



actual size

Oscillator · VX3 · 3.3 V

SMD Oscillator with Tristate Function · 7.0 x 5.0 mm

- preferred type for extended temperature range
- reflow soldering temperature: 260 °C max.
- full ceramic package



General Data

| | |
|--------------------------------|---|
| type | VX3 3.3 V |
| frequency range | 0.50 ~ 70.0 MHz (15pF max.) |
| | 0.50 ~ 70.0 MHz (30pF max.) |
| frequency stability over all* | ± 20ppm ~ ± 100ppm (table 1) |
| current consumption | see table 2 |
| supply voltage V_{DC} | 3.3 V ± 10% |
| temperature | operating -10 °C ~ +70 °C / -40 °C ~ +85 °C |
| | storage -55 °C ~ +125 °C |
| output | rise & fall time see table 3 |
| | load max 15pF / 30pF |
| | current max. 8mA |
| | low level max. 0.1 x V_{DC} |
| | high level min. 0.9 x V_{DC} |
| output enable time max. | 100ns |
| output disable time max. | 100ns |
| start-up time max. | 10ms |
| standby function | tristate |
| phase jitter 12 kHz ~ 20.0 MHz | < 1.0ps RMS |
| symmetry at 0.5 x V_{DC} | 45% ~ 55% typ. (40% ~ 60% max.) |

Table 1: Type

| | | | | | | | | | | |
|-----------------|-----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| stability | ± 100 ppm | ± 50 ppm | ± 30 ppm | ± 25 ppm | ± 20 ppm | | | | | |
| type VX3 | J | M | K | MH | JS | MS | JQ | MQ | JP | MP |
| output load | 15 pF | 30 pF | 15 pF | 30 pF | 15 pF | 30 pF | 15 pF | 30 pF | 15 pF | 30 pF |
| -10 °C ~ +70 °C | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | △ | △ |
| -40 °C ~ +85 °C | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | | |

● standard ○ available △ excludes aging

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

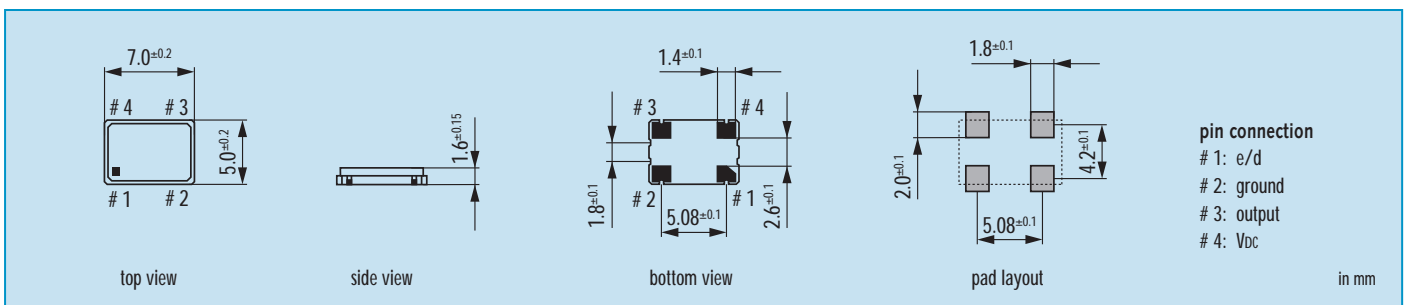
Table 2: Current Consumption max.

| Current at 15pF load | | Current at 30pF load | |
|----------------------|-------|----------------------|-------|
| 0.5 ~ 33.9 MHz | 8 mA | 0.5 ~ 33.9 MHz | 10 mA |
| 34.0 ~ 49.9 MHz | 12 mA | 34.0 ~ 49.9 MHz | 20 mA |
| 50.0 ~ 70.0 MHz | 25 mA | 50.0 ~ 70.0 MHz | 25 mA |

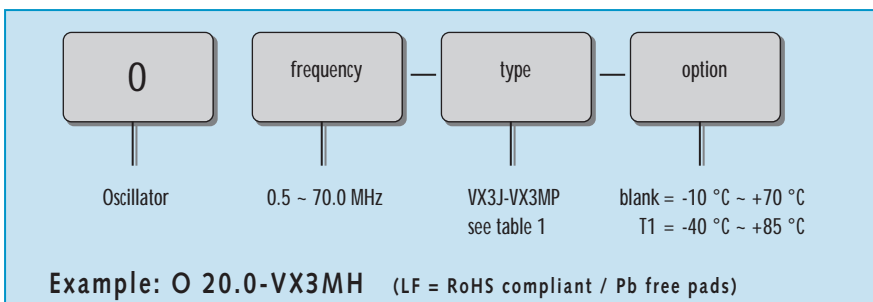
Table 3: Rise & Fall Time max.

| | |
|-------------------------|--|
| 8.0 ns: 0.5 ~ 1.79 MHz | note: - specific data on request - rise time: 0.1 V_{DC} ~ 0.9 V_{DC} - fall time: 0.9 V_{DC} ~ 0.1 V_{DC} |
| 6.0 ns: 1.8 ~ 34.99 MHz | |
| 5.0 ns: 35.0 ~ 70.0 MHz | |

Dimensions



Order Information

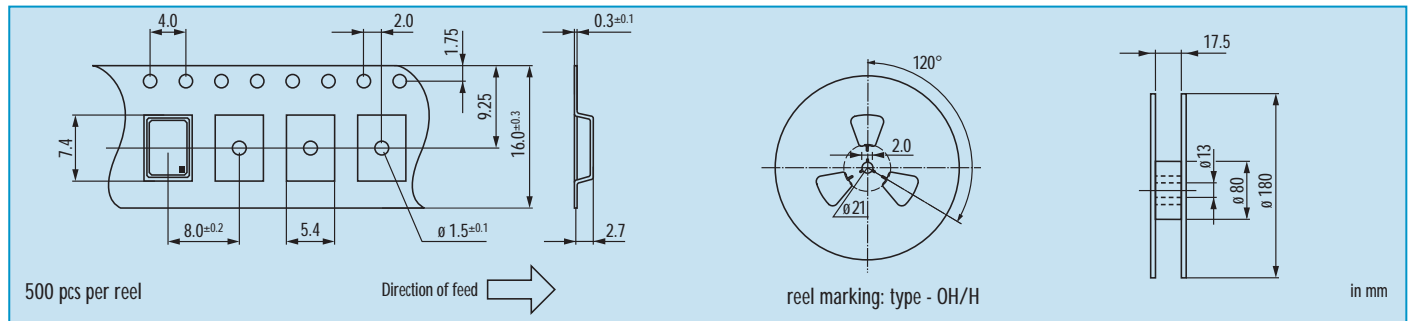


Preferred Type

| | |
|------------------|------------------------------------|
| VX3MH-T1: | ± 50 ppm / 30 pF / -40 °C ~ +85 °C |
| VX3MH: | ± 50 ppm / 30 pF |

Oscillator · VX3 · 3.3 V · Tristate Function

Taping Specification (JIS-C0806)



Enable / Disable Function

| pin #1 (e/d control) | pin #3 (output) |
|--|-----------------|
| open | active |
| high "1" ($V_{IH} \geq 0.8 V_{DD}$) | active |
| low "0" ($V_{IL} \leq 0.2 V_{DD}$) | high impedance |
| disabled conditions: | |
| <ul style="list-style-type: none"> • oscillator active • output high impedance | |

Marking

type / frequency

date code:

A ~ M: Jan. - Dec.

0: 2010

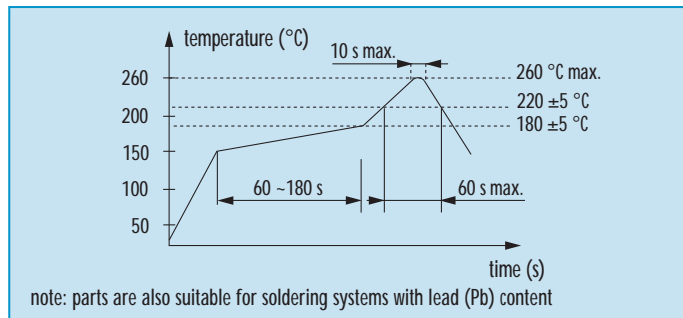
1: 2011

2: 2012

| Jan. | Febr. | Mar. | Apr. | May | June |
|------|-------|------|------|-----|------|
| A | B | C | D | E | F |

| July | Aug. | Sept. | Oct. | Nov. | Dec. |
|------|------|-------|------|------|------|
| G | H | J | K | L | M |

Reflow Soldering Profile



Packing Note

- standard packing units are 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk