

Specifications

| | |
|--|---|
| Package | TC52R |
| Standard Frequencies | 10.000MHz, 12.800MHz, 16.800MHz 19.200MHz, 20.000MHz, 25.600MHz 26.000MHz, 36.000MHz, 40.000MHz |
| Logic Family | HCMOS |
| Frequency Tolerance | ±1.5ppm @ 25°C Max |
| Frequency - Temperature (Reference To Value 25°C±2°C) | ±0.2ppm -10°C ~ +70°C ±0.5ppm -40°C ~ +85°C |
| Frequency - Volt Coefficient | ±0.3ppm @ Vcc=3.3V±0.165V |
| Frequency - Load Coefficient | ±0.1ppm @ 15pf ±5% |
| Aging - 20 Years @ 25C | ≤4.6ppm of Nominal Frequency |
| Frequency - After Reflow | ±1.5ppm @ 2 Reflows |
| Hysteresis | ±0.2ppm @ T=0°C ~ +70°C |
| Operating (TOPR) | -40°C ~ +85°C |
| Storage (TSTG) | -40°C ~ +85°C |
| Input Impedance | 100K Ohms |

Phase Noise

| | | |
|--|-----------------|-------------|
| SSB Phase Noise (25 ±2°C) 19.200MHz | @ 1Hz Offset | -73 dBc/Hz |
| | @ 10Hz Offset | -94 dBc/Hz |
| | @ 100Hz Offset | -118 dBc/Hz |
| | @ 1KHz Offset | -139 dBc/Hz |
| | @ 10KHz Offset | -150 dBc/Hz |
| | @ 100KHz Offset | -152 dBc/Hz |

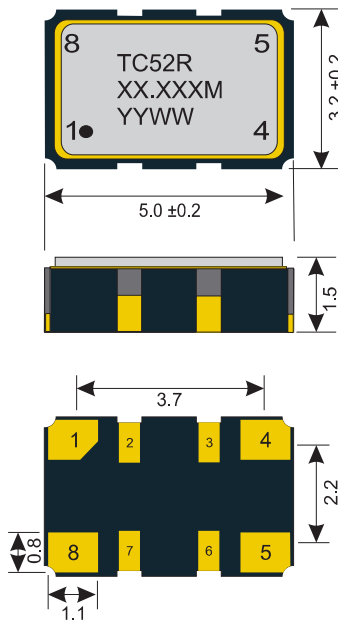
Electrical

| | | |
|----------------------------|--------------------|---------------------|
| Power Supply | Voltage (VDD) | 3.3 VDC ±5% |
| | Current (Icc) | 4mA Max (19.200MHz) |
| Output | Load CMOS | 15pF Max |
| | Voltage (VOL Max.) | 10% Vdd |
| | Voltage (VOH Min.) | 90% Vdd |
| Rise (TR) & Fall (TF) Time | ≤9ns (10% to 90%) | |
| Symmetry/Duty | 45/55% @ 50% Level | |

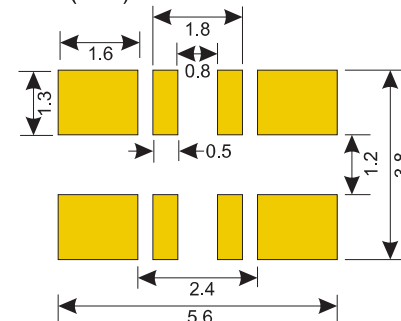
Tri-State

| | |
|-------------------------|-----------------|
| Tri State (Pin 6) | Output (Pin 5) |
| 70%Vcc Min, N/C or Open | Enabled Active |
| 30%Vcc Max | Disabled High Z |

Dimensions (mm)



Recommended Pad (mm)



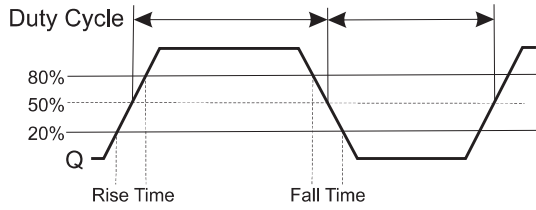
Connections

| | |
|-------|---------------------|
| Pin 1 | VC or No Connection |
| Pin 2 | N/C |
| Pin 3 | N/C |
| Pin 4 | Ground |
| Pin 5 | Output |
| Pin 6 | Enable/Disable |
| Pin 7 | N/C |
| Pin 8 | Vcc |





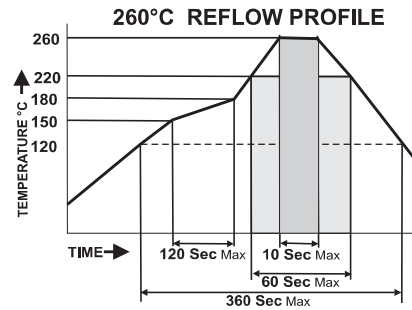
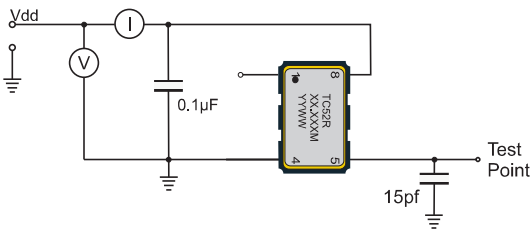
Waveform



Environmental And Mechanical

| | |
|--------------------|---|
| Temperature | 10 Cycles of -30°C (30Mins), Normal (1Hr), 85°C (30Mins), Normal (1Hr) |
| Shock | Accelerated at 1000G for 1mS in each perpendicular axis. |
| Vibration | 4 Cycles of 2.0G acceleration at 5 ~ 150Hz Pulling hour 1.0 Octave/Min XYZ for 6 hours each axis. |
| Solder | Peak Temperature of 260°C Max for 10 Seconds with preheat of 160°C for 90±10% for 10 Seconds for a Maximum of 2 Cycles. |

HCMOS Test Circuit



Part Number

TC52R- XX.XXXM - T

Developed Frequencies

- 10.000MHz 25.600MHz
- 12.800MHz 26.000MHz
- 16.800MHz 36.000MHz
- 19.200MHz 40.000MHz
- 20.000MHz

Tape & Reel
Frequency: 10.000MHz ~ 40.000MHz
(See Developed Frequencies.) For other frequencies
contact your sales representative.
Standard RoHS Compliant 5.0 x 3.2mm SMD Oscillator

Options not specified default to the values indicated on the data sheet.
 Example: **TC52R-19.200M-T** is 19.200MHz, Operating at -40°C ~ +85°C
 Delivered on Tape & Reel

Tape & Reel

