

FEATURES

- Miniature 5.0 x 3.2mm package, small footprint
- Frequency Range 1.0MHz to 125MHz
- Tristate function standard
- Supply voltage 1.0, 1.2, 1.8, 2.5, 3.3 or 5.0 Volts

DESCRIPTION

The XO53 microminiature oscillators have a small footprint but is fully specified. The oscillator is available with supply voltage of 1.0, 1.2, 1.8, 2.5, 3.3 or 5.0 Volts.

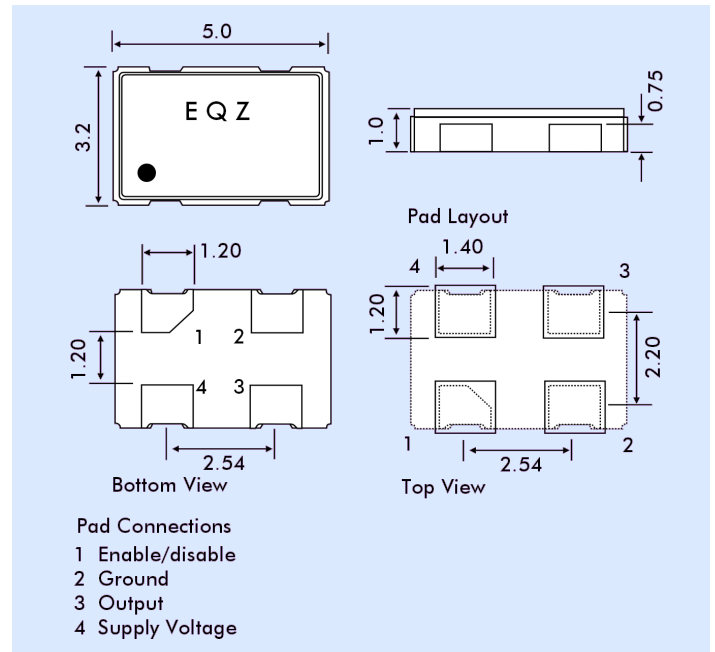
SPECIFICATION

Frequency Range:	1.0MHz to 125.0MHz
Supply Voltage:	1.0, 1.20, 1.8, 2.5, 3.3 or 5.0 Volts
Output Logic:	LSTTL/HCMOS
Frequency Stability over Temperature Range	
0° to +50°C:	from ±10ppm
0° to +70°C:	from ±15ppm
-55° to +125°C:	from ±25ppm
Rise/Fall Time:	10ns max. (10% to 90%Vdd) (frequency dependant)
Output Voltage:	
HIGH '1':	90%Vdd minimum (see table)
LOW '0':	10%Vdd maximum (see table)
Output Load	
CMOS:	15pF (50pF available for 3.3V supply)
TTL:	10 LSTTL loads
Duty Cycle:	50%±5% typical
Supply Current:	See table
Startup Time	
1.0MHz to 32MHz:	5ms max.
32MHz to 125MHz:	10ms max.
Ageing:	±5ppm max. per year
Phase Jitter RMS:	10ps typical
Enable Time:	100ms max.
Disable Time:	100ns max.
Tristate Function (Pad 1):	
Output (Pad 3) is active if Pad 1 is not connected or a voltage of 2.2V or greater is applied to Pad 1. Output is high impedance when a voltage of 0.8V or lower is applied to Pad 1.	
RoHS Status:	RoHS Compliant and pB free

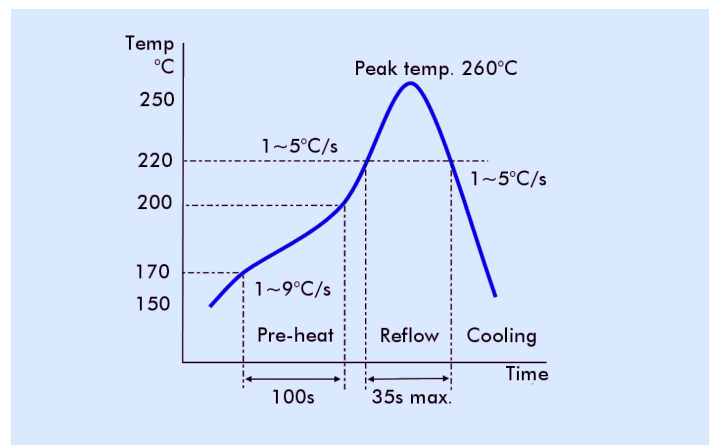
Note: Parameters are measured at ambient temperature of 25°C, supply voltage as stated and a load of 15pF



OUTLINE & DIMENSIONS



SOLDER TEMPERATURE PROFILE



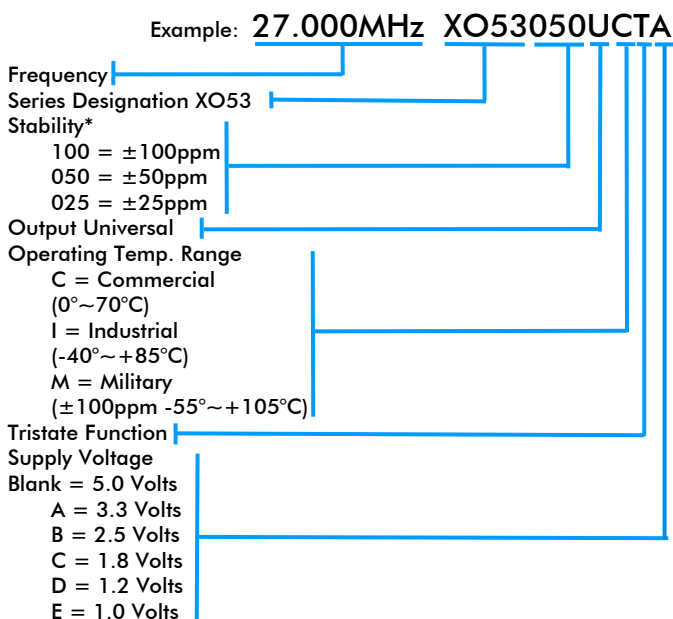
SUPPLY VOLTAGE/CURRENT CONSUMPTION/RISE AND FALL TIME

Supply Voltage	+1.0VDC±5% Code = 'E'	+1.2VDC±5% Code = 'D'	+1.8VDC±5% Code = 'C'	+2.5VDC±5% Code = 'B'	+3.3VDC±5% Code = 'A'	+5.0VDC±10% Code = '_'
Available Frequency Range	0.5~40MHz	0.5~50MHz	1.0~160MHz	0.3~160MHz	0.3~160MHz	0.5~125.0MHz
Logic HIGH '1' (90%Vdd min.)	0.9V min.	0.9V min.	1.62V min.	2.25V min.	2.97V min.	4.5V min.
Logic LOW '0' (90% Vdd max.)	0.1V max.	0.1V max.	0.18V max.	0.25V max.	0.33V max.	0.5V max.
Current Consumption	[0.5~32MHz] 2.0mA max.	[0.5~32MHz] 2.5mA max.	[1.0~1.5MHz] 5mA max.	[0.3~1.5MHz] 5mA max.	[0.3~1.5MHz] 5mA max.	[0.3~1.5MHz] 5mA max.
			[1.5~20MHz] 8mA max.	[1.5~20MHz] 8mA max.	[1.5~20MHz] 8mA max.	[1.5~20MHz] 10mA max.
	[32.1~40MHz] 3.0mA max.	[32.1~50MHz] 3.5mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.
Rise Time/Fall Time	6ns max.	6ns max.	7ns max.	7ns max.	10ns max.	10ns max.
	Measured between 10% ~ 90% of wave form (CL = 15pF)					

ENVIRONMENTAL PERFORMANCE SPECIFICATION

RoHS Status:	Compliant
Storage Temperature Range:	-55° to +105°C
Humidity:	85% RH, 85°C for 48 hours
Hermetic Seal:	Leak rate 2x10 ⁻⁸ ATM -cm ³ /s max.
Solderability:	MIL-STD-202F Method 208E
Reflow:	260°C for 10 sec (see diagram)
Vibration:	MIL-STD-202F Method 204, 35±5 mins, 50 to 2000Hz
Shock:	MIL-STD-202F Method 213B, test Condition E, 50g 11ms.

PART NUMBERING



* For other stability requirements enter figure required.
E.g. for ±20 ppm enter '020' after 'XO53'.