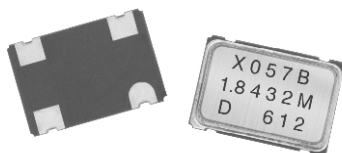


## Surface Mount Oscillator



The XOSM-57 series is an ultra miniature package clock oscillator with dimensions 7.0 x 5.0 x 1.6 mm. It is mainly used in portable PC and telecommunication devices and equipment.

### FEATURES

- Miniature Package
- Tri-state enable/disable
- TTL/HCMOS compatible
- Tape and Reel
- IR Re-flow
- 5 V input voltage
- 100 % Lead (Pb)-free and RoHS compliant

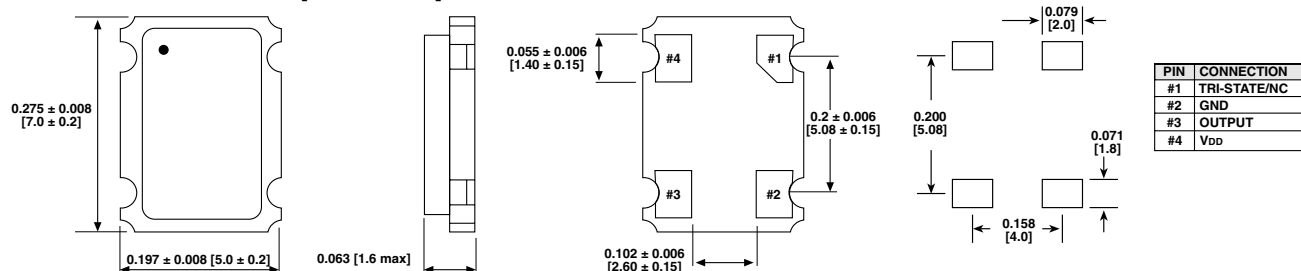

**RoHS**  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

| PARAMETER                 | SYMBOL     | CONDITION                     | XOSM-57                                                                                |
|---------------------------|------------|-------------------------------|----------------------------------------------------------------------------------------|
| Frequency Range           | $F_O$      |                               | 1 MHz ~ 100.000 MHz                                                                    |
| Frequency Stability*      |            | All Condition*                | $\pm 25$ ppm, $\pm 50$ ppm, $\pm 100$ ppm                                              |
| Operating Temperature     | $T_{OPR}$  |                               | 0 °C ~ 70 °C (- 40 °C ~ + 85 °C option)                                                |
| Storage Temperature Range | $T_{STG}$  |                               | - 55 °C ~ + 125 °C                                                                     |
| Power Supply Voltage      | $V_{DD}$   |                               | 5.0 V $\pm$ 10 %                                                                       |
| Aging (First Year)        |            | 25 °C $\pm$ 3 °C              | $\pm 5$ ppm                                                                            |
| Supply Current            | $I_{DD}$   | 1.000 MHz to 23.999 MHz       | 20 mA Max                                                                              |
|                           |            | 24.000 MHz to 49.999 MHz      | 30 mA Max                                                                              |
|                           |            | 50.000 MHz to 69.999 MHz      | 40 mA Max                                                                              |
|                           |            | 70.000 MHz to 100.000 MHz     | 60 mA Max                                                                              |
| Output Symmetry           | Sym        | At 1/2 $V_{DD}$               | 40/60 % (45/55 % Option)                                                               |
| Rise Time                 | $T_r$      | 10 % $V_{DD}$ ~ 90 % $V_{DD}$ | 5 ns Max                                                                               |
| Fall Time                 | $T_f$      | 90 % $V_{DD}$ ~ 10 % $V_{DD}$ | 5 ns Max                                                                               |
| Output Voltage            | $V_{OH}$   |                               | 90 % $V_{DD}$ Min                                                                      |
|                           | $V_{OL}$   |                               | 10 % $V_{DD}$ Max                                                                      |
| Output Load               | TTL Load   |                               | 1 ~ 10 TTL                                                                             |
|                           | HCMOS Load |                               | 30 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<br>Pin 1 = L..... high impedance at pin 3 |

\* Include: 25 °C tolerance, operating temperature range, input voltage change, aging, load change, shock and vibration.

### DIMENSIONS in inches [millimeters]



\*\*\*note: A 0.01  $\mu$ F bypass capacitor should be placed between  $V_{DD}$  (Pin4) and GND (Pin2) to minimize power supply line noise

### ORDERING INFORMATION

| XOSM-57 | B                                                                                  | R                                          | E                       | 50 M          | e4                            |
|---------|------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|---------------|-------------------------------|
| MODEL   | FREQUENCY STABILITY                                                                | OTR                                        | ENABLE/DISABLE          | FREQUENCY/MHz | JEDEC LEAD (Pb)-FREE STANDARD |
|         | AA = 0.0025 % (25 ppm)<br>A = 0.005 % (50 ppm)<br>B = 0.01 % (100 ppm)<br>Standard | Blank = Standard<br>R = - 40 °C to + 85 °C | E = Disable to Tristate |               |                               |

### GLOBAL PART NUMBER

|       |   |   |   |                        |     |                    |                 |         |   |           |   |   |
|-------|---|---|---|------------------------|-----|--------------------|-----------------|---------|---|-----------|---|---|
| X     | O | 5 | 7 | C                      | T   | E                  | C               | N       | A | 5         | 0 | M |
| MODEL |   |   |   | FREQUENCY<br>STABILITY | OTR | ENABLE/<br>DISABLE | PACKAGE<br>CODE | OPTIONS |   | FREQUENCY |   |   |

## GLOBAL PART NUMBERING

| X                                                                                                                                                                                                                                                                                                           | O | 5 | 2 | C                                                                              | T                                          | E                                         | L                                                                                                                                                                                                      | N                                                                                              | A | 4                                                                                                                         | 0 | M |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------|---|---|
| MODEL NUMBER                                                                                                                                                                                                                                                                                                |   |   |   | FREQUENCY STABILITY                                                            | OPERATING TEMPERATURE (OTR)                | ENABLE/DISABLE                            | PACKAGE CODE                                                                                                                                                                                           | OPTIONS                                                                                        |   | FREQUENCY                                                                                                                 |   |   |
| XO53 = XO-53<br>XO54 = XO-54<br>XO34 = XO-543<br>XO52 = XO-52<br>XO32 = XO-523<br>XO56 = XO-56<br>XOVC = XOVC-23<br>XO5M = XOSM-52<br>XO63 = XOSM-533<br>XO62 = XOSM-532<br>XO61 = XOSM-531<br>XO57 = XOSM-57<br>XO37 = XOSM-573<br>XO27 = XOSM-572<br>XO17 = XOSM-571<br>XO55 = XOSM-55<br>XO35 = XOSM-553 |   |   |   | C = 0.01 %<br>(100 ppm)<br>D = 0.005 %<br>(50 ppm)<br>E = 0.0025 %<br>(25 ppm) | T = 0 °C to +70 °C<br>R = -40 °C to +85 °C | F = Pin 1 Open<br>E = Disable to Tristate | TAPE AND REEL<br>H = RF7<br><br>BULK<br>A = B04<br>(XO63, XO62, XO61)<br>C = D06<br>(XO57, XO37, XO27, XO17)<br>D = D07<br>(XO53, XO54, XO34, XO56, XOVC, XO55, XO35)<br>L = D08<br>(XO52, XO32, XO5M) | NA = No Additional Options<br>60 = 45/55 Symmetry<br><br>Contact factory for all other options |   | 4M = 4 MHz<br>40M = 40 MHz<br>100M = 100 MHz<br>12M288 = 12.288 MHz<br><br>M is used as decimal place holder in frequency |   |   |

Example: XO52CTELNA40M



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