

Surface Mount Oscillator



The XOSM-533 series is an ultra miniature package clock oscillator with dimensions 5.0 mm x 3.2 mm x 1.3 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 www.vishay.com/doc?99912

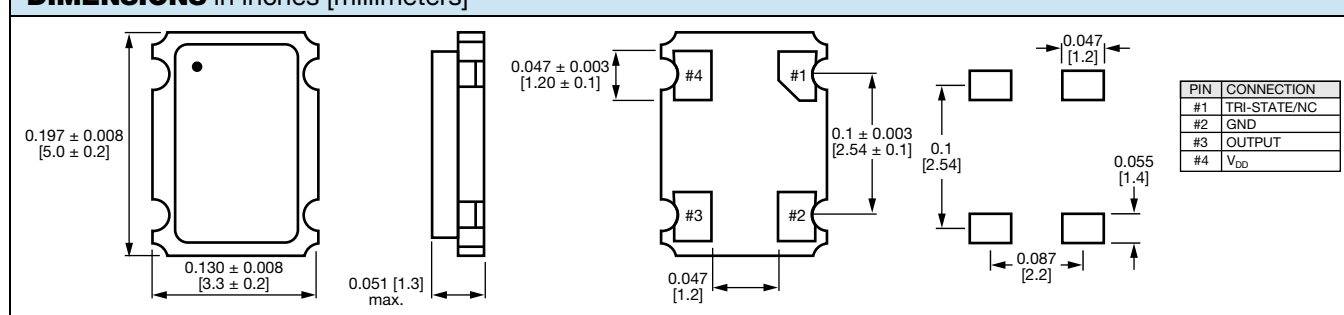


RoHS
COMPLIANT
HALOGEN
FREE

STANDARD ELECTRICAL SPECIFICATIONS			
PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range	F_O	-	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 $\frac{1}{2} V_{DD}$	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

DIMENSIONS in inches [millimeters]											
 Top view dimensions: 0.197 $\pm$ 0.008 [5.0 $\pm$ 0.2], 0.130 $\pm$ 0.008 [3.3 $\pm$ 0.2], 0.051 [1.3] max. Side view dimensions: 0.047 $\pm$ 0.003 [1.20 $\pm$ 0.1] Pin layout dimensions: 0.1 $\pm$ 0.003 [2.54 $\pm$ 0.1], 0.047 [1.2], 0.087 [2.2], 0.055 [1.4], 0.047 [1.2] <table border="1"> <thead> <tr> <th>PIN</th><th>CONNECTION</th></tr> </thead> <tbody> <tr> <td>#1</td><td>TRI-STATE/NC</td></tr> <tr> <td>#2</td><td>GND</td></tr> <tr> <td>#3</td><td>OUTPUT</td></tr> <tr> <td>#4</td><td>V_{DD}</td></tr> </tbody> </table>		PIN	CONNECTION	#1	TRI-STATE/NC	#2	GND	#3	OUTPUT	#4	V_{DD}
PIN	CONNECTION										
#1	TRI-STATE/NC										
#2	GND										
#3	OUTPUT										
#4	V_{DD}										

Note

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

**ORDERING INFORMATION**

XOSM-533	B	R	E	50M	e2
MODEL	FREQUENCY STABILITY AA = 0.0025 % (25 ppm) A = 0.005 % (50 ppm) B = 0.01 % (100 ppm) standard	OTR blank = standard R = - 40 °C to + 85 °C	ENABLE/DISABLE E = disable to tri-state	FREQUENCY/MHz	JEDEC LEAD (Pb)-FREE standard

GLOBAL PART NUMBER

X	O	6	3	C	T	E	A	N	A	5	0	M
MODEL				FREQUENCY STABILITY	OTR	ENABLE/DISABLE	PACKAGE CODE	OPTIONS		FREQUENCY		

GLOBAL PART NUMBERING OPTIONS

X	O	5	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: XO57CTECNA40M															

PART MARKING

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



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