

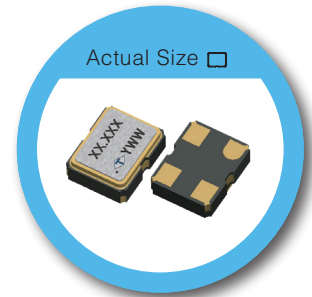
# 32.768kHz OY-I Type 2.5 x 2.0mm SMD Crystal Oscillator

## FEATURE

- Low Power Supply Voltage: 3.3, 2.5, 1.8 Supply Options
- Singled-end Output: CMOS
- Frequency: 32.768kHz
- Temperature Range: -40° to 85°C Operation
- Pb-free/RoHS Compliant

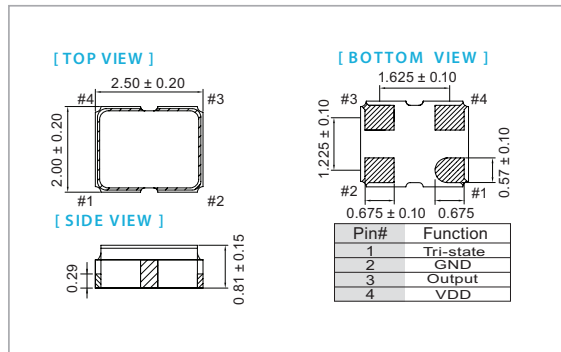
## TYPICAL APPLICATION

- RTC Module
- Smartphone
- IoT
- Wearable Device
- Watch, Medical

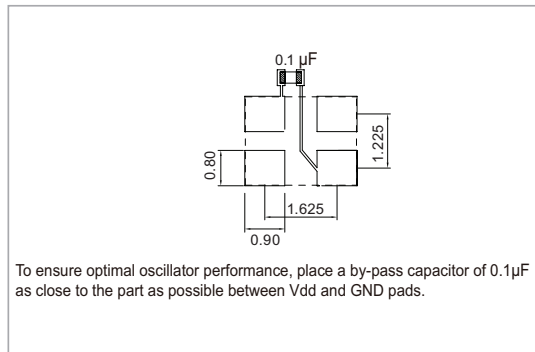


RoHS Compliant

## DIMENSION (mm)



## SOLDER PAD LAYOUT (mm)



## ELECTRICAL SPECIFICATION

Parameter		3.3 V		2.5 V		1.8 V		unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		VDD-10%	VDD+10%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		32.768						kHz
Supply Current (No Load)		-	35	-	35	-	35	µA
Output Level	Output High	2.97	-	2.25	-	1.62	-	V
	Output Low	-	0.33	-	0.25	-	0.18	
Transition Time (10%-90%)	Rise Time / Fall Time	-	15.0	-	15.0	-	15.0	nSec
Duty Cycle		45	55	45	55	45	55	%
Startup Time		-	20	-	20	-	20	mSec
Tri-State Mode (Input to Pin 1)	Enable	0.7xVDD	-	0.7xVDD	-	0.7xVDD	-	V
	Disable	-	0.3xVDD	-	0.3xVDD	-	0.3xVDD	
Standby Current		-	3	-	3	-	3	µA
Output Loading (CMOS)		-	15	-	15	-	15	pF
Aging (@ 25°C 1st year)		-	±3	-	±3	-	±3	ppm
Storage Temp. Range		-55	125	-55	125	-55	125	°C

## FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm		
	±20	±25	±50
-10~+60	○	○	○
-20~+70	○	○	○
-40~+85	△	○	○

\* ○: Available △:Conditional X: Not available

\* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock, and vibration

**Note: not all combination of options are available. Other specifications may be available upon request.**