

### FEATURES

- Miniature 5.0 x 3.2 x 1.2mm package, small footprint
- Frequency Range 250kHz to 200MHz (V<sub>DD</sub> Dependant)
- Tristate function standard
- Supply voltage 1.2, 1.5, 1.8, 2.5, 3.3 or 5.0 Volts



### DESCRIPTION

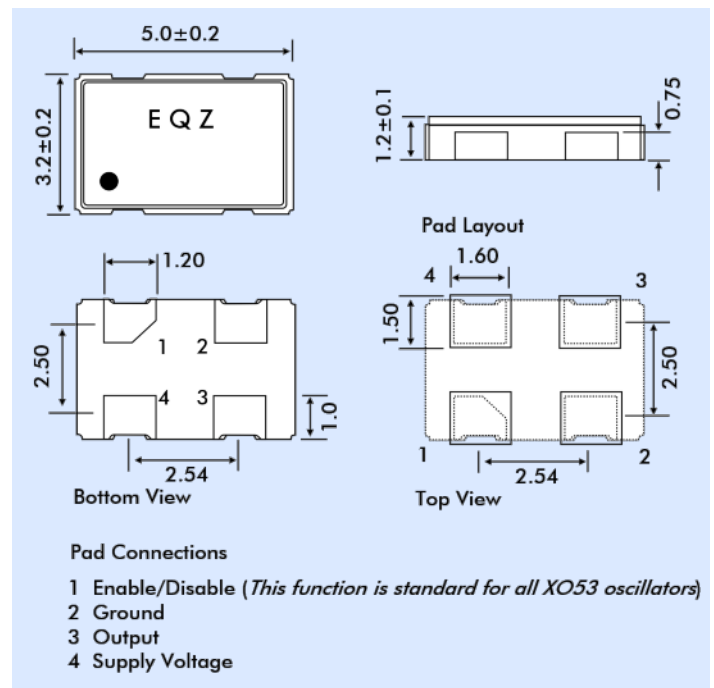
The XO53 microminiature oscillators are a small footprint oscillator and fully specified. The oscillator is available with supply voltage of 1.2, 1.5, 1.8, 2.5, 3.3 or 5.0 Volts.

### SPECIFICATION

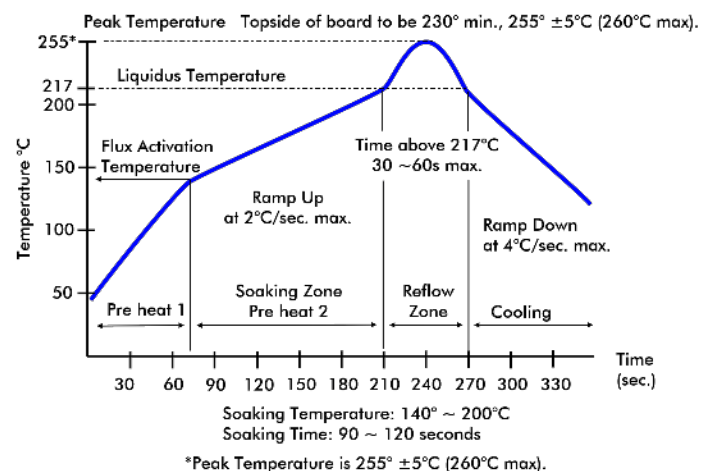
Frequency Range:	250kHz to 200MHz (V <sub>DD</sub> Dependant)
Supply Voltage:	1.0, 1.2, 1.5, 1.8, 2.5, 3.3 or 5.0 Volts
Output Logic:	HCMOS
Frequency Stability over Temperature Range	
0° to +50°C:	from ±10ppm
-10° to +70°C:	from ±15ppm
-55° to +125°C:	from ±25ppm
Rise/Fall Time:	10ns max. (10% to 90%V <sub>DD</sub> ) (frequency dependant)
Output Voltage:	
HIGH '1':	90%V <sub>DD</sub> minimum (see table)
LOW '0':	10%V <sub>DD</sub> maximum (see table)
Output Load	
CMOS:	15pF (50pF available 3.3V & 5V V <sub>DD</sub> )
Duty Cycle:	50%±10%, ±5% available - Add "S" at end of part number
Supply Current:	See table
Startup Time	
1MHz to 32MHz:	5ms max.
32MHz+ to 160MHz:	10ms max.
Ageing:	±3ppm max. per year
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



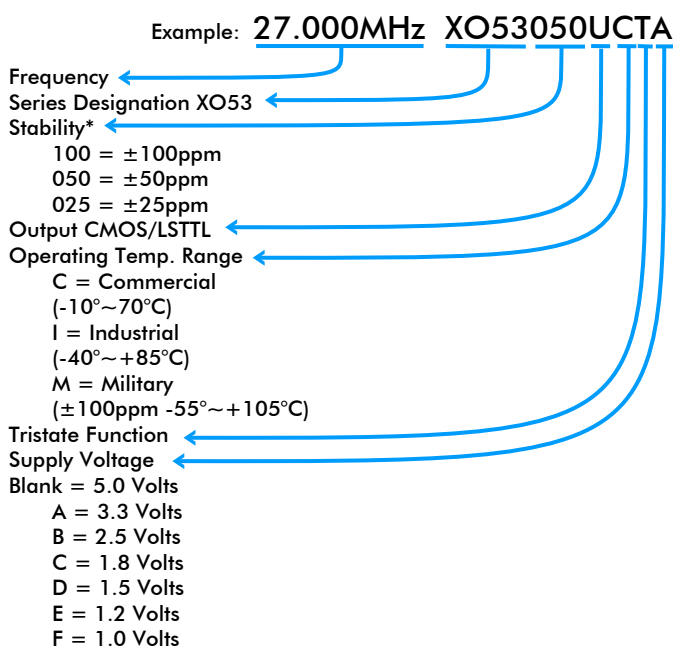
### SOLDER TEMPERATURE PROFILE



### SUPPLY VOLTAGE-DEPENDENT PARAMETERS

Supply Voltage	+1.2VDC±5% Code = 'E'	+1.5VDC±5% Code = 'D'	+1.8VDC±5% Code = 'C'	+2.5VDC±5% Code = 'B'	+3.3VDC±5% Code = 'A'	+5.0VDC±10% Code = '1'
Frequency Range	250kHz~50MHz	250kHz~50MHz	32.768kHz~312kHz~160MHz	32.768kHz~312kHz~160MHz	32.768kHz~312kHz~200MHz	375kHz~100MHz
Logic HIGH '1' (90%Vdd min.)	0.9V min.	1.35V.min	1.62V min.	2.25V min.	2.97V min.	4.5V min.
Logic LOW '0' (10% Vdd max.)	0.1V max	0.15V max.	0.18V max.	0.25V max.	0.33V max.	0.5V max.
Current Consumption	[1~1.5MHz] 4mA max.	[0.3~1.5MHz] 4mA 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] 4mA max.	[1.5~20MHz] 4mA max.	[1.5~20MHz] 8mA max.	[1.5~20MHz] 8mA max.	[1.5~20MHz] 8mA max.	[1.5~20MHz] 8mA max.
	[20.1~50MHz] 4mA max.	[20~60MHz] 4mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.	[20~50MHz] 15mA max.
	-	-	[50~160MHz] 22mA max.	[50~160MHz] 25mA max.	[50~160MHz] 35mA max.	[50~125MHz] 40mA max.
Rise Time/ Fall Time	6ns max.	6ns max.	7ns max.	7ns max.	10ns max.	10ns max.

### PART NUMBERING



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

### 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 <sup>-8</sup> ATM -cm <sup>3</sup> /s max.
Solderability:	MIL-STD-202F Method 208E
Reflow:	248°C max. (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.