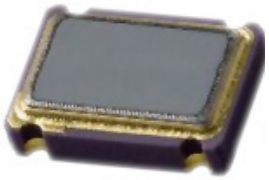
Oscillator

multicomp PRO



RoHS Compliant

Specifications

Nominal Frequency	32.768 MHz
Storage Temperature	-55°C to +125°C
Operable Temperature	-20°C to +70°C

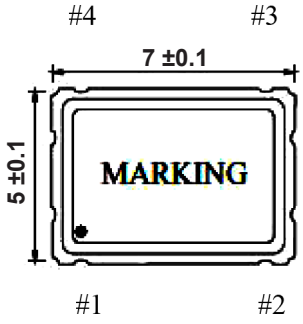
Electrical Performance

Frequency Stability	±50 ppm overall from -20°C to +70°C
Supply Voltage	3.3V ±10%
Supply Current	15mA max.
Transition Time	Rise Time 10ns max.
	Fall Time 10ns max.
Start Time	10ms max.
Symmetry or Duty Cycle	40% / 60% at 1/2 VDD
Output Waveform	CMOS
Output Voltage	VOH : 90% VDD min.
	VOL : 10% VDD max.
Fanout	CMOS/15pF
Aging	±3ppm/first year

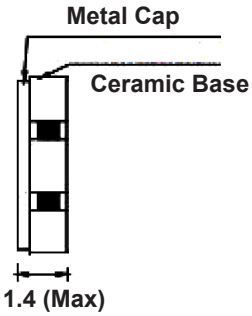
Physical and Environmental Parameters

Description	Contents	Requirements
Vibration	10 ~ 55Hz, 0.75mm amplitude, in 3 directions duration of 30 minutes.	No mechanical damage and the measured values shall meet electrical parameters.
Random Dropping	The crystal will be test by natural dropping to 30mm wooden broad 3 times from high of 30cm	
Resistance Solder Heat	Dipped the terminals up to 2mm into the solder bath (260 ±5°C) for 3 sec, placed in a natural condition for 2 hours.	Measured values shall meet electrical parameters.
Thermal Shock	Temperature cycling from -40°C (30mins) to +85°C (30mins) was performed 10 cycless, then placed in a natural condition for 24 hours.	
Life Test (High Temperature)	Placed in a chamber (85 ± 2°C) for 72 hours, then placed in a natural condition for 24 hours.	
Life Test (Low Temperature)	Placed in a chamber (-40 ± 2°C) for 72 hours, then placed in a natural condition for 24 hours.	
Humidity	Placed in a chamber (Humi: 90 ~ 95% RH, Temp: 60 ±2°C) for 48 hours, then placed in a natural condition for 2 hours	

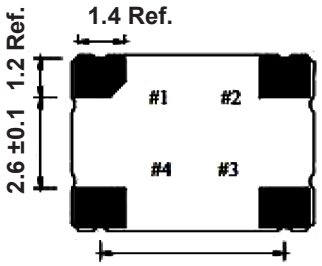
Diagram



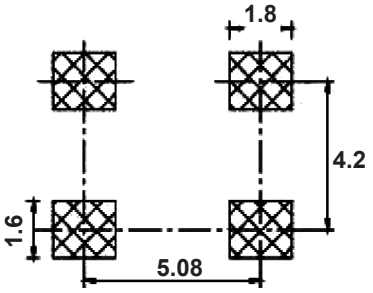
Top View



Side View

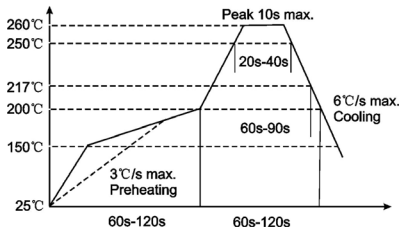


Bottom View

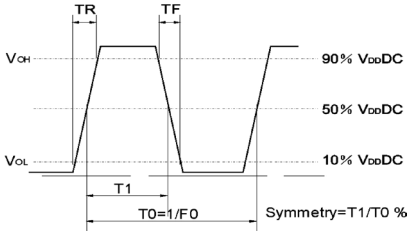


Recommended Soldering Pattern

REFLOW PROFILE



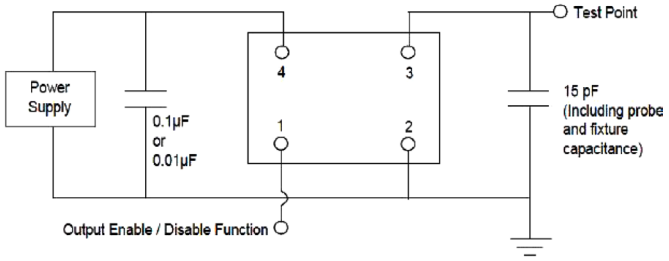
OUTPUT WAVEFORM



Pin Function:

#1. OE
#2. GND
#3. Output
#4. VDD

Test Circuit



Dimensions : Millimetres

Part Number Table

Description	Fanout	Part Number
Oscillator, 32.768MHz, 3.3V, 7mm×5mm	CMOS/15pF	MCOT7327683V30000RA