

FCom Crystal Oscillator

Series FCO-6P-PJ



Programmable Oscillator 2.0×1.6 mm

Feature

- Operation supply voltage: 1.8V, 2.5V and 3.3V
- Frequency Stability ± 20 ppm over -40°C to 105°C
- Low phase jitter: < 1 pS (0.8 pS, typ.) RMS
- Tri-state enable / disable mode

Application

- IoT, Smartphone
- Game console
- Mobile device
- Wearable device

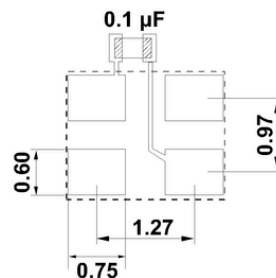
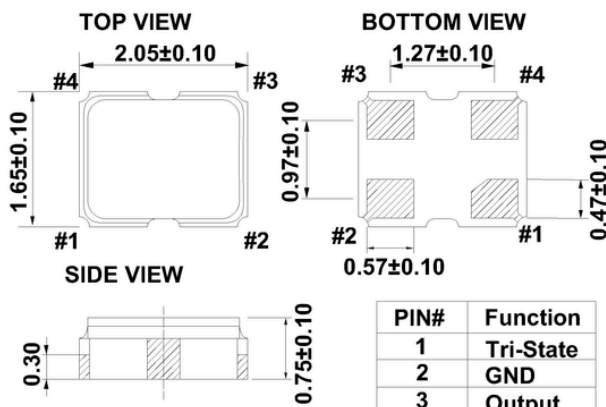
ELECTRICAL SPECIFICATIONS

Parameters		Symbol	Min.	Typ.	Max.	Units	Notes
Frequency Range		F	1~200			MHz	
VDD Sensitivity ($\pm 5\%$)			-2	-	2	ppm	
Supply Voltage		Vdd	1.8V	2.5V	3.3V	V	Typ.
Current Consumption	$1\text{MHz} \leq F_o < 30\text{MHz}$	Icc	25	27	27	mA	Max. @15pF Loading
	$30\text{MHz} \leq F_o < 75\text{MHz}$		25	27	27		
	$75\text{MHz} \leq F_o < 125\text{MHz}$		25	30	30		
	$125\text{MHz} \leq F_o < 170\text{MHz}$		-	35	35		
	$170\text{MHz} \leq F_o \leq 200\text{MHz}$		-	35	40		
Transition Time: Rise/Fall Time	$1\text{MHz} \leq F_o < 10\text{MHz}$	Tr/Tf	4	4	3	nSec	Max. @10% ~ 90% @ load 15pF
	$10\text{MHz} \leq F_o < 125\text{MHz}$		3	3	2		
	$125\text{MHz} \leq F_o < 200\text{MHz}$		-	2	2		
Stand by Current	@PD Mode	Icc(ST)	-	-	400	uA	
	@OE Mode		-	-	25	mA	
Output Load		CL	15			pF	
Output Level		VoH	90% Vdd	-	-	V	Output High
		VoL	-	-	10% Vdd	V	Output Low
Tri-State Mode (Input to Pin 1)		VIH	70% Vdd	-	-	V	Enable
		VIL	-	-	30% Vdd	V	Disable
RMS Phase Jitter	Integer Mode	PJ	-	0.8	1.5	pSec	Offset 12kHz~20MHz @50MHz
	Fractional Mode		-	-	2.0		
Duty Cycle		TH/T	45	~	55	%	
Start-up Time		Tosc	-	-	8	mSec	
Aging		ppm/yr	± 3			ppm/yr	1st. Year at 25°C

Test condition
Ambient temperature : $25 \pm 5^{\circ}\text{C}$
Relative humidity : 40% ~ 70%

Note : The table shows common spec. if you have special spec. requirement , please feel free to contact our salesperson.

DIMENSION(mm)



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

Temp.(°C) \ ppm	± 15	± 20	± 25	± 50
@-20~70°C	△	○	○	○
@-40~85°C	x	△	○	○
@-40~105°C	x	△	○	○
@-40~125°C	x	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.