

OC Type

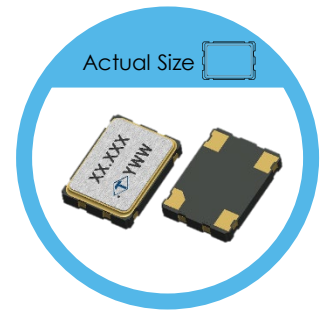
7.0 x 5.0 mm SMD Crystal Oscillator

FEATURES

- Conforms to AEC-Q200
- Typical 7.0 x 5.0 x 1.3 mm Ceramic SMD Package
- Output Frequency up to 166MHz
- Tri-State Enable/Disable

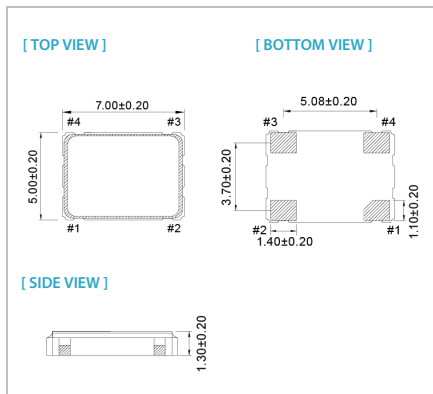
TYPICAL APPLICATION

- xDSL, WLAN, Fiber/10Gbit Ethernet
- Netbook, PDA
- PC, VGA Card

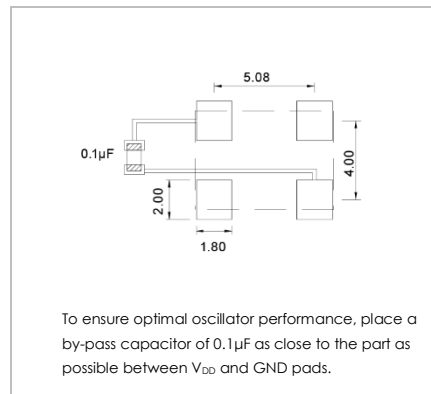


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



PIN FUNCTION (mm)

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

ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit	Test Condition
	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation (V _{DD})	V _{DD} - 10%	V _{DD} + 10%	V _{DD} - 10%	V _{DD} + 10%	V _{DD} - 10%	V _{DD} + 10%	V	
Frequency Range	0.0137	166	0.0137	133	0.0137	125	MHz	
Standard Frequency	2.048, 25, 26, 27, 50, 66.667, 100, 125						MHz	Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.
Supply Current	13.7 kHz ≤ Fo ≤ 70 kHz	1	1	1	1	1	mA	
	0.3125 MHz ≤ Fo < 35.328 MHz (A1)	10	8	7	7	7	mA	
	30 MHz ≤ Fo < 75 MHz	20	18	15	15	15	mA	
	75 MHz ≤ Fo < 133 MHz	35	30	25	25	25	mA	
Output Level (CMOS)	133 MHz ≤ Fo	45	40	40	40	40	mA	
	Output High (Logic "1")	2.97		2.25		1.62	V	
Transition Time: Rise/Fall Time	Output Low (Logic "0")		0.33	0.25	0.18	0.18	V	
	13.7 kHz ≤ Fo ≤ 70 kHz		50	50	50	50	nSec	Transition times are measured between 10% and 90% of V _{DD} , with an output load of 15 pF.
	0.3125 MHz ≤ Fo < 100 MHz		5	5	5	5	nSec	
100 MHz ≤ Fo		3	3	3	3	nSec		
Start Time		5	5	5	5	5	mSec	
Output Drive Capability (CL)		15	15	15	15	15	pF	
Tri-State (Input to Pin 1)	Enable (High Voltage or Floating)	2.31		1.75		1.26	V	
	Disable (Low Voltage or GND)		0.99	0.75	0.54	0.54	V	
Period Jitter (pk-pk)		40	40	40	40	40	pSec	
RMS Phase Jitter (Integrated 12 kHz-20 MHz)		1	1	1	1	1	pSec	
Standby Current		10	10	10	10	10	μA	
Aging (@25°C, 1 st year)		±3	±3	±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	X	△	○	○
-40 ~ +125	X	X	△	△

○: 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.