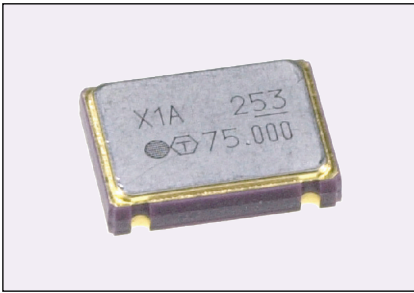


Crystal Clock Oscillator



**TCO-7086X1A**

SMO-N-K CMOS

**Features**

- CMOS logic output
- Ceramic package
- Space savings
- Enable / Disable feature

**Specifications**

Absolute Maximum Ratings

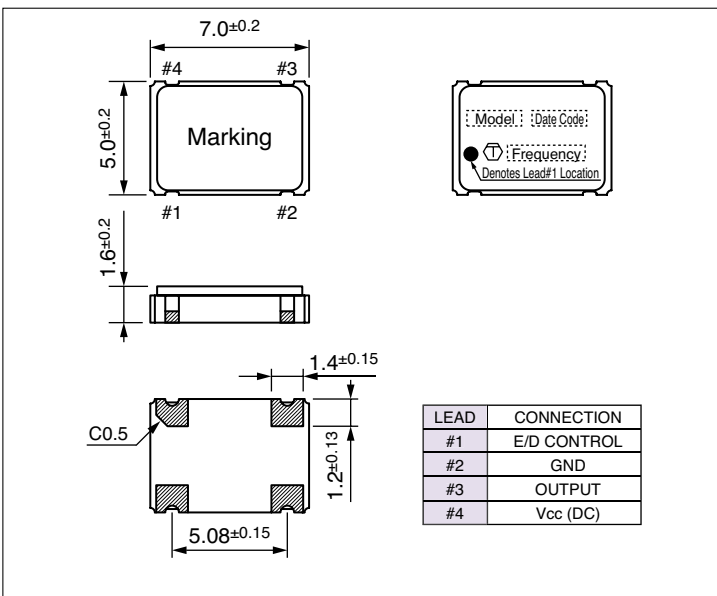
Parameter	Symbol	Rating
Supply voltage	V <sub>CC</sub>	-0.5 to +7.0 V
Input voltage	V <sub>IN</sub>	-0.5 to V <sub>CC</sub> +0.5 V
Output voltage	V <sub>O</sub>	-0.5 to V <sub>CC</sub> +0.5 V
Input current	I <sub>IN</sub>	±10 mA
Output current	I <sub>O</sub>	±25 mA
Storage temperature	T <sub>stg</sub>	-55 to +125 °C
Soldering condition	T <sub>sol</sub> T	+260°C / 20sec or +230°C / 180sec

Parameter		TCO-7086X1A	Conditions
Frequency	f <sub>o</sub>	1.5 to 75 MHz	—
Frequency Stability	Δf/f <sub>o</sub>	±50 ppm max.	(*1)
Operating Temperature	T <sub>opr</sub>	0 °C to +70 °C	—
Supply Voltage	V <sub>CC</sub>	+3.3 V ±10 %	DC
Supply Current	I <sub>CC</sub>	20mA max.	V <sub>CC</sub> = +3.63V
Input Voltage	V <sub>IH</sub> V <sub>IL</sub>	V <sub>IH</sub> =70 % V <sub>CC</sub> min. / V <sub>IL</sub> =30 % V <sub>CC</sub> max.	#1:V <sub>IH</sub> or OPEN ... Enable #1:V <sub>IL</sub> or GND ... Disable
Output Voltage	V <sub>OH</sub> V <sub>OL</sub>	V <sub>OH</sub> =90 % V <sub>CC</sub> min. / V <sub>OL</sub> =10 % V <sub>CC</sub> max.	I <sub>OH</sub> =-5mA, I <sub>OL</sub> =+5mA at V <sub>CC</sub> =+2.97V
Symmetry	SYM	40 to 60 %	at 50% V <sub>CC</sub>
Rise/Fall time	tr/tf	6 ns max.	at 10% to 90% V <sub>CC</sub>
Load Capacitance	CL	15 pF max.	—
Start-up time	t <sub>st</sub>	10 ms max.	(*2)

\*1 Inclusive of calibration tolerance at +25°C, operating temperature, operating voltage range.

\*2 Rise time (0 to +2.97V) of V<sub>CC</sub> > 150μs

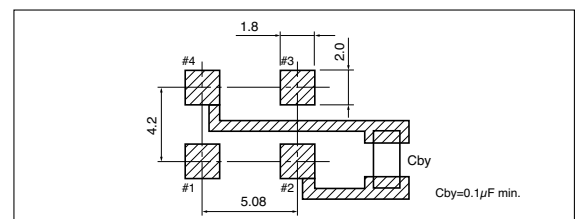
**Package Outlines [Dimensions in mm]**



**Test Circuit**

See Test Circuit page TEST-4

**Footprint [Dimensions in mm]**



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