

# DIFFERENTIAL OSCILLATOR

## DO32B SERIES



### Features

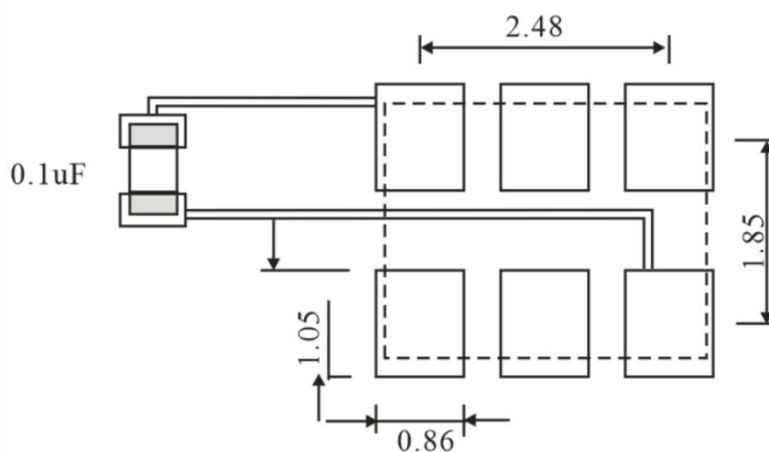
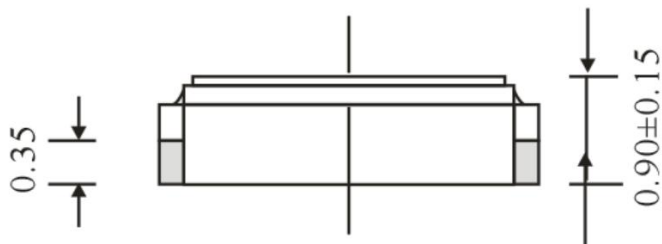
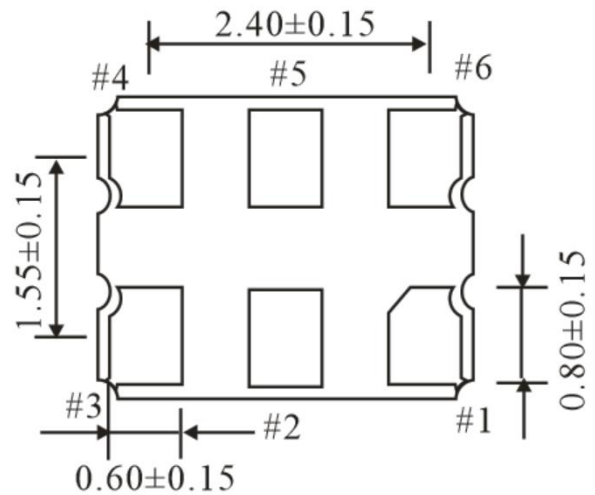
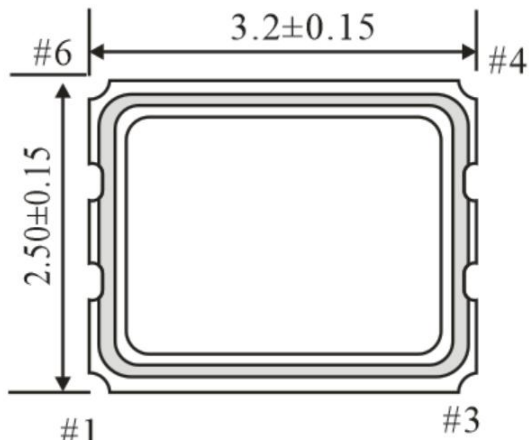
- External dimensions:3.2×2.5×0.9mm
- Very low jitter performance:typical 0.1ps RMS from 12KHz~20MHz
- Fundamental/3rd overtone crystal design,Output frequency up to 250MHz
- Tri-state enable/disable,up to 125°C operating temperature range
- 10G bit Ethernet,Fiber channel,Storage Area Network etc,Telecom etc.

### Specifications

Parameter	LVPECL				LVDS				Unit
	3.3V		2.5V		3.3v		2.5V		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation( $V_{DD}$ )	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	10	250	10	250	10	250	10	250	MHz
Standard Frequency	25/106.25/125/156.25/161.1328/212.5								
Supply Current	10MHz ≤ F o ≤ 160MHz		160MHz ≤ F o ≤ 250MHz		10MHz ≤ F o ≤ 160MHz		160MHz ≤ F o ≤ 250MHz		mA
	-	75	-	75	-	50	-	50	
Output Level	Output High		Output Low		Output High		Output Low		V
	2.275	-	1.475	-	-	1.6	-	1.6	
Transition Time:Rise/Fall Time <sup>+</sup>	-	1.0	-	1.0	-	1.0	-	1.0	nSec
Start Time	-	10	-	10	-	10	-	10	mSec
Tri-state(Input to pin2 or pin1)									
Enable(High voltage or floating)	2.31	-	1.75	-	2.31	-	1.75	-	V
Disable(Low voltage or GND)	-	0.99	-	0.75	-	0.99	-	0.75	
RMS Phase Jitter (integrated 12KHz-20MHz)									
FO < 80MHz	-	1	-	1	-	1	-	1	pSec
80MHz ≤ FO < 125MHz	-	0.5	-	0.5	-	0.5	-	0.5	
125MHz ≤ FO < 170MHz	-	0.3	-	0.3	-	0.3	-	0.3	
170MHz ≤ FO < 200MHz	-	0.5	-	0.5	-	0.5	-	0.5	
200MHz ≤ FO	-	0.3	-	0.3	-	0.3	-	0.3	
Phase Noise@156.25MHz	100Hz		1KHz		100Hz		1KHz		dBc/ Hz
	-95		-90		-90		-90		
	-125		-125		-120		-120		
	10KHz		10KHz		10KHz		10KHz		
	-140		-140		-140		-140		
Aging(@25°C 1 <sup>st</sup> yeat)	--	±3	--	±3	--	±3	--	±3	ppm
Storage Temp.Range	-55	125	-55	125	-55	125	-55	125	°C

### Dimensions

(Unit:mm)



Pin#	Function
1	NC/Tri-State
2	Tri-state/NC
3	GND
4	Output
5	Comp. Output
6	VDD

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.