

Low Current Consumption 32.768kHz OY-I Type 2.5 x 2.0mm SMD Crystal Oscillator

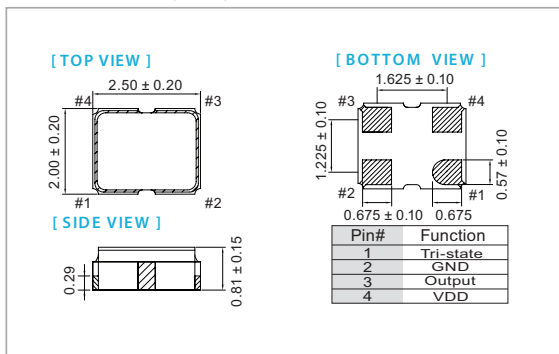
FEATURE

- Low Power Supply Voltage: 3.3, 2.5, 1.8 Supply Options
- Singled-end Output: CMOS
- Frequency: 32.768kHz
- Low Current Consumption: 18 μ A Max
- Temperature Range: -40 to 85°C Operation
- Pb-free/RoHS Compliant

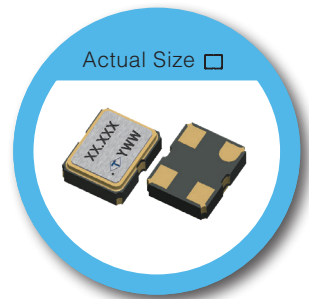
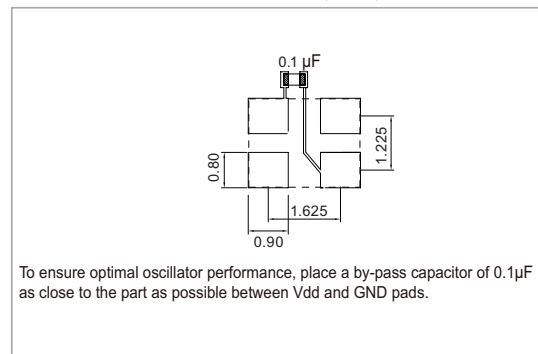
TYPICAL APPLICATION

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

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



RoHS Compliant

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)	-	18	-	18	-	18	μ A	
Output Level	Output High	2.97	-	2.25	-	2.25	V	
	Output Low	-	0.33	-	0.25	-		0.25
Transition Time (10%-90%)	Rise Time / Fall Time	-	15.0	-	15.0	-	15.0	nSec
		-	15.0	-	15.0	-	15.0	
Duty Cycle	45	55	45	55	45	55	%	
Startup Time	-	20	-	20	-	20	mSec	
Tri-State Mode (Input to Pin 2)	Enable	0.7xVDD	-	0.7xVDD	-	0.7xVDD	V	
	Disable	-	0.3xVDD	-	0.3xVDD	-		0.3xVDD
Standby Current	-	3	-	3	-	3	μ A	
Output Loading (CMOS)	-	15	-	15	-	15	pF	
Aging (@ 25°C 1st year)	-	\pm 3	-	\pm 3	-	\pm 3	ppm	
Storage Temp. Range	-55	125	-55	125	-55	125	°C	

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm		
	\pm 20	\pm 25	\pm 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 (1st year), shock, and vibration

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