



Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

XO5300AC-66.6666MHz-A

Ceramic Surface Mount Crystal Oscillator

Features and Benefits

- ±50 ppm stability over operating temperature
- Durable SMD package
- Custom frequency low noise clock

Typical Applications

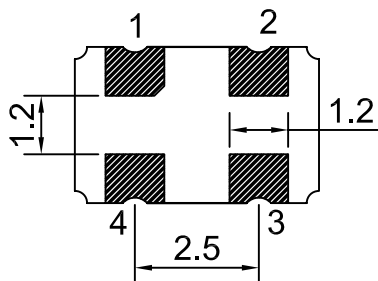
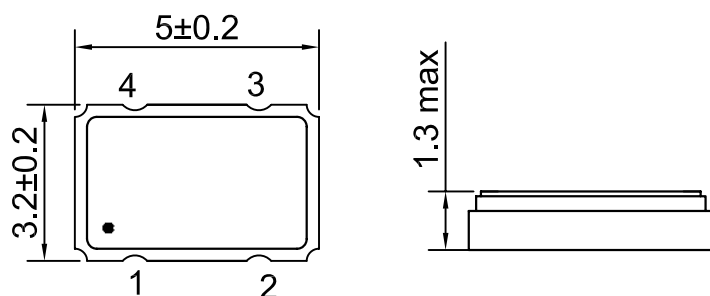
Reference clock for microprocessor IC in data communication

Description

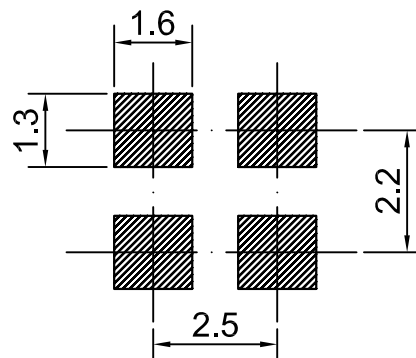
XO5300AC-66.6666MHz-A offers outstanding stability and custom frequency in a durable SMD package, ideal for reference clock for microprocessor IC in data communication.

Mechanical Drawing & Pin Connections

Drawing No: MD170033-1



Recommended Land Pattern



Pin Connections:

Pad 1	Output Enable
Pad 2	Ground
Pad 3	Output
Pad 4	Supply V(Vcc)

Unit in mm

1mm = 0.0394 inches



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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F_{nom}			66.6666		MHz	
Output			CMOS				
Load				15		pF	
Duty Cycle			40		60	%	
T-Rise					6	ns	
T-Fall					6	ns	
High Output Voltage			0.9			vdd	
Low Output Voltage					0.1	vdd	
Power Supply							
Voltage	V_{cc}	$\pm 10\%$		1.8		V	
Current Consumption		Warm-up			40	mA	
Frequency Stability							
Versus temperature		-40°C to 85°C			± 50	ppm	
Aging		Per year			± 5	ppm	
Environmental Conditions							
Operating temperature range		-40°C to +85°C					
Storage temperature range		-40°C to +85°C					

Reliability Test	Condition	Basis of Verdict	Unit
Aging	Temperature: +85°C; Time: 1000 hours	$\Delta FL \leq \pm 10$	ppm
Moisture Resistance	High temperature: +65°C $\pm 2^\circ\text{C}$ (10 hours, including heating) Low Temperature: +25°C $\pm 2^\circ\text{C}$ (2 hours, including cooling) Humidity: 85% for 10 cycles (24 hours / cycle)		
Humidity	Temperature: +85°C $\pm 2^\circ\text{C}$; Humidity: 85%; Time: 1000 hours		
Life	Temperature: +85°C; Time: 1000 hours, rated VDD applied		
Low Temperature	Temperature: -40°C $\pm 2^\circ\text{C}$; Time: 1000 hours		
Temperature Shock	5 min -55°C $\pm 2^\circ\text{C}$ (5 min) \longleftrightarrow +125°C $\pm 2^\circ\text{C}$ (5 min); For 1000 cycles	$\Delta FL \leq \pm 5$	ppm
Drop	Height: 1m; 3 times		
Mechanical Shock	Peak: 100g's Duration: 6 ms Waveform: Half-sine Velocity Change: 12.3 ft/sec Direction: +X, -X, +Y, -Y, +Z, -Z 3 times / direction		
Vibration	Frequency: 10 ~ 2000 Hz; Acceleration: 5g/s Direction: X, Y, Z Duration: 20 min / direction Times: 12	$\Delta FL \leq \pm 5$ No Rust	ppm
Reflow	<div> <div> <div>260°C $\pm 5^\circ\text{C}$</div> <div>150°C $\pm 5^\circ\text{C}$</div> </div> <div>Cycle Time: 200 sec max.</div> </div>		
Solder	Temperature: +250°C; Time: 8 hours	Solder Coverage ≥ 95	%
Terminal Strength	1.8 kg of the tangential thrust (60 s) 1.8 kg of the perpendicular tension (60 s)	No Rupture Observed	