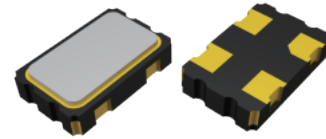


## Crystal Oscillator, Series FCO-5C

SMD Crystal Oscillator 5.0×3.2 mm

### FEATURE

- Typical 5.0×3.2×1.2mm ceramic SMD package
- Tight symmetry (45 to 55%) available
- Operation voltage: 1.8V, 2.5V, 3.3V
- Realize the standby function with Tri-State
- RoHS compliant / Pb-free



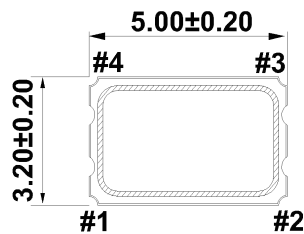
### ELECTRICAL SPECIFICATIONS

Item	Specifications						Unit
	3.3V		2.5V		1.8V		
Parameter	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation	2.97	3.63	2.25	2.75	1.62	1.98	V
Frequency Range	0.0137	160	0.0137	160	0.0137	135	MHz
Standard Frequency	2,048, 25, 26, 27, 50, 66.667, 100, 125						MHz
Supply Current	13.7kHz≤FO<93kHz	-	1	-	1	-	1
	0.3125MHz≤FO<50MHz	-	10	-	8	-	7
	40 MHz≤FO<75MHz	-	20	-	18	-	15
	75 MHz≤FO<135MHz	-	35	-	30	-	25
Transition Time :	135 MHz≤FO	-	45	-	40	-	-
	13.7kHz≤FO<93kHz	-	50	-	50	-	50
	0.3125MHz≤FO<100MHz	-	5	-	5	-	5
	100MHz≤FO	-	3	-	3	-	3
Output Level (CMOS)	Out High(Logic"1")	2.97		2.25		1.62	
	Out Low(Logic"0")		0.33		0.25		0.18
Start Time		-	5		5		5
Tri-State (Input to Pin 1)	Enable(High Voltage or floating)	2.31		1.75		1.26	
	Disable(Low Voltage or GND)		0.99		0.75		0.54
Period Jitter (Pk-Pk)		-	40		40		40
RMS Phase Jitter (integrated 12kHz to 20MHz)		-	1		1		1
Standby Current		-	10		10		10
Aging(@25 1st year)		-	±3		±3		±3
Storage Temp. Range		-55	125		-55	125	

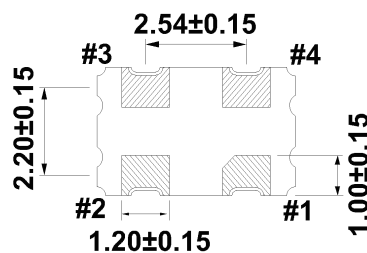
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.  
 + Transition times are measured between 10% and 90% of VDD, with an output load of 15pF.

### DIMENSION (mm)

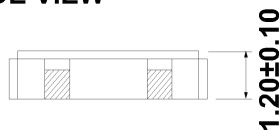
#### TOP VIEW



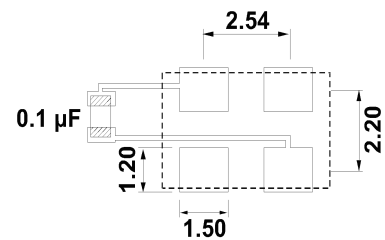
#### BOTTOM VIEW



#### SIDE VIEW



### SOLDER PAD LAYOUT(mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1μF as close to the part as possible between Vdd and GND pads

PIN#	Function
1	Tri-State
2	GND
3	Output
4	VDD

### FREQ. STABILITY vs. TEMP. RANGE

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