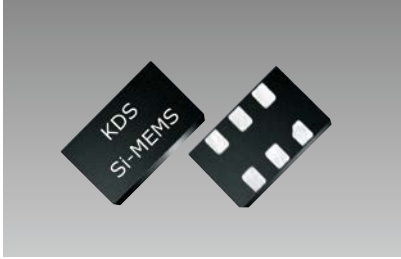


压控MEMS振荡器(VCMO) - Super Low Jitter

MO3372/MO3373



■ 优点

- 外形尺寸: 3.2×2.5 mm, 5.0×3.2 mm, 7.0×5.0 mm
- 频率可变范围: $\pm 25 \sim \pm 3200 \times 10^{-6}$
- RMS相位抖动(Typ.): 0.23 ps

■ 用途

- Telecom clock synchronization, instrumentation
- Low bandwidth analog PLL, jitter cleaner, clock recovery, 音响
- 视频、宽带调制解调器、网络设备、3G/HD-SDI, FPGA



型号	频率范围 (MHz)	频率公差 ($\times 10^{-6}$)	电源电压 (V)	消耗电流 (mA Typ.)	尺寸 (mm)	输出
MO3372	1 to 220	$\pm 15, \pm 25, \pm 35, \pm 50$	+2.25 to 3.63	+76 to +84	3.2×2.5×0.8, 5.0×3.2×0.8, 7.0×5.0×1.0 (QFN)	LVPECL LVDS HCSL
MO3373	220 to 725					

■ 一般规格(MO3372)

项目	符号	Min.	Typ.	Max.	单位	条件
输出频率范围	f	1	-	220	MHz	Accurate to 6 decimal places
电源电压	V _{dd}	+2.97	+3.3	+3.63	V	
		+2.7	+3.0	+3.3		
		+2.52	+2.8	+3.08		
		+2.25	+2.5	+2.75		
运行温度范围	T _{use}	-20	-	+70	°C	Extended Commercial
		-40	-	+85		
		-40	-	+95		Industrial
		-40	-	+105		
频率公差	F _{stab}	-15	-	+15	$\times 10^{-6}$	包含 +25°C 时的初始频率偏差, 温度特性, 运行电源电压范围内的电源电压特性, 负载特性, 长年老化 (1 年)。
		-25	-	+25		
		-35	-	+35		
		-50	-	+50		
占空比	DC	45	-	55	%	
OE 端子 0 电平输入电压	V _{li}	-	-	V _{dd} ×0.3	V	Pin 2, OE
OE 端子 1 电平输入电压	V _{hi}	V _{dd} ×0.7	-	-	V	Pin 2, OE
启动时间	T _{start}	-	-	3.0	ms	V _{dd} 达到额定最小值以后经过的时间
输出使能时间	T _{oe}	-	-	3.8	μs	f = 156.25 MHz
输出禁用时间						
频率可变范围	PR	$\pm 25, \pm 50, \pm 80, \pm 100, \pm 150, \pm 200, \pm 400, \pm 800, \pm 1600, \pm 3200$			$\times 10^{-6}$	
输出端子禁用电流	I _{leak}	-	+0.15	-	μA	OE = Low
0 电平控制电压	VC _L	-	-	V _{dd} ×0.1	V	Voltage at which minimum frequency deviation is guaranteed
1 电平控制电压	VC _U	V _{dd} ×0.9	-	-	V	Voltage at which maximum frequency deviation is guaranteed
控制电压输入阻抗	VC _z	-	10	-	MΩ	
控制电压输入带宽	V _c	-	10	-	kHz	
线性	Lin	-	-	1	%	
频率变化极性	-	Positive Slope			-	
RMS 周期抖动 [1]	T _{jitt}	-	1.0	1.6	ps	f = 156.25 MHz, V _{dd} = +3.3V or +2.5V
LVPECL 输出						
消耗电流	I _{dd}	-	-	+92	mA	Excluding Load Termination Current, V _{dd} = +3.3V or +2.5V
OE 端子禁用电流	I _{oe}	-	-	+61	mA	OE = Low
最大输出电流	I _{driver}	-	-	+30	mA	Maximum average current drawn from OUT+ or OUT -
0 电平电压	V _{ol}	V _{dd} - 2.0	-	V _{dd} - 1.5	V	
1 电平电压	V _{oh}	V _{dd} - 1.15	-	V _{dd} - 0.7	V	
差分输出电压	V _{Swing}	+1.2	+1.6	+2.0	V	
上升时间、下降时间	Tr, Tf	-	225	290	ps	20% to 80%
RMS 相位抖动 (随机)	T _{phj}	-	0.225	0.275	ps	Note [2]
LVDS 输出						
消耗电流	I _{dd}	-	-	+84	mA	Excluding Load Termination Current, V _{dd} = +3.3V or +2.5V
OE 端子禁用电流	I _{oe}	-	-	+62	mA	OE = Low
上升时间、下降时间	Tr, Tf	-	400	470	ps	Measured with 2pF capacitive loading to GND, 20% to 80%
差分输出电压	V _{od}	+250	-	+450	mV	
差分输出误差	ΔV_{od}	-	-	+50	mV	
补偿电压	V _{os}	+1.125	-	+1.375	V	
补偿误差	ΔV_{os}	-	-	+50	mV	
RMS 相位抖动 (随机)	T _{phj}	-	0.235	0.275	ps	Note [2]
HCSL 输出						
消耗电流	I _{dd}	-	-	+97	mA	Excluding Load Termination Current, V _{dd} = +3.3V or +2.5V
OE 端子禁用电流	I _{oe}	-	-	+62	mA	OE = Low
上升时间、下降时间	Tr, Tf	-	360	495	ps	Measured with 2pF capacitive loading to GND, 20% to 80%
0 电平电压	V _{ol}	-0.05	-	+0.05	V	
1 电平电压	V _{oh}	+0.6	-	+0.9	V	
差分输出电压	V _{Swing}	+1.2	+1.4	+1.8	V	
RMS 相位抖动 (随机)	T _{phj}	-	0.23	0.275	ps	Note [2]
包装单位	1000pcs./reel (φ 180) or 3000pcs./reel (φ 180: 3225 package)					

[1]. 依据 JEDEC 65B 测量

[2]. 5.0×3.2 and 3.2×2.5 mm package, f = 156.25 MHz, Integration bandwidth = 12 kHz to 20 MHz, all V_{dd} levels, includes spurs. Temperature ranges -20 to +70°C and -40 to +85°C