

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

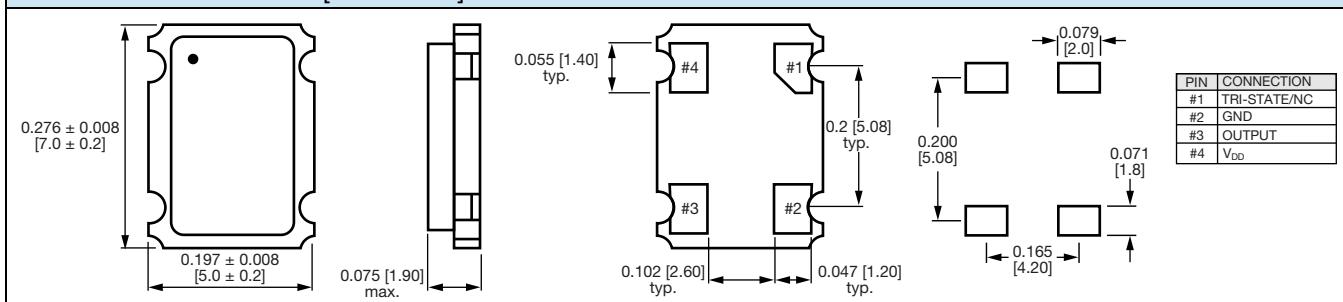
STANDARD ELECTRICAL SPECIFICATIONS

| PARAMETER | SYMBOL | CONDITION | VALUE |
|------------------------------------|-----------|--|---|
| Frequency range | F_O | - | 1.500 MHz to 100.000 MHz |
| Frequency stability ⁽¹⁾ | | all conditions | ± 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} | - | 5.0 V ± 10 % |
| Aging (first year) | | 25 °C ± 3 °C | ± 5 ppm |
| Supply current | I_{DD} | 1.500 MHz to 20.000 MHz 20.001 MHz to 50.000 MHz 30.001 MHz to 100.000 MHz | 20 mA max. 35 mA max. 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 67.001 MHz to 100.000 MHz | 10 ns 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 67.001 MHz to 100.000 MHz | 10 TTL or 50 pF max. 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]

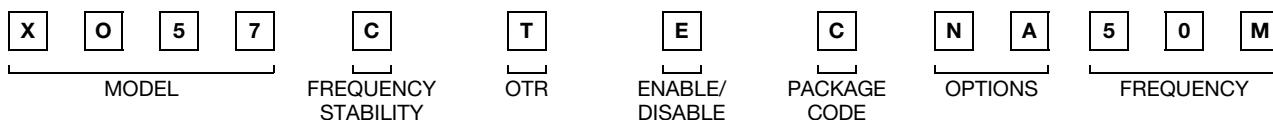


Note

- 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-57 | B | R | E | 50M | e4 |
|------------------------|------------------------|--------------------------|----------------|---------------|----------------------|
| MODEL | FREQUENCY STABILITY | OTR | ENABLE/DISABLE | FREQUENCY/MHz | JEDEC LEAD (Pb)-FREE |
| AA = 0.0025 % (25 ppm) | blank = standard | E = disable to tri-state | | | standard |
| A = 0.005 % (50 ppm) | R = - 40 °C to + 85 °C | | | | |
| B = 0.01 % (100 ppm) | | | | | |
| standard | | | | | |

GLOBAL PART NUMBER

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 |
| X063 = XOSM-533 | | | | C = 0.01 % (100 ppm) | | T = 0 °C to + 70 °C | | E = Disable to tristate | | Tape and reel H = RF7 | | NA = No additional options |
| X062 = XOSM-532 | | | | D = 0.005 % (50 ppm) | | R = - 40 °C to + 85 °C | | | | Bulk A = B04 (X063, X062, X061) | | 60 = 45/55 symmetry |
| X061 = XOSM-531 | | | | E = 0.0025 % (25 ppm) | | | | | | C = D06 (X057, X037, X027, X017) | | Contact factory for all other options |
| X057 = XOSM-57 | | | | | | | | | | | | M is used as decimal place holder in frequency |
| X037 = XOSM-573 | | | | | | | | | | | | |
| X027 = XOSM-572 | | | | | | | | | | | | |
| X017 = XOSM-571 | | | | | | | | | | | | |

Example: XOSM-57CTECNA40M

PART MARKING

Line 1: M2804XXXX (part number)
Line 2: XX.XXXXM (frequency)
Line 3: yywwvv (date/factory code)

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