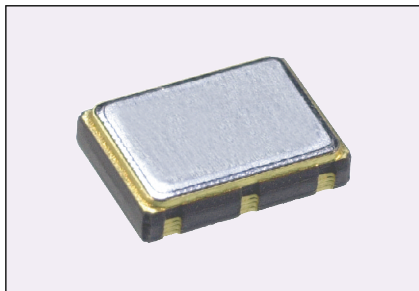


# Crystal Clock Oscillator



## TCO-7116H1A

SMO-N-K LVPECL

### Features

- for Gigabit ethernet
- LVPECL Output
- Small size : 7.0(W) X 5.0(D) X 1.8(H)mm
- 3rd OT Oscillation
- Low operation voltage (+3.3V)

### Specifications

### Absolute Maximum Ratings

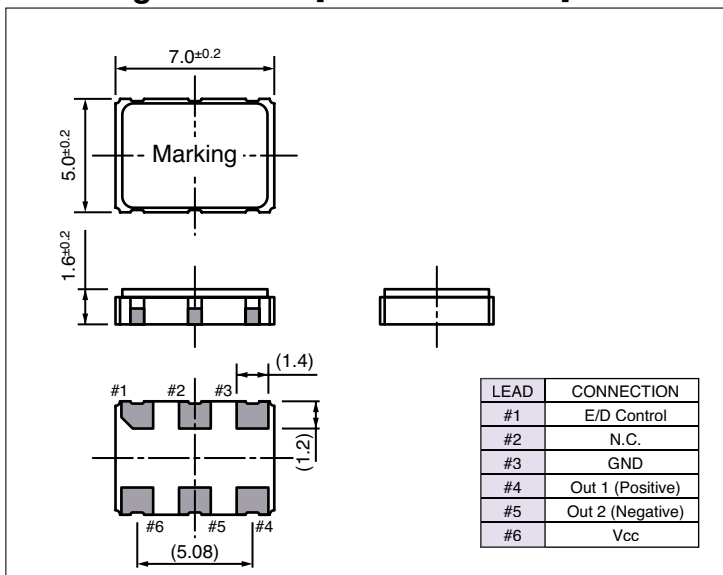
Parameter	Symbol	Rating
Supply voltage	V <sub>CC</sub>	-0.5 to +7.0 V
Input voltage	V <sub>IN</sub>	-0.5 to V <sub>CC</sub> +0.5 V
Output voltage	V <sub>O</sub>	-0.5 to V <sub>CC</sub> +0.5 V
Storage temperature	T <sub>stg</sub>	-50 to +150 °C
Soldering condition	T <sub>sol</sub> T	+260°C / 20sec or +230°C / 180sec

Parameter		TCO-7116H1A	Conditions
Frequency	f <sub>o</sub>	106.25 , 156.25 , 161.1328 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 ±5 %	DC
Supply Current	I <sub>CC</sub>	80mA max.	V <sub>CC</sub> = +3.6V
Input Voltage	V <sub>IH</sub> V <sub>IL</sub>	V <sub>IH</sub> =70 % V <sub>CC</sub> min. / V <sub>IL</sub> =20 % 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> = V <sub>CC</sub> -1.0 min. / V <sub>OL</sub> = V <sub>CC</sub> -1.6 max.	—
Symmetry	SYM	40 to 60 %	at Outputs Crossing Point
Rise/Fall time	t <sub>r</sub> /t <sub>f</sub>	1 ns max.	at 20% to 80% Output Swing
Start-up time	t <sub>st</sub>	2 ms max.	(*2)

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

\*2 Rise time (0 to +3.14V) of V<sub>CC</sub>>150μs

### Package Outlines [Dimensions in mm]



### Footprint [Dimensions in mm]

