

Surface Mount Oscillator



The XOSM-533 series is an ultra miniature package clock oscillator with dimensions $5.0~\text{mm} \times 3.2~\text{mm} \times 1.3~\text{mm}$. It is mainly used in portable PC and telecommunication devices and equipment.

FEATURES

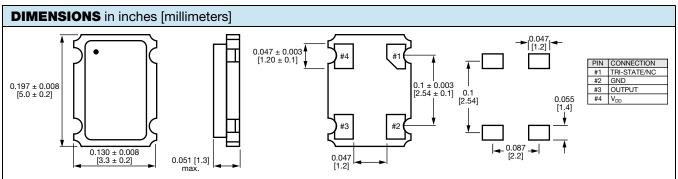
- Size: 5.0 x 3.2 x 1.3 (mm)
- Miniature package
- Tri-state enable/disable
- HCMOS compatible
- Tape and reel
- I_R re-flow
- 3.3 V input voltage
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>



PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range	Fo	-	1.544 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}	-	3.3 V ± 10 %
Aging (first year)		25 °C ± 3 °C	± 5 ppm
Supply current	I _{DD}	1.544 MHz to 9.999 MHz	8 mA max.
		10.000 MHz to 34.999 MHz	10 mA max.
		35.000 MHz to 49.999 MHz	25 mA max.
		50.000 MHz to 100.000 MHz	35 mA max.
Output symmetry	Sym	at ¹ / ₂ V _{DD}	40 %/60 % (45 %/55 % option)
Rise time	t _r	10 % V_{DD} to 90 % V_{DD}	7 ns max.
Fall time	t _f	90 % V _{DD} to 10 % V _{DD}	7 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	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 vibration



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



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ORDERING INFORMATION

R XOSM-533 В Ε 50M e4

FREQUENCY/MHz JEDEC® LEAD (Pb)-FREE MODEL FREQUENCY STABILITY OTR **ENABLE/DISABLE** E = disable to tri-state Standard

AA = 0.0025 % (25 ppm)Blank = standard $R = -40 \, ^{\circ}C$ to $+85 \, ^{\circ}C$ A = 0.005 % (50 ppm)

B = 0.01 % (100 ppm)standard

GLOBAL PART NUMBER

X 0 6 3 С Ε Α Ν Α 5 0 М ENABLE/ MODEL FREQUENCY PACKAGE OPTIONS **FREQUENCY STABILITY** DISABLE CODE

GLOBAL PART NUMBERING OPTIONS

Χ 0 5 С Т

MODEL NUMBER

XO63 = XOSM-533XO62 = XOSM-532

XO61 = XOSM-531XO57 = XOSM-57

XO37 = XOSM-573XO27 = XOSM-572

XO17 = XOSM-571

FREQUENCY STABILITY

C = 0.01 %(100 ppm) D = 0.005 %(50 ppm) $E = 0.0025^{\circ}$ %

(25 ppm)

TEMPERATURE

 $T = 0 \,^{\circ}C$ to +70 $^{\circ}C$ R = -40 °C to +85 °C

OPERATING (OTR)

ENABLE/ **DISABLE**

Ε

E = disable totristate

PACKAGE CODE

С

Tape and reel H = RF7

Bulk A = B04(XO63, XO62, XO61) C = D06(XO57, XO37,

XO27, XO17)

OPTION

Α

NA = noadditional options 60 = 45/55symmetry

Contact factory for all other options

FREQUENCY

0

Μ

4M = 4 MHz40M = 40 MHz100M =100 MHz 12M288 = 12 288 MHz

M is used as decimal place holder in frequency

Example: XO57CTECNA40M

PART MARKING

Line 1: M2807XXXXX (part number) Line 2: XX.XXXXM (frequency) Line 3: yywwvv (date/factory code)



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