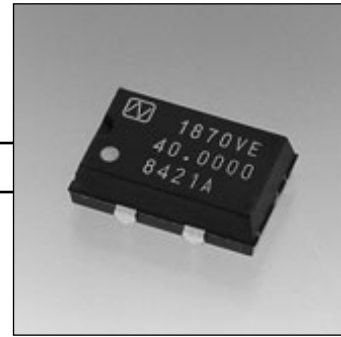


# CRYSTAL CLOCK OSCILLATORS

## Programmable Type

### 1870XE • 1870YE SERIES



#### Features

- Supply Voltage 3.3V.
- Directly drives C-MOS IC.
- The PLL technology enables this series to cover the frequency range from 1 to 125MHz.
- The frequency writing technology makes quick delivery possible.
- Stand-by function for output (Tri-state output).
- Compact and light weight : height 4.7mm, volume 0.4cm<sup>3</sup>, weight 1.5g.
- High reliability.  
(metal hermetic sealed crystal unit is inhoused)
- Applicable for reflow automatic mounting processes.
- Static electricity proof packaging : tape & reel.

#### Absolute Maximum Rating

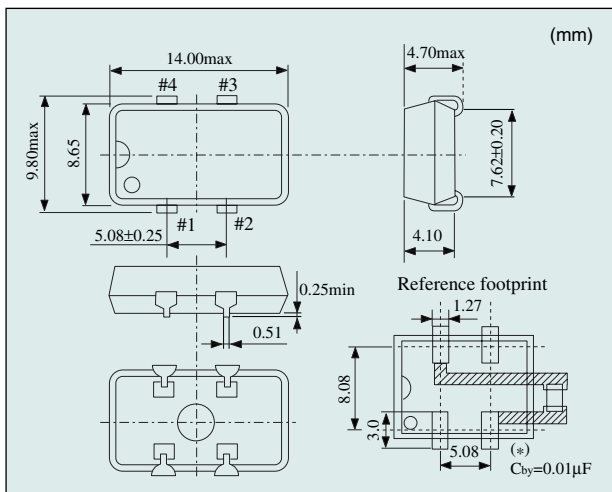
Supply Voltage (V<sub>DD</sub>) -0.5~+7.0V DC

Storage Temperature Range -55~+125°C

Item	Model	1870XE	1870YE
Output Level		C-MOS	
Frequency Range	(MHz)	1~125	
Frequency Stability	(×10 <sup>-6</sup> )	±50, ±100	
Operating Temp. Range	(°C)	-20~+70	
Supply Voltage	(V)	3.3±0.3	
Current Consumption (+3.3V, at 25°C)		28mA (max)	
	stand-by	16mA (max)	50µA (max)
V <sub>OL</sub> max / V <sub>OH</sub> min	(V)	0.4/V <sub>DD</sub> -0.4 I <sub>OL</sub> =8mA, I <sub>OH</sub> =-8mA	
Tr max/Tf max	(ns)	3/3 (at 0.2V <sub>DD</sub> ~0.8V <sub>DD</sub> )	
Duty Cycle	(%)	45~55 (≤40MHz), 40~60(>40MHz) : at 1/2V <sub>DD</sub>	
Fanout (gate)	C <sub>L</sub> (pF)	15	
Stand-by Function		Yes (tri-state)	
Jitter	P-P (ps)	250 (max) : at C <sub>L</sub> =15pF	

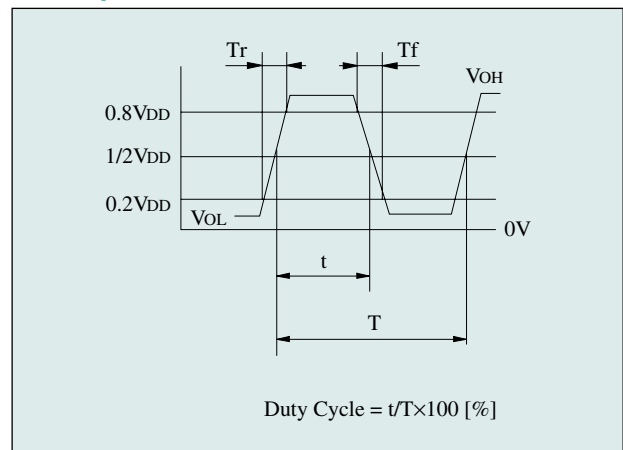
Note : If requested, Supply Voltage 2.7~3.3V (≤66.7MHz•Duty Cycle 40 ~ 60%), Operating Temp. Range -40~+85°C (Frequency Stability ±100×10<sup>-6</sup>) is available.

#### 1870XE • 1870YE Series Outline



PIN	Connection
# 1	STAND-BY
# 2	GND
# 3	OUTPUT
# 4	+3.3VDC

#### Output Wave <C-MOS>



#### Stand-by Function

# 1 pin input	# 3 pin output
H level (0.7V <sub>DD</sub> min) or open	Operating
L level (0.2V <sub>DD</sub> max)	High impedance (Weak pull down)