

Type VT - MF smd VCXO (60.0 ~ 200)MHz, Multiplier CMOS (7.0 x 5.0)mm, height 1.8mm

A high quality, smd, voltage controlled crystal oscillator manufactured over the frequency range of 60.0MHz to 200MHz; multiplied frequencies Tight symmetry, wide pulling range, +3.3V d.c. supply.

A standard package providing an excellent combination of parameters within a small smd enclosure.

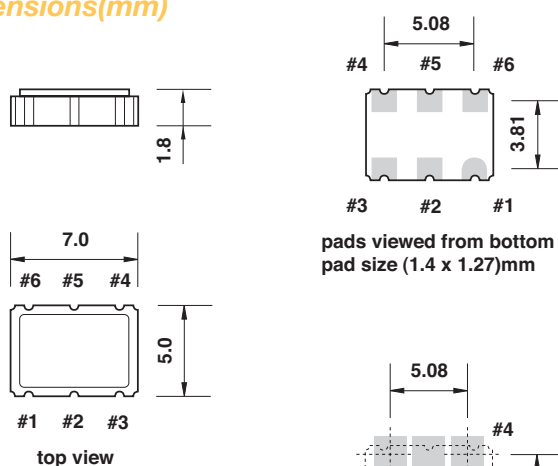
Supplied on tape and reel with 1000 and 3000 pieces per reel.

Frequency stability -vs- temperature:

| TEMP. RANGE | COMBINED TOLERANCE | |
|-------------|--------------------|--------|
| (-10 +60)°C | ±25ppm | ±50ppm |
| (-20 +70)°C | ±25ppm | ±50ppm |
| (-40 +85)°C | | ±50ppm |

Tolerance inclusive of calibration tolerance at +25°C, temperature tolerance, load variation and supply voltage variation, first year ageing, vibration and shock

Dimensions(mm)



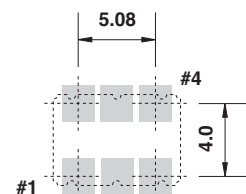
pad connections:

- #1 voltage control
- #2 tri-state
- #3 ground
- #4 output
- #5 N/C
- #6 V_{DD}

output inhibit:

- #2 high: output oscillation
- #2 low: output high impedance

pads viewed from bottom
pad size (1.4 x 1.27)mm



suggested land pattern
pad size (2.0 x 1.8)mm

connect 0.1µF capacitor
between V_{DD} and ground

Electrical specification:

| | 3.3Vd.c. | | |
|--|---------------|--------------|------------|
| | min. | max. | |
| supply voltage ±10% | 2.97 | 3.63 | Vd.c. |
| frequency range | (60 ~ 200)MHz | | MHz |
| pulling range | ±50 | - | ppm |
| control voltage range | 0.3 | 3.0 | V |
| supply current (60.0 ~ 160)MHz | - | 40 | mA |
| supply current (160 ~ 200)MHz | - | 50 | mA |
| CMOS o/p high | 90% V_{DD} | | V |
| CMOS o/p low | | 10% V_{DD} | V |
| t_r 60.0MHz ~ 200MHz | - | 2 | nano sec. |
| start up time | | 2 | milli sec. |
| tri-state: active o/p | 0.7 V_{DD} | - | V |
| tri-state: high impedance o/p | - | 0.3 V_{DD} | V |
| absolute clock period jitter | - | 150 | pico sec. |
| RMS phase jitter(integrated 12kHz ~ 20MHz) | | 4 | |
| linearity | - | 10 | % |
| modulation bandwidth | 25 | - | kHz |
| input impedance | 2000 | - | kΩ |
| ageing | - | ±3 | ppm |
| storage temperature range | (-55 +125)°C | | °C |

Ordering information

| | |
|----------------------------|---|
| EXAMPLE | <i>type VT - MF smd VCXO, 100.0MHz, +3.3Vd.c., ±25ppm(-20 +70)°C</i> |
| TFC PART NUMBER | VT - MF 100.0M E M C |
| VT - MF | <i>type: VT - MF = VCXO type VT; (7.0 x 5.0)mm package, M; multiplied frequency, F; CMOS load</i> |
| 100.0M | <i>frequency: 100.0MHz, frequency range (60.0 ~ 200)MHz</i> |
| E | <i>supply voltage: E = +3.3Vd.c.</i> |
| M | <i>frequency stability: M = ±25ppm</i> |
| C | <i>temperature range: C = (-20 +70)°C</i> |
| OPTIONS | |
| frequency stability | <i>M: ±25ppm, P: ±50ppm</i> |
| temperature range | <i>C: (-20 +70)°C, L: (-40 +85)°C</i> |