Surface Mount Oscillators

The XOSM-531 series is an ultra miniature package clock oscillator with dimensions 5.0 x 3.2 x 1.3 mm. It is mainly used in portable PC and telecommunication devices and equipment.

FEATURES

- 5 x 3.2 x 1.3 Miniature Package
- Tri-state enable/disable
- HCMOS compatible
- Tape and Reel
- IR Re-flow
- 1.8 V input voltage
- 100 % Lead (Pb)-free and RoHS compliant

RoHS
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER		SYMBOL	CONDITION	XOSM-531
Frequency Range		F_O		1.544 MHz ~ 100.000 MHz
Frequency Stability*			All Condition*	± 25 ppm, ± 50 ppm, ± 100 ppm
Operating Temperature		T_{OPR}		0 °C ~ 70 °C (- 40 °C ~ + 85 °C option)
Storage Temperature Range		T_{STG}		- 55 °C ~ + 125 °C
Power Supply Voltage		V_{DD}		1.8 V ± 10 %
Aging (First Year)			25 °C ± 3 °C	± 5 ppm
Supply Current		I_{DD}	1.544 MHz to 9.999 MHz	6 mA Max
			10.000 MHz to 34.999 MHz	7 mA Max
			35.000 MHz to 49.999 MHz	15 mA Max
			50.000 MHz to 100.000 MHz	25 mA Max
Output Symmetry		Sym	At 1/2 V_{DD}	40/60 % (45/55 % Option)
Rise Time		T_r	10 % V_{DD} ~ 90 % V_{DD}	5 ns Max
Fall Time		T_f	90 % V_{DD} ~ 10 % V_{DD}	5 ns Max
Output Voltage		V_{OH}		90 % V_{DD} Min
		V_{OL}		10 % V_{DD} Max
Output Load	HCMOS Load			30 pF Max (15 pF typ.)
Start-up Time			Ts	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

* Include: 25 °C tolerance, operating temperature range, input voltage change, aging, load change, shock and vibration.
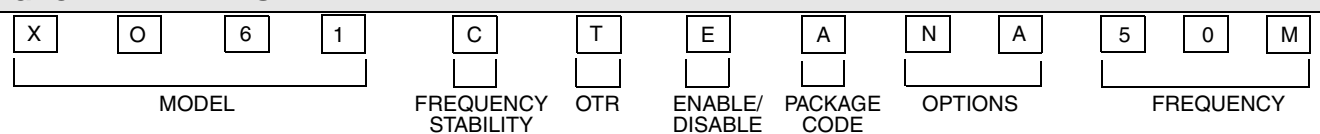
DIMENSIONS in inches [millimeters]

PIN	CONNECTION
#1	TRI-STATE/NC
#2	GND
#3	OUTPUT
#4	V_{DD}
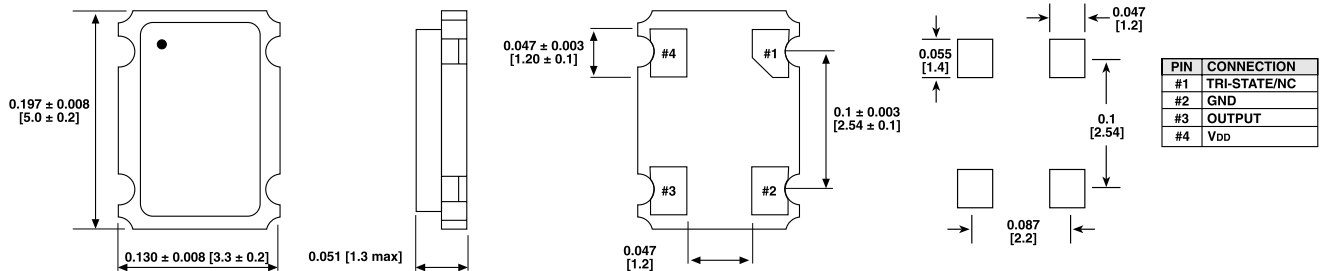
***note: A 0.01 µF bypass capacitor should be placed between VDD (Pin4) and GND (Pin2) to minimize power supply line noise

ORDERING INFORMATION

XOSM-531	B	R	E	50 M	e4
MODEL	FREQUENCY STABILITY AA = 0.0025 % (25 ppm) A = 0.005 % (50 ppm) B = 0.01 % (100 ppm)	OTR Blank = Standard R = - 40 °C to + 85 °C	ENABLE/DISABLE E = Disable to Tristate	FREQUENCY/MHz	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

X	O	6	1	C	T	E	A	N	A	5	0	M
MODEL				FREQUENCY STABILITY	OTR	ENABLE/ DISABLE	PACKAGE CODE	OPTIONS		FREQUENCY		

Surface Mount Oscillators

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	OPTIONS	FREQUENCY
XO53 = XO-53 XO54 = XO-54 XO34 = XO-543 XO52 = XO-52 XO32 = XO-523 XO56 = XO-56 XOVC = XOVC-23 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, XO56, XOVC, 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

For technical questions contact: frequency@vishay.com

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.