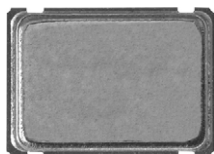


Surface-Mount Oscillator



The XOSM-571 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
- HCMOS compatible
- Tape and reel
- I_R re-flow
- 1.8 V input voltage
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

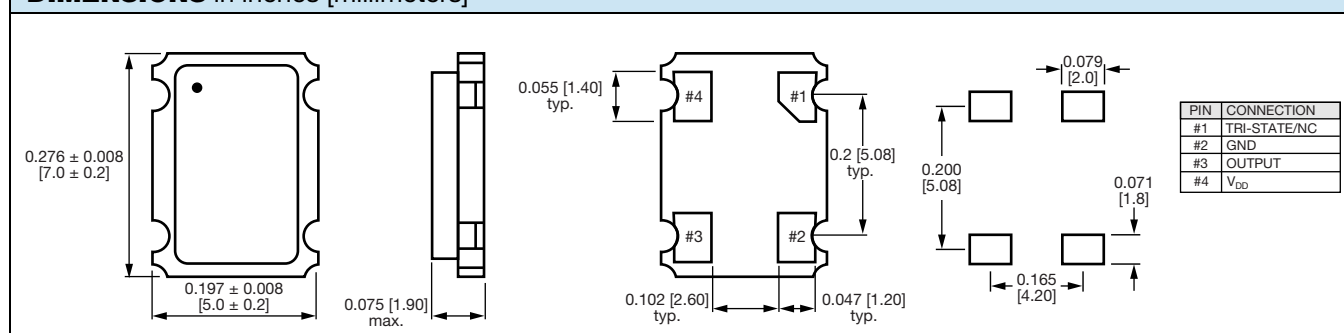


RoHS
COMPLIANT
HALOGEN
FREE

| STANDARD ELECTRICAL SPECIFICATIONS | | | |
|------------------------------------|--------------------------------|--------------------------|---|
| PARAMETER | SYMBOL | CONDITION | VALUE |
| Frequency range | F _O | - | 1.000 MHz to 70.000 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} | - | 1.8 V ± 10 % |
| Aging (first year) | | 25 °C ± 3 °C | ± 5 ppm |
| Supply current | I _{DD} | 1.000 MHz to 70.000 MHz | 20 mA max. |
| Output symmetry | Sym | At 1/2 V _{DD} | 40 %/60 % (45 %/55 % option) |
| Rise/fall time | t _r /t _f | 1.000 MHz to 35.328 MHz | 10 ns |
| | | 35.329 MHz to 70.000 MHz | 4 ns |
| Output voltage | V _{OH} | - | 90 % V _{DD} min. |
| | V _{OL} | - | 10 % V _{DD} max. |
| Output load | | - | 10 TTL or 30 pF |
| 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 | 1 | D | R | E | H | T | 1 | 6 | M | 1 | 2 | 8 |
|------------|----------------|----------|-----------|--|--|---------------------------------|-------------------|--|--|---|---|---|---|---|---|---|
| Oscillator | Package / Size | Logic | Voltage | Stability | Temp. | Tri-State | Package | Options | Frequency | | | | | | | |
| | 5 7 | C = CMOS | 1 = 1.8 V | C = ± 100 ppm D = ± 50 ppm F = ± 35 ppm G = ± 30 ppm E = ± 25 ppm H = ± 20 ppm ⁽¹⁾ | S = -10 °C to +70 °C R = -40 °C to +85 °C | N = no connect E = Tri-State | H = tape and reel | X = no options T = 45/55 Contact factory for available options | Use "M" as decimal place holder Frequency must be six digits - complete with "0" at the end | | | | | | | |

Note⁽¹⁾ Contact factory for availability

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 | 1 | 7 | C | T | E | C | N | A | 5 | 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: XO17CTECNA50M

| XOSM-571 | B | R | E | 50M | e4 |
|----------|--|--|--------------------------|---------------|--------------------------------|
| MODEL | FREQUENCY STABILITY | OTR | ENABLE / DISABLE | FREQUENCY/MHz | JEDEC® LEAD (Pb)-FREE STANDARD |
| | AA = 0.0025 % (25 ppm) A = 0.005 % (50 ppm) B = 0.01 % (100 ppm) standard | blank = standard R = -40 °C to +85 °C | E = disable to tri-state | | |

PART MARKING

Line 1: M28_XXXXX (part number)
 Line 2: XX.XXXXM (frequency)
 Line 3: yywwvv (date/factory code)



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