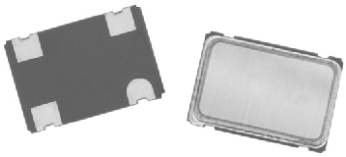
Surface-Mount Oscillator



The XOSM-573 series is an ultra miniature package clock oscillator with dimensions 7.0 mm x 5.0 mm x 1.9 mm. It is mainly used in portable PC and telecommunication devices and equipment

FEATURES

- Size: 7.0 x 5.0 x 1.9 (mm)
- Miniature package
- Tri-state enable / disable
- TTL/HCMOS compatible
- Tape and reel
- I_R re-flow
- 3.3 V input voltage
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE

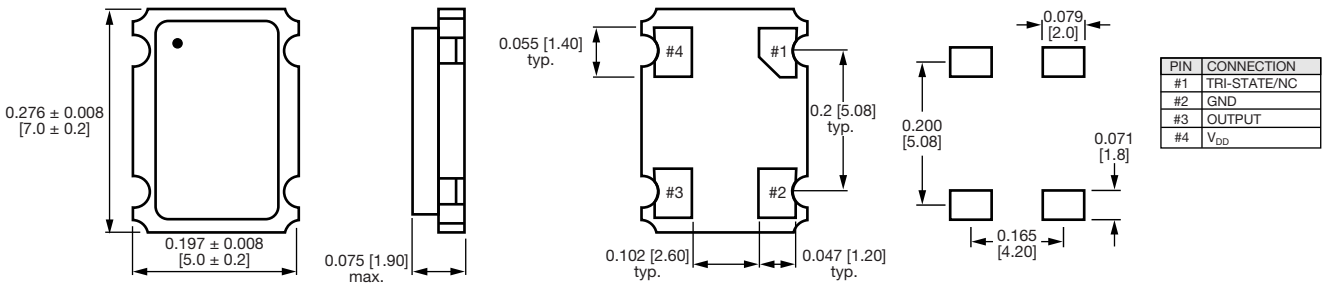
STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range	F_O	-	1.500 MHz to 100.000 MHz
Frequency stability (1)		All conditions	± 20 ppm, ± 25 ppm, ± 30 ppm, ± 35 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}	-	3.3 V ± 10 %
Aging (first year)		25 °C ± 3 °C	± 5 ppm
Supply current	I_{DD}	1.500 MHz to 20.000 MHz	10 mA max.
		20.001 MHz to 50.000 MHz	20 mA max.
		50.001 MHz to 67.000 MHz	30 mA max.
		67.001 MHz to 100.000 MHz	55 mA max.
Output symmetry	Sym	At ½ V_{DD}	40 %/60 % (45 %/55 % option)
Rise/fall time	t_r/t_f	1.500 MHz to 50.000 MHz	6 ns
		50.001 MHz to 80.000 MHz	4 ns
		80.001 MHz to 100.000 MHz	2 ns
Output voltage	V_{OH}	-	90 % V_{DD} min.
	V_{OL}	-	10 % V_{DD} max.
Output load		-	2 TTL or 15 pF
Start-up time	t_s	-	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

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

DIMENSIONS in inches [millimeters]



Note

- A 0.01 µF bypass capacitor should be placed between V_{DD} (pin 4) and GND (pin 2) to minimize power supply line noise

For technical questions, contact: frequency@vishay.com

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PART NUMBER CONFIGURATIONS (to be used on **all New Designs**)

X O	5 7	C	3	D	R	E	H	T	1 6 M 1 2 8
Oscillator	Package / Size	Logic	Voltage	Stability	Temp.	Tri-State	Package	Options	Frequency
	5 7	**C** = CMOS	**3** = 3.3 V	**C** = ± 100 ppm **D** = ± 50 ppm **F** = ± 35 ppm **G** = ± 30 ppm **E** = ± 25 ppm **H** = ± 20 ppm	**S** = -10 °C to +70 °C **R** = -40 °C to +85 °C	**N** = no connect **E** = Tri-State	**H** = tape and reel	**X** = no options **T** = 45/55 Contact factory for available options	Use “M” as decimal place holder Frequency must be six digits - complete with “0” at the end

Previous / legacy part number information: still valid for existing designs;
all New Designs should use the new part configuration above

PREVIOUS / LEGACY GLOBAL PART NUMBERING

X O 3 7	C	T	E	C	N A	4 0 M
MODEL NUMBER	**FREQUENCY STABILITY**	**OPERATING TEMPERATURE (OTR)**	**ENABLE/ DISABLE**	**PACKAGE CODE**	**OPTION**	**FREQUENCY**
XO63 = XOSM-533 XO62 = XOSM-532 XO61 = XOSM-531 XO57 = XOSM-57 XO37 = XOSM-573 XO27 = XOSM-572 XO17 = XOSM-571	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	E = disable to tristate	**Tape and reel** H = RF7 **Bulk** A = B04 (XO63, XO62, XO61) C = D06 (XO57, XO37, XO27, XO17)	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: XO37CTECNA40M

XOSM-573	B	R	E	50M	e4
MODEL	FREQUENCY STABILITY	OTR	ENABLE / DISABLE	FREQUENCY/MHz	JEDEC® LEAD (Pb)-FREE STANDARD
	AA = 0.0025 % (25 ppm) A = 0.005 % (50 ppm) B = 0.01 % (100 ppm) standard	blank = standard R = -40 °C to +85 °C	E = disable to tri-state		

PART MARKING

Line 1: M2809XXXXX (part number)

Line 2: XX.XXXXM (frequency)

Line 3: yywwvv (date/factory code)

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