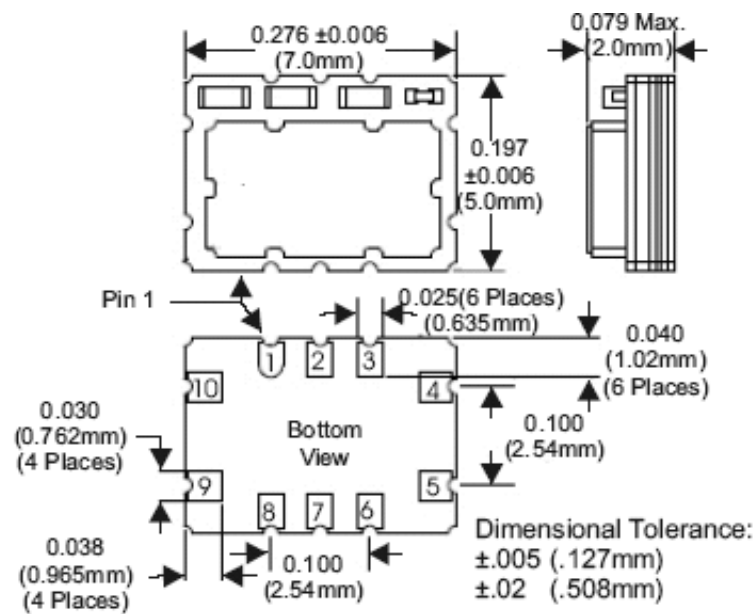
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

Notes:

1. The design, manufacturing process, and specifications of this device are subject to change without notice.

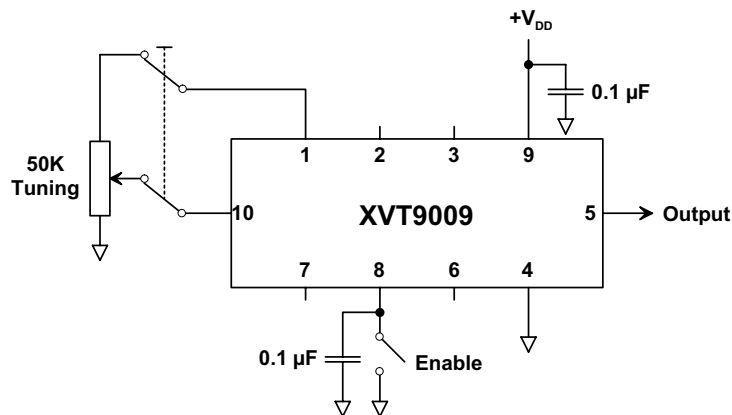
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case 5 x 7 mm Nominal Footprint

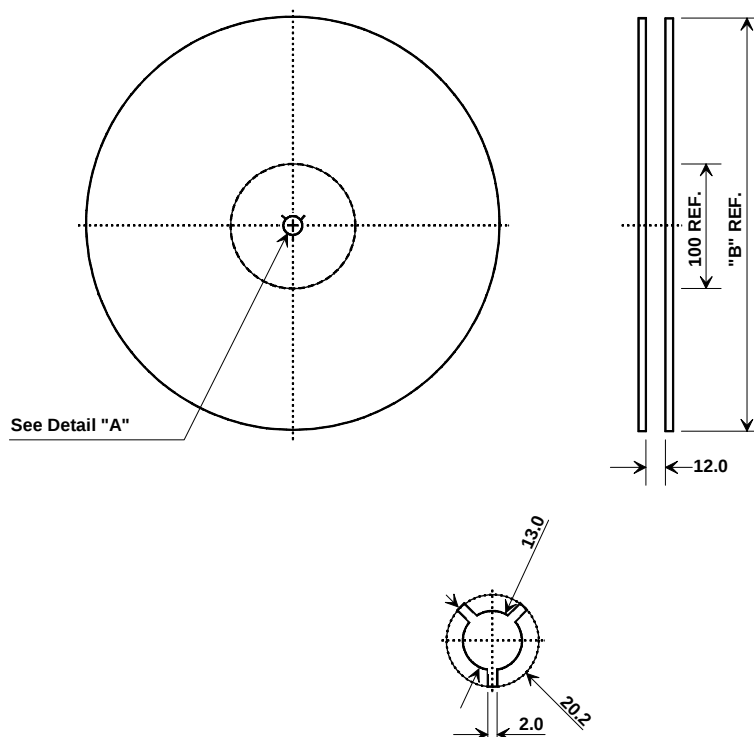


Pin	Connection
1	Control Voltage Full Scale Reference
2	No Connection
3	DC-coupled Output (do not connect)
4	Ground
5	Output (V_{OUT})
6	No Connection
7	No Connection
8	Enable (tri-state control, ground to disable output)
9	Supply Voltage (V_{DD})
10	Control Voltage V_{CON} (leave unconnected if not used)

XVT9009 Application Circuit



Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	9.4 mm
Bo	7.4 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm

