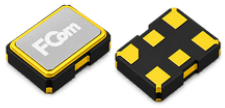
FCom Crystal Oscillator

Series FCO-6LH

Differential Oscillator 2.0×1.6 mm



Feature

- Frequency support 285MHz, 312.5MHz
- Ultra low phase jitter: 40 fS, Max. RMS from 12kHz - 20MHz
- Tri-state enable/disable

Application

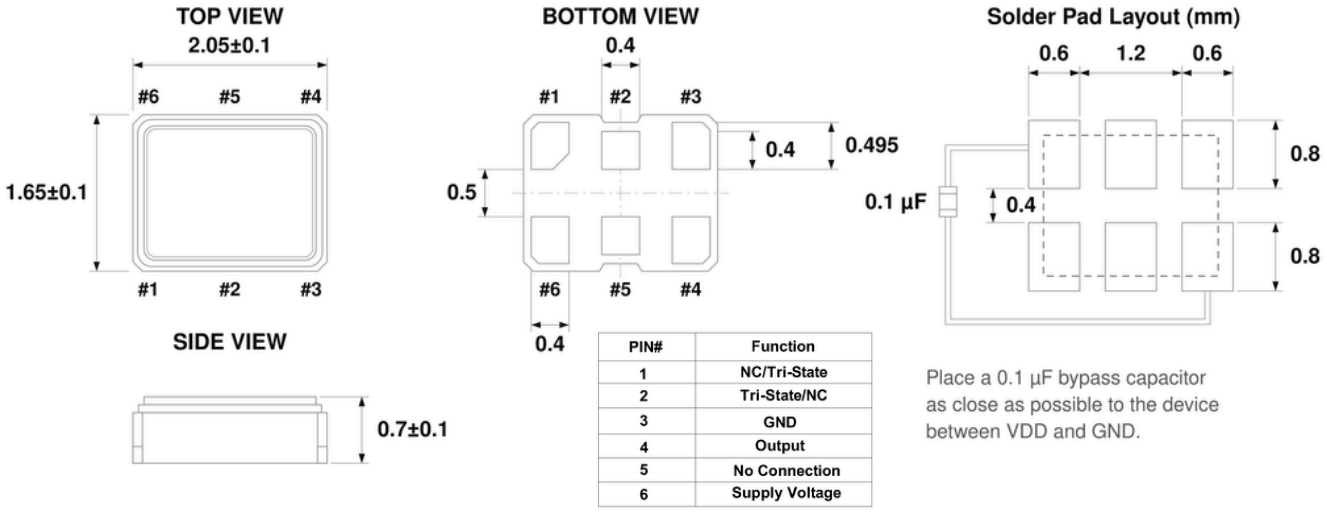
- 800Gbit/ 1.6Tbit Optical Module, Fiber Channel
- Network Equipment: Router, Switch
- Ethernet, MAN, SONET, Data Center
- Test Instrumentation

ELECTRICAL SPECIFICATIONS

Parameters		Symbol	LVPECL				Units	Notes	
			3.3V		2.5V				
			Min.	Max.	Min.	Max.			
Frequency Range		F	285, 312.5				MHz		Test condition Ambient temperature: 25 ± 5°C Relative humidity: 40% ~ 70%
Standard Frequency		F(ST)	285, 312.5				MHz		
Supply Current		Icc	-	65	-	65	mA		
Transition Time	Rise Time	Tr	-	0.4	-	0.4	nSec	Measured from 20% ~ 80%	
	Fall Time	Tf	-	0.4	-	0.4			
Output Level		VoH	Vdd-1.1	Vdd-0.7	Vdd-1.1	Vdd-0.7	V	Output High	
		VoL	Vdd-1.9	Vdd-1.5	Vdd-1.9	Vdd-1.5	V	Output Low	
Tri-State Mode		VIH	80% Vdd	-	80% Vdd	-	V	Enable	
		VIL	-	20% Vdd	-	20% Vdd	V	Disable	
Phase Noise		PN	Typ.	Max.	Typ.	Max.	dBc/Hz	At VDD=3.3V, fout=312.5MHz	
10 kHz			-135		-135				
100 kHz			-154	-	-154				
1 MHz			-160	-	-160				
RMS Phase Jitter 12 kHz~20 MHz		PJ		40 Max.		40 Max.	fSec		
Duty Cycle		TH/T	45 ~ 55				%		
Stand by Current		Icc(ST)	-	60	-	60	μA		
Output Load		RL	50Ω, VDD – 2V				/		
Start-up Time		Tosc	10				mSec	Max	
Aging		ppm/yr	±3				ppm/yr	1st. Year at 25°C	

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

DIMENSION(mm)



PIN#	Function
1	NC/Tri-State
2	Tri-State/NC
3	GND
4	Output
5	No Connection
6	Supply Voltage

Place a 0.1 μF bypass capacitor as close as possible to the device between VDD and GND.

Parameters	Symbol	LVDS						Units	Notes	
		3.3V		2.5V		1.8V				
		Min.	Max.	Min.	Max.	Min.	Max.			
Frequency Range	F	285, 312.5						MHz		
Standard Frequency	F(ST)	285, 312.5						MHz		
Supply Current	Icc	-	40	-	40	-	40	mA		
Transition Time	Tr	-	0.4	-	0.4	-	0.4	nSec	Measured from 20% ~ 80%	
	Tf	-	0.4	-	0.4	-	0.4			
Output Level	VoH	-	1.6	-	1.6	-	1.6	V		
	VoL	0.9	-	0.9	-	0.9	-	V		
Tri-State Mode	VIH	80% Vdd	-	80% Vdd	-	80% Vdd	-	V	Enable	Test condition Ambient temperature: 25 ± 5°C Relative humidity: 40% ~ 70%
	VIL	-	20% Vdd	-	20% Vdd	-	20% Vdd	V	Disable	
Phase Noise	PN	**Typ.**	**Max.**	**Typ.**	**Max.**	**Typ.**	**Max.**	dBc/Hz	At VDD=3.3V, fout=156.25MHz	
10 kHz		-147		-147		-146				
100 kHz		-156	-	-156		-156				
1 MHz		-158	-	-158		-158				
RMS Phase Jitter	PJ	-	40 Max.	-	40 Max.	-	40 Max.	fSec	Integrated 12 kHz~20 MHz @ 3.3V	
Duty Cycle	TH/T	45 ~ 55						%		
Stand by Current	Icc(ST)	60						µA	Max	
Output Load	RL	100Ω (Between OUT & OUTN)						Ω		
Start-up Time	Tosc	-	10	-	10	-	10	mSec		
Aging	ppm/yr	±3						ppm/yr	1st. Year at 25°C	

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