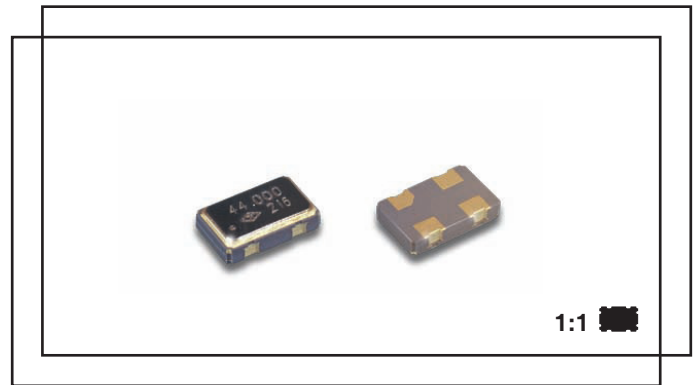


## Type OV clock oscillator smd ceramic package (0.3456 ~ 125)MHz

- # **tight symmetry**
- # **(5.0 x 3.2)mm footprint**
- # **+(1.8, 2.5, 3.3, 5.0)Vd.c. supply**
- # **RoHS compliant**



### Electrical specification

Case style V: (5.0 x 3.2)mm, height 1.3mm max.  
 Frequency range (0.6912 ~ 125)MHz: 1.8V, (0.3456 ~ 125)MHz: 2.5V/3.3V, (0.3456 ~ 75)MHz: 5V  
 Stability \*  $\pm(20 \sim 100)$ ppm, temperature range dependent

Supply voltage $V_{CC} \pm 10\%$		+1.8Vd.c.	+2.5Vd.c.	+3.3Vd.c.	+5.0Vd.c.
Supply current max.	(0.3456 ~ 1.5)MHz	-	5mA	5mA	7mA
	(1.5 ~ 20)MHz	5mA	7mA	7mA	10mA
	(20 ~ 70)MHz	15mA	20mA	30mA	40mA
Rise and fall time max. **	(0.3456 ~ 20)MHz	10ns	10ns	10ns	8ns
	(20 ~ 75)MHz	6ns	6ns	6ns	5ns

Operating temperature (-10 +60) $^{\circ}$ C ~ (-40 +85) $^{\circ}$ C  
 Storage temperature (-55 +125) $^{\circ}$ C  
 Output TTL, CMOS  
 Symmetry (45 ~ 55)%, (40 ~ 60)%  
 Tri-state fixed frequency or tri-state

\* inclusive of calibration tolerance at +25 $^{\circ}$ C, temperature tolerance, supply voltage variation, load variation, first year ageing(10 years for types S and J), shock and vibration.

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

### Ordering information

**Example .... type OV smd clock oscillator, 25.00MHz, +3.3Vd.c., fixed frequency,  $\pm 25$ ppm(-20 +70) $^{\circ}$ C, output CMOS 15pF, symmetry (45 ~ 55)%**

**TFC PART NUMBER .... OV 25.0M E F D C J**

'OV' .... type number: OV = smd clock oscillator type OV

'25.0M' .... frequency: 25.0M = 25.00MHz, frequency range from (0.3456 ~ 125)MHz

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

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

'D' .... frequency stability: D =  $\pm 25$ ppm

'C' .... temperature range: C = (-20 +70) $^{\circ}$ C

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

**Frequency stability .... C:  $\pm 20$ ppm, D:  $\pm 25$ ppm, G:  $\pm 50$ ppm, H:  $\pm 100$ ppm, S:  $\pm 32$ ppm\*, J:  $\pm 50$ ppm\***

*\*including 10 years ageing*

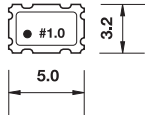
**Temperature range .... I: (-10 +60) $^{\circ}$ C, C: (-20 +70) $^{\circ}$ C, L: (-40 +85) $^{\circ}$ C**

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

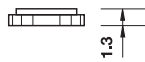
**B: TTL(40 ~ 60)%, R: TTL 50pF(40 ~ 60)%, K: CMOS 15pF(40 ~ 60)%, G: CMOS 50pF(40 ~ 60)%**

## Type OV clock oscillator

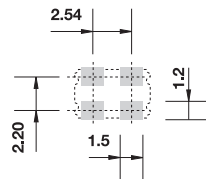
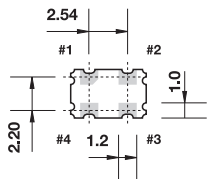
### OV dimensions(mm) shown twice full size



Suggested land pattern



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

### Environmental test conditions (on request)

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