



# Full Size Clock Oscillators TTL/HCMOS Compatible



The XO-54 series oscillator is full size tri-state enable/disable control. The metal package with pin 7 case ground acts as shielding to minimize EMI radiation.

#### **FEATURES**

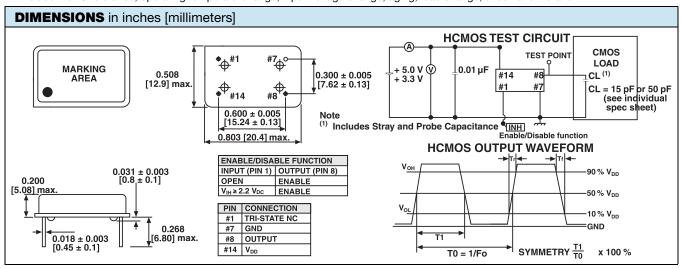
- Size: 14 pin full size
- Industry standard
- Wide frequency range
- Low cost
- Tri-state enable/disable
- · Resistance weld package
- 5 V
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



STANDARD ELECTRICAL SPECIFICATIONS							
PARAMETER	SYMBOL CONDITION		VALUE				
Frequency range	Fo	- 1.000 MHz to 100.000 MH					
Frequency stability (1)		all conditions ± 25 ppm, ± 50 ppm, ± 100					
Operating temperature range	т		0 °C to 70 °C				
	T <sub>OPR</sub>	-	- 40 °C to + 85 °C (option)				
Storage temperature range	T <sub>STG</sub>	55 °C to + 125 °C					
Power supply voltage	$V_{DD}$	- 5.0 V ± 10 %					
Aging (first year)		25 °C ± 3 °C	± 5 ppm				
		1.000 MHz to 23.999 MHz	20 mA max.				
Supply current		24.000 MHz to 49.999 MHz	30 mA max.				
	I <sub>DD</sub>	50.000 MHz to 69.999 MHz	40 mA max.				
		70.000 MHz to 100.000 MHz	60 mA max.				
Output symmetry	Sym	at ½ V <sub>DD</sub>	40 %/60 % (45 %/55 % option)				
Rise time	t <sub>r</sub>	10 % V <sub>DD</sub> to 90 % V <sub>DD</sub>	10 ns max.				
Fall time	t <sub>f</sub>	90 % V <sub>DD</sub> to 10 % V <sub>DD</sub>	10 ns max.				
Output voltage	V <sub>OH</sub>	-	90 % V <sub>DD</sub> min.				
	V <sub>OL</sub>	-	10 % V <sub>DD</sub> max.				
Output load	TTL load	-	1 TTL to 10 TTL				
		-	to 50M: 50 pF				
	HCMOS load	-	to 70M: 30 pF				
		-	to 100M: 15 pF				
Start-up time	t <sub>s</sub>	-	10 ms max.				
Pin 1, tri-state function		-	pin 1 = H or open (output active at pin 3)				
			pin 1 = L (high impedance at pin 3)				

### Note

<sup>(1)</sup> Include: 25 °C tolerance, operating temperature range, input voltage change, aging, load change, shock and vibration



Document Number: 35024 Revision: 08-Mar-11 For technical questions, contact: frequency@vishay.com

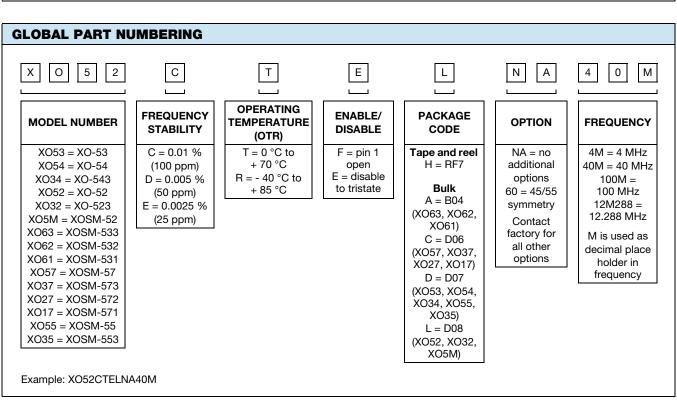
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ORDERING INFORMATION										
XO-54	В	R	E	40 <b>M</b>	e2					
MODEL	FREQUENCY STABILITY	OTR	ENABLE/DISABLE	FREQUENCY/MHz	JEDEC LEAD (Pb)-FREE					
	AA = 0.0025 % (25 ppm)	blank = 0 °C to + 70 °C	blank = pin 1 open		standard					
	A = 0.005 % (50 ppm)	$R = -40  ^{\circ}\text{C} \text{ to} + 85  ^{\circ}\text{C}$	E = disable to tri-state							
	B = 0.01 % (100 ppm)									
	standard									

GLOBAL PART NUMBER								
X O 5 4	FREQUENCY STABILITY	T OTR	E ENABLE/ DISABLE	PACKAGE CODE	N A OPTIONS	FREQUENCY		



#### **PART MARKING**

Line 1: M2803XXXXX (part number)
Line 2: XX.XXXXM (frequency)
Line 3: yywwv (date/factory code)

For technical questions, contact: <u>frequency@vishay.com</u>

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