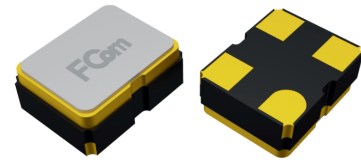


FCom Ultra-low Power OSC

Series FCO-2C-UP

Ultra-low Power SMD OSC 2.5×2.0 mm



Feature

- 0.9V, 1.2V, 1.5V ultra-low power supply
- Singled-end Output: CMOS
- Low Noise, 0.3ps at 12kHz~20MHz offsets
- Pb-free/RoHS Compliant

Application

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

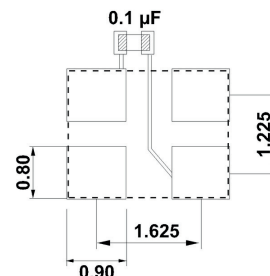
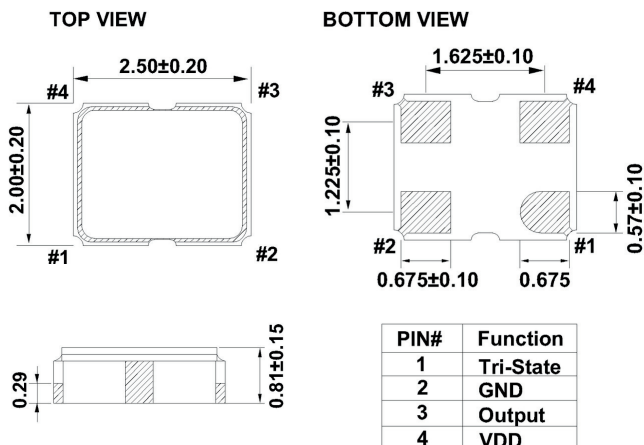
ELECTRICAL SPECIFICATIONS

Parameters		Symbol	Min.	Typ.	Max.	Units	Notes
Frequency Range		F	1~50			MHz	
Supply Voltage		Vdd	0.9V	1.2V	1.5V	V	Typ.
Current Consumption	@15pF Load	Icc	1.5	2	3	mA	Max.
	1MHz ≤ Fo < 10MHz		0.9	1	1.2		Max. @No Load Condition
	10MHz ≤ Fo < 20MHz		1	1.2	1.2		
	20 MHz ≤ Fo < 50 MHz		1.2	1.5	1.5		
Transition Time: Rise/Fall Time	1MHz ≤ Fo < 10MHz	Tr/Tf	4	3	3	nSec	Max. @10% ~ 90% @ load 15pF
	10MHz ≤ Fo < 20MHz		3	3	3		
	20 MHz ≤ Fo < 50 MHz		2	2	2		
Stand by Current		Icc(ST)	-	-	100	uA	
Output Load (CMOS)		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
Supply Voltage		Vdd	0.9V	1.2V	1.5V	V	Typ.
Phase Noise	1kHz offset	PN	-130	-133	-135	dBc/Hz	At VDD=1.2V, Fout=24MHz
	10kHz offset		-140	-143	-143		
	100kHz offset		-148	-150	-150		
	1MHz offset		-152	-155	-155		
Period Jitter		Pk	-	-	40	pSec	
RMS Phase Jitter		PJ	-	0.3	1.0	pSec	Integrated 12 KHz~20 MHz
Duty Cycle		TH/T	45	~	55	%	
Start-up Time		Tosc	-	-	4	mSec	
Aging		ppm/yr	±3			ppm/yr	1st. Year at 25°C

Test condition
Ambient temperature:
25 ± 5°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	± 25	± 50
@-10~60°C	○	○	○
@-20~70°C	○	○	○
@-40~85°C	△	○	○

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