

Full Size Clock Oscillators TTL Compatible



The XO-53 series oscillator is TTL compatible and features fast rise/fall times with high reliability at low cost. The metal package with pin 7 case ground acts as shielding to minimize EMI radiation.

FEATURES

- 10 TTL output load
- Size: 14 pin full size
- Industry standard
- Wide frequency range
- Low cost
- Resistance weld package
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

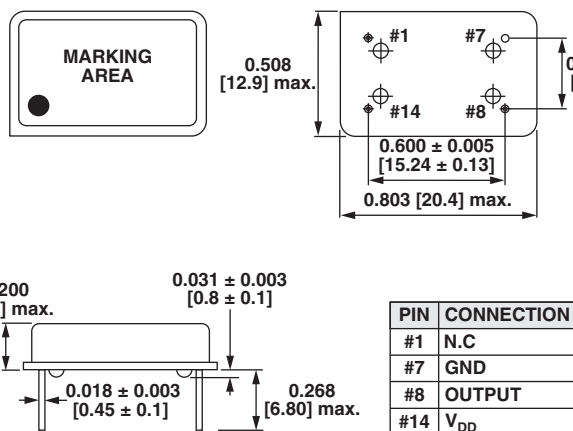
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range	F_O	-	1.0 MHz to 100.000 MHz
Frequency stability ⁽¹⁾		all conditions	± 25 ppm, ± 50 ppm, ± 100 ppm
Operating temperature range	T_{OPR}	-	0 °C to 70 °C
			- 40 °C to + 85 °C (option)
Storage temperature range	T_{STG}	-	- 55 °C to + 125 °C
Power supply voltage	V_{DD}	-	5.0 V $\pm$ 10 %
Aging (first year)		25 °C $\pm$ 3 °C	± 5 ppm
Supply current	I_{DD}	1.0 MHz to 23.999 MHz	15 mA max.
		24.000 MHz to 69.999 MHz	30 mA max.
		70.000 MHz to 100.000 MHz	60 mA max.
Output symmetry	Sym	at 1.4 V	40 %/60 % (45 %/55 % option)
Rise time	t_r	0.4 V to 2.4 V	5 ns max.
Fall time	t_f	2.4 V to 0.4 V	5 ns max.
Output voltage	V_{OH}	-	2.4 V min.
	V_{OL}	-	0.4 V max.
Output load	TTL load	-	1 TTL to 10 TTL
Start-up time	t_s	-	10 ms max.

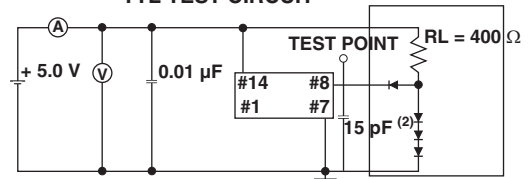
Note

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

DIMENSIONS in inches [millimeters]



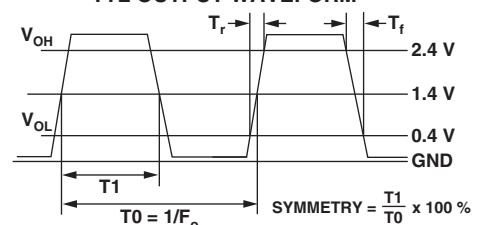
TTL TEST CIRCUIT



Note

⁽²⁾ Includes Stray and Probe Capacitance

TTL OUTPUT WAVEFORM



ORDERING INFORMATION

XO-53	B	R	40M	e2
MODEL	FREQUENCY STABILITY AA = 0.0025 % (25 ppm) A = 0.005 % (50 ppm) B = 0.01 % (100 ppm) standard	OTR blank = 0 °C to + 70 °C R = - 40 °C to + 85 °C	FREQUENCY/MHz	JEDEC LEAD (Pb)-FREE standard

GLOBAL PART NUMBER

X	O	5	3	C	T	D	N	A	4	0	M
MODEL				FREQUENCY STABILITY	OTR	PACKAGE CODE	OPTIONS		FREQUENCY		

GLOBAL PART NUMBERING

X	O	5	2	C	T	E	L	N	A	4	0	M
MODEL NUMBER				FREQUENCY STABILITY	OPERATING TEMPERATURE (OTR)	ENABLE/DISABLE	PACKAGE CODE	OPTION	FREQUENCY			
XO53 = XO-53 XO54 = XO-54 XO34 = XO-543 XO52 = XO-52 XO32 = XO-523 XO5M = XOSM-52 XO63 = XOSM-533 XO62 = XOSM-532 XO61 = XOSM-531 XO57 = XOSM-57 XO37 = XOSM-573 XO27 = XOSM-572 XO17 = XOSM-571 XO55 = XOSM-55 XO35 = XOSM-553				C = 0.01 % (100 ppm) D = 0.005 % (50 ppm) E = 0.0025 % (25 ppm)	T = 0 °C to + 70 °C R = - 40 °C to + 85 °C	F = pin 1 open E = disable to tristate	Tape and reel H = RF7 Bulk A = B04 (XO63, XO62, XO61) C = D06 (XO57, XO37, XO27, XO17) D = D07 (XO53, XO54, XO34, XO55, XO35) L = D08 (XO52, XO32, XO5M)	NA = no additional options 60 = 45/55 symmetry Contact factory for all other options	4M = 4 MHz 40M = 40 MHz 100M = 100 MHz 12M288 = 12.288 MHz M is used as decimal place holder in frequency			
Example: XO52CTELNA40M												

PART MARKING

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



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