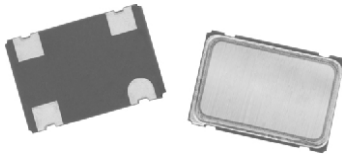


Surface-Mount Oscillator



The XOSM-57 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
- 5 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	-	1.500 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}	-	5.0 V ± 10 %
Aging (first year)		25 °C ± 3 °C	± 5 ppm
Supply current	I _{DD}	1.500 MHz to 20.000 MHz	20 mA max.
		20.001 MHz to 50.000 MHz	35 mA max.
		30.001 MHz to 100.000 MHz	45 mA max.
Output symmetry	Sym	At 1/2 V _{DD}	40 %/60 % (45 %/55 % option)
Rise/fall time	t _r /t _f	1.500 MHz to 67.000 MHz	10 ns
		67.001 MHz to 100.000 MHz	3 ns
Output voltage	V _{OH}	-	90 % V _{DD} min.
	V _{OL}	-	10 % V _{DD} max.
Output load		1.500 MHz to 67.000 MHz	10 TTL or 50 pF max.
		67.001 MHz to 100.000 MHz	15 pF max.
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]											
<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 μF bypass capacitor should be placed between V_{DD} (pin 4) and GND (pin 2) to minimize power supply line noise



PART NUMBER CONFIGURATIONS (to be used on all New Designs)									
X O	5 7	C	5	D	R	E	H	T	1 6 M 1 2 8
Oscillator	Package / Size 5 7	Logic C = CMOS	Voltage 5 = 5 V	Stability C = ± 100 ppm D = ± 50 ppm F = ± 35 ppm G = ± 30 ppm E = ± 25 ppm H = ± 20 ppm	Temp. S = -10 °C to +70 °C R = -40 °C to +85 °C	Tri-State N = no connect E = Tri-State	Package H = tape and reel	Options X = no options T = 45/55 Contact factory for available options	Frequency 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 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						
XOSM-57	B	R	E	50M	e4	JEDEC® LEAD (Pb)-FREE STANDARD
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		

PART MARKING	
Line 1:	M2804XXXXX (part number)
Line 2:	XX.XXXXM (frequency)
Line 3:	yywwvv (date/factory code)



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