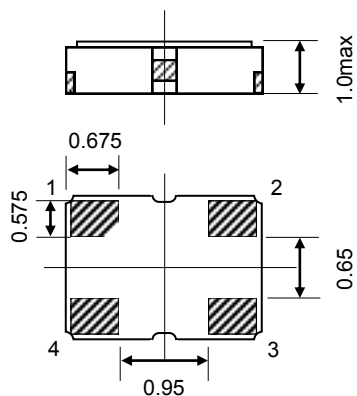
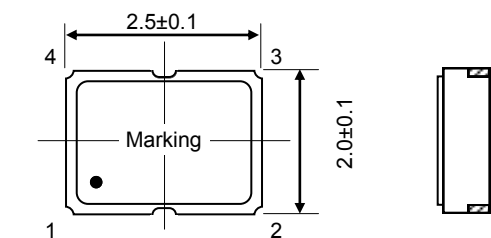


MINIATURE SMD OSCILLATOR (2.5 x 2.0 x 1.0mm)
FEATURES:

- HCMOS OUTPUT @ 32.768kHz
- LOW POWER CONSUMPTION


■ SPECIFICATION

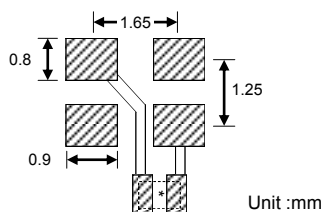
FREQUENCY		32.768kHz
FREQUENCY STABILITY		STD: $\pm 50\text{ppm}$ (See P/N guide for other options)
OPERATING TEMPERATURE RANGE		$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
STORAGE TEMPERATURE RANGE		$-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
SUPPLY VOLTAGE $\pm 10\%$		1.8V ~ 3.3V
SUPPLY CURRENT		10 μA max.
OUTPUT	LOGIC FAMILY	HCMOS
	LOAD	15pF
	LEVEL LOGIC '1' (V_{OH})	$0.9 \times V_{DD}$ min.
	LEVEL LOGIC '0' (V_{OL})	$0.1 \times V_{DD}$ max.
	SYMMETRY(DUTY CYCLE)	40% / 60%
	RISE AND FALL TIME (T_r/T_f)	30nS Max.
	START-UP TIME	10mS Max.
STAND-BY VOLTAGE	ENABLE (V_{IH})	$0.7 \times V_{DD} \leq V_{IH} \leq V_{DD}$ or N/C
	DISABLE (V_{IL})	$V_{IL} \leq 0.3 \times V_{DD}$
AGING @ $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$		$\pm 3.0\text{ppm} / 1^{\text{st}}$ year max.

■ PACKAGE DIMENSIONS


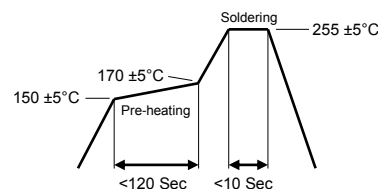
Unit : mm

Pin Configuration		
1	Disable	Enable
2	GND	
3	Z*	Output
4	V_{DD}	

*Z: high impedance

■ SOLDER PATTERN


*0.01 μF to 0.1 μF bypass capacitor recommended

■ REFLOW PROFILE

■ PART NUMBERING GUIDE

TLP22		- H	50	CQ	33	R	T	-	32.768K	-	TR
Product series											
Output H: HCMOS											
Stability 00: ± 100ppm 50: ± 50ppm 25: ± 25ppm 20: ± 20ppm											
Operating Temperature CQ: -40 ~ 85°C											
		</									