

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

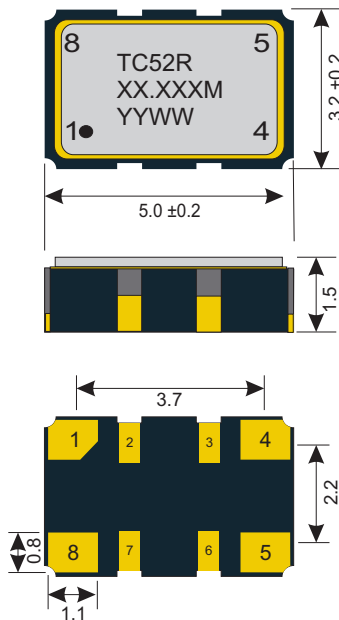
Electrical

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	

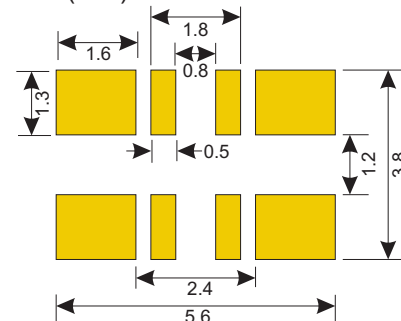
Tri-State

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)



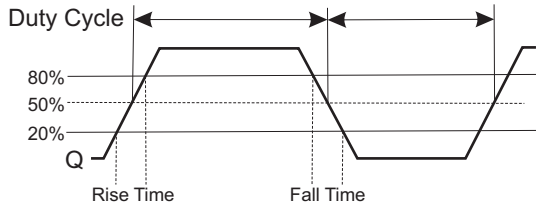
Connections

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





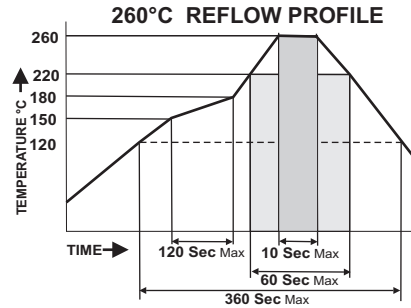
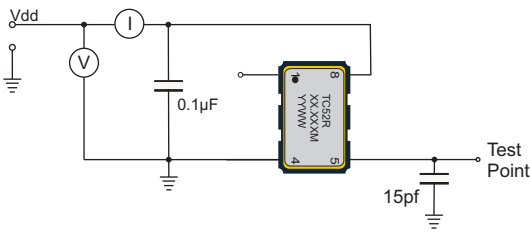
Waveform



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

