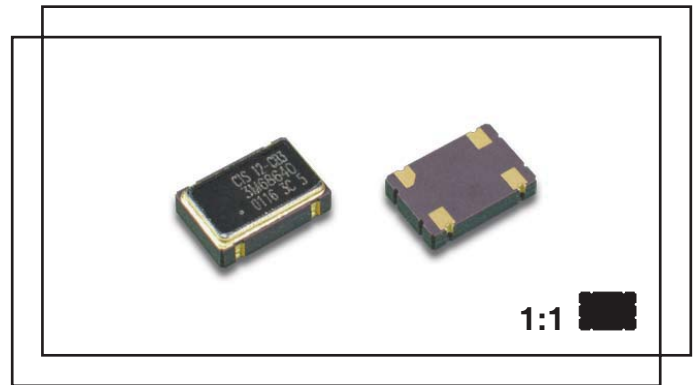


Type OC clock oscillator smd ceramic package (0.012 ~ 133)MHz

- # **tight symmetry**
- # **(7.0 x 5.0)mm footprint**
- # **+(1.8, 2.5, 3.3, 5.0)Vd.c. supply**
- # **RoHS compliant**



Electrical specification

Case style	C: (7.5 x 5.0)mm, height 1.4mm				
Frequency range	(0.048 ~ 125)MHz: 1.8V, (0.012 ~ 133)MHz: 2.5V/3.3V, (0.012 ~ 110)MHz: 5V				
Stability *	±(20 ~ 100)ppm, temperature range dependent				
Supply voltage V_{CC} ±10%		+1.8Vd.c.	+2.5Vd.c.	+3.3Vd.c.	+5.0Vd.c.
Supply current max.	(0.012 ~ 20)MHz	5mA	7mA	7mA	10mA
	(20 ~ 125)MHz	20mA	20mA	30mA	40mA
	(125 ~ 133)MHz	-	30mA	40mA	-
Rise and fall time max. **	(0.012 ~ 1.0)MHz	200ns	200ns	200ns	
	(1.0 ~ 20)MHz	10ns	10ns	10ns	8ns
	(20 ~ 133)MHz	6ns	6ns	6ns	5ns
Operating temperature	(-10 +60)°C ~ (-40 +85)°C				
Storage temperature	(-55 +125)°C				
Output	TTL, CMOS				
Symmetry	(45 ~ 55)%, (40 ~ 60)%				
Tri-state	fixed frequency or tri-state				

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

** measured, with an output load of 15pF, between (10 ~ 90)% V_{CC}

Ordering information

Example type OC smd clock oscillator, 25.00MHz, +5.0Vd.c., tri-state, ±25ppm(-20 +70)°C, output CMOS 15pF, symmetry (45 ~ 55)%

TFC PART NUMBER OC 25.0M C T D C J

'OC' type number: OC = smd clock oscillator type OC

'25.0M' frequency: 25.0M = 25.00MHz, frequency range from (0.012 ~ 133)MHz

'C' supply voltage: C = +5Vd.c., E = +(2.8 ~ 3.3)Vd.c., J = +2.5Vd.c., K = +1.8Vd.c.

'T' tri state: F = fixed frequency, T = tri-state function on pin #1

'D' frequency stability: D = ±25ppm

'C' temperature range: C = (-20 +70)°C

'J' output logic and symmetry: J = CMOS 15pF, (45 ~ 55)%

Frequency stability C: ±20ppm, D: ±25ppm, G: ±50ppm, H: ±100ppm

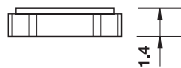
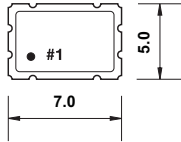
temperature range I: (-10 +60)°C, C: (-20 +70)°C, L: (-40 +85)°C

Output A: TTL(45 ~ 55)%, E: TTL 50pF(45 ~ 55)%, J: CMOS 15pF(45 ~ 55)%, F: CMOS 50pF(45 ~ 55)%

B: TTL(40 ~ 60)%, R: TTL 50pF(40 ~ 60)%, K: CMOS 15pF(40 ~ 60)%, G: CMOS 50pF(40 ~ 60)%

Type OC clock oscillator

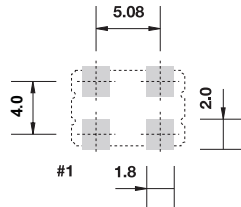
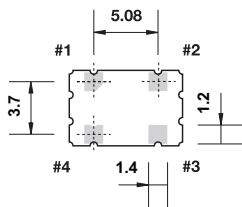
OC dimensions(mm) shown twice full size



Suggested land pattern

Pads are gold, 2.5µ min., over nickel, suitable for vapour phase or reflow soldering, preheat +150°C for 2 minutes, peak temperature +250°C for 30 seconds max.

Connect 0.01µF capacitor between Vcc and ground



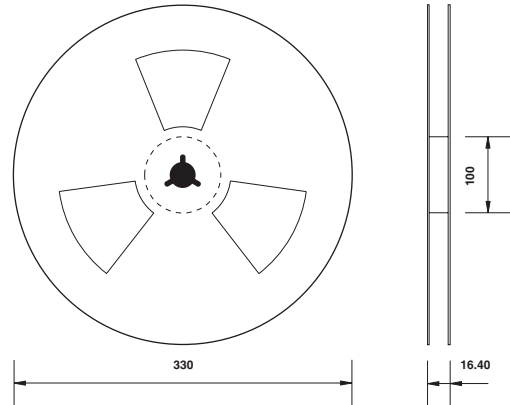
Pads viewed from bottom

- #1 output inhibit/N.C.
- #2 ground
- #3 output
- #4 Vcc

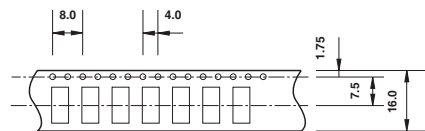
Output inhibit:

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

Standard tape and reel dimensions(mm)



Centre hole diameter 13.5mm, slot width 1.5mm spaced at 120°
Reel quantity 3000 pieces, leader tape 400mm minimum
Trailer tape: 10 empty compartments minimum



Tape transport hole diameter 1.5mm
Compartment size 5.56mm x 8.18mm, depth 2.16mm
Component spacing 8.0mm

Environmental test conditions

Mechanical shock	1500g, half sine wave, 0.5ms, 3 directions	MIL STD 883D 2002.3, condition A
Thermal shock	(-55 ~ +125)°C, 20 cycles	MIL STD 883D 1011.9, condition B
Vibration	(10 ~ 2000)Hz, 1.25mm, sine wave, 20g, each of three planes, duration 4 hours	MIL STD 883D 2005.2, condition B
Solderability	+245°C ±5°C, 5 seconds ±0.5 seconds	MIL STD 883D 2003.7
Fine leak	Mass spectrometer leak rate less than 2 ¹⁰⁻⁸ atm.cc/sec. helium	MIL STD 883D 1014.9, condition A
Gross leak	Leak test in de-ionised water, vacuum 70cm/Hg	
Humidity	85% relative humidity, +85°C, 500 hours	JIS-C 7022 B-5, condition C