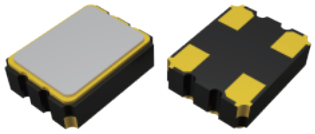
Crystal Oscillator, Series FCO-3K

SMD Crystal Oscillator 3.2×2.5 mm 32.768kHz

FEATURE

- Typical 3.2×2.5×0.95mm SMD package
- Tight symmetry (45 to 55%) available
- Operation voltage: 1.8V, 2.5V, 3.3V
- Tri-state enable / disable
- Built-in ASIC enables reduction of current consumption

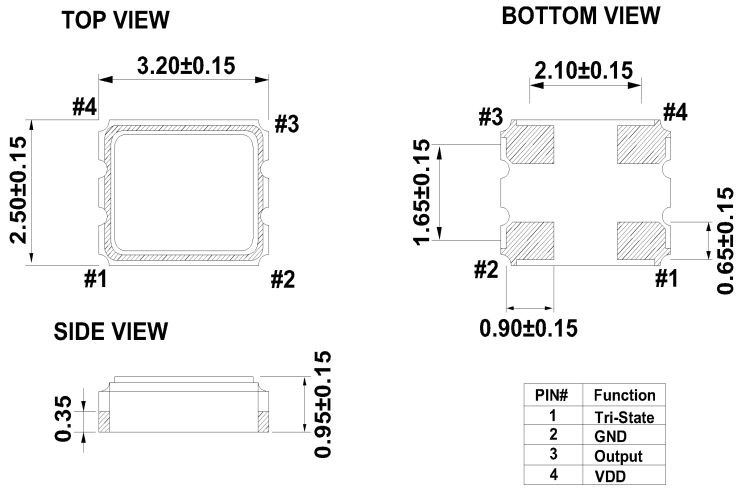


ELECTRICAL SPECIFICATIONS

Item		Specifications						
Parameter		3.3V		2.5V		1.8V		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation		2.97	3.63	2.25	2.75	1.62	1.98	V
Supply Current	@ 15pF Load	-	70	-	66	-	63	uA
	@ no load	-	65	-	62	-	60	
Duty Cycle		45	55	45	55	45	55	%
Transition Time :Rise/Fall Time		-	50	-	50	-	50	nSec
Output Level	Out High(Logic"1")	2.97		2.25		1.62		V
	Out Low(Logic"0")		0.33		0.25		0.18	
Startup Time		-	2	-	2	-	2	mSec
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	
Aging(@25 1st year)		-	±3	-	±3	-	±3	ppm
Storage Temp. Range		-55	125	-55	125	-55	125	°C

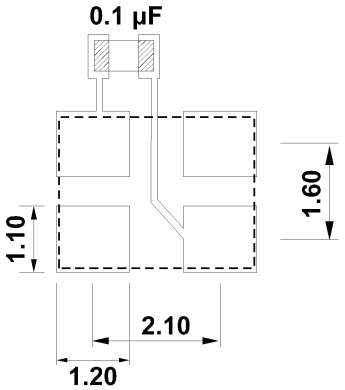
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.
+ Transition times are measured between 10% and 90% of VDD, with an output load of 15pF.

DIMENSION (mm)



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

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.

FREQ. STABILITY vs. TEMP. RANGE

ppm / Temp. (°C)	±20	±25	±40	±50
-10 ~ +60	○	○	○	○
-20 ~ +70	△	○	○	○
-40 ~ +85	×	△	○	○
-40 ~ +125	×	×	△	○

○: Available △: Conditional ×: Not available
Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration