

OY Type

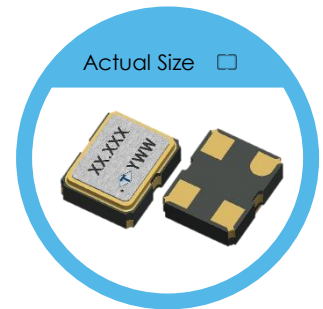
2.5 x 2.0 mm SMD Ultra Low Power SMD CMOS Output Crystal Oscillator

FEATURES

- Ultra Low Power Supply Voltage: 0.9V, 1.2V, 1.5V Supply Options
- Singled-end Output: CMOS
- Frequency Support from 1MHz to 50MHz
- Low Noise Typical: 0.3ps at 12kHz to 20MHz Frequency Offsets
- Temperature Range: -40 to 85°C Operation

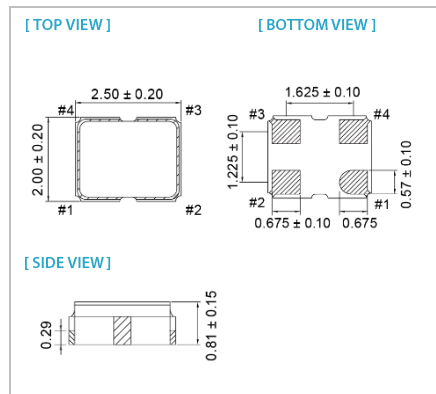
TYPICAL APPLICATION

- IoT, Smartphone, Digital Camera
- Game Console, Wearable Device, Digital Consumer Electronics

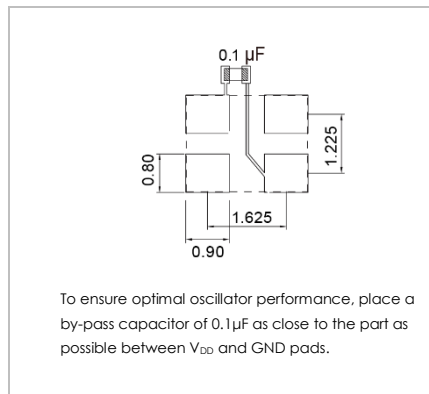


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



PIN FUNCTION (mm)

PIN#	FUNCTION
1	Tri-State
2	GND
3	Output
4	V _{DD}

ELECTRICAL SPECIFICATION

Parameter			0.9V		1.2V		1.5V		Unit	Test Condition
			Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation (V _{DD})			V _{DD} - 5%	V _{DD} + 5%	V _{DD} - 5%	V _{DD} + 5%	V _{DD} - 5%	V _{DD} + 5%	V	
Frequency Range			1	50	1	50	1	50	MHz	
Supply Current	At 15pF Load			1.5		2		3	mA	
	No Load Condition	1 MHz ≤ Fo < 10 MHz		0.9		1		1.2	mA	
		10 MHz ≤ Fo < 20 MHz		1		1.2		1.2	mA	
		20 MHz ≤ Fo < 50 MHz		1.2		1.5		1.5	mA	
Duty Cycle			45	55	45	55	45	55	%	
Output Level	Output High		90% V _{DD}		90% V _{DD}		90% V _{DD}		V	
	Output Low		10% V _{DD}		10% V _{DD}		10% V _{DD}		V	
Transition Time: Rise/Fall Time	1 MHz ≤ Fo < 50 MHz		6		6		6		nSec	Transition times are measured between 10% and 90% of V _{DD} , with an output load of 15 pF.
Startup Time			5		5		5		mSec	
Tri-State (Input to Pin 1)	Enable (High Voltage or Floating)		0.7 x V _{DD}		0.7 x V _{DD}		0.7 x V _{DD}		V	
	Disable (Low Voltage or GND)		0.3 x V _{DD}		0.3 x V _{DD}		0.3 x V _{DD}		V	
Output Loading			15		15		15		pF	
Standby Current				100		100		100	μA	
Aging (@25°C, 1 st year)				±3		±3		±3	ppm	
Storage Temp. Range			-55	+125	-55	+125	-55	+125	°C	
Phase Noise	At V _{DD} =1.2V, F _{out} =24MHz	1kHz offset	-130		-133		-135		dBc/Hz	
		10kHz offset	-140		-143		-143		dBc/Hz	
		100kHz offset	-148		-150		-150		dBc/Hz	
		1MHz offset	-152		-155		-155		dBc/Hz	
Period Jitter (pk-pk)			-	40	-	40	-	40	pSec	
RMS Phase Jitter (Integrated 12 kHz~20 MHz)			-	1	-	1	-	1	pSec	

FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C)	ppm	±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 (1st year),shock,and vibration

Note: not all combination of options are available. Other specifications may be available upon request.
 Specifications subject to change without notice.