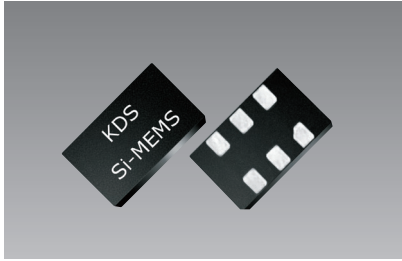


温度补偿MEMS振荡器(TC-MO/ VC TC-MO)

MO5021/MO5022



■ 优点

- 外形尺寸: 3.2×2.5、5.0×3.2、7.0×5.0 mm
- 频率公差: $\pm 5 \times 10^{-6}$
- 低相位抖动: 0.6ps (12 kHz~20 MHz)

■ 用途

- SATA、SAS、10GB Ethernet、Fibre Channel、PCI-Express
- 宽带调制解调器、网络设备、instrumentation



型号	频率范围 (MHz)	频率公差 ($\times 10^{-9}$)	电源电压 (V)	消耗电流 (mA Typ.)	尺寸 (mm)	输出
MO5021	1 to 220	±5	+2.25 to +3.63	+54 to +69	3.2×2.5×0.8, 5.0×3.2×0.8, 7.0×5.0×1.0 (QFN)	LVPECL LVDS
MO5022	220 to 625					

■ 一般规格(MO5021)

项目	符号	Min.	Typ.	Max.	单位	条件
输出频率范围	f	1	-	220	MHz	
电源电压	V _{dd}	+2.25	+2.5	+2.75	V	
		+2.97	+3.3	+3.63		
		+2.25	-	+3.63		
运行温度范围	T _{use}	-20	-	+70	℃	Extended Commercial
		-40	-	+85		Industrial
频率公差	F _{stab}	-5.0	-	+5.0	$\times 10^{-6}$	Over operating temperature range at rated nominal power supply voltage and load.
电源电压特性	F _{Vdd}	-	50	-	$\times 10^{-9}$	±10% V _{dd}
负载特性	F _{load}	-	0.1	-	$\times 10^{-6}$	15pF ±10% of load
长期老化 (1 年)	F _{aging1}	-2.5	-	+2.5	$\times 10^{-6}$	T _A = +25℃
长期老化 (10 年)	F _{aging10}	-5.0	-	+5.0		T _A = +25℃
频率可变范围	PR	±12.5, ±25, ±50			$\times 10^{-6}$	
1 电平控制电压	VC _U	V _{dd} - 0.1	-	-	V	All V _{dds} , Voltage at which maximum deviation is guaranteed.
0 电平控制电压	VC _L	-	-	+0.1	V	
频率变化极性	-	Positive slope			-	
OE 端子 0 电平输入电压	V _{IL}	-	-	V _{dd} ×0.3	V	Pin 1, OE or \overline{ST}
OE 端子 1 电平输入电压	V _{IH}	V _{dd} ×0.7	-	-	V	Pin 1, OE or \overline{ST}
启动时间	T _{start}	-	6	10	ms	V _{dd} 达到额定最小值以后经过的时间
重起时间	T _{resume}	-	6	10	ms	In Standby mode, measured from the time \overline{ST} pin crosses
占空比	DC	45	-	55	%	
待机时电流	I _{std}	-	-	+100	μA	\overline{ST} = Low, for all V _{dds}
OE 端子禁用电流	I _{oe}	-	-	+35	mA	OE = Low
输出使能时间	T _{oe}	-	-	115	ns	f = 212.5 MHz- For other frequencies, T _{oe} = 100ns + 3 period
输出禁用时间	T _{oe}	-	-	115	ns	
LVPECL 输出、DC and AC Characteristics						
消耗电流	I _{dd}	-	+61	+69	mA	Excluding Load Termination Current, V _{dd} = +3.3V or +2.5V
0 电平电压	V _{OL}	V _{dd} - 1.9	-	V _{dd} - 1.5	V	
1 电平电压	V _{OH}	V _{dd} - 1.1	-	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	-	300	500	ps	20% to 80%
RMS 周期抖动	T _{jitt}	-	1.2	1.7	ps	f = 100 MHz, V _{dd} = +3.3V or +2.5V
		-	1.2	1.7		f = 156.25 MHz, V _{dd} = +3.3V or +2.5V
		-	1.2	1.7		f = 212.5 MHz, V _{dd} = +3.3V or +2.5V
RMS 相位抖动 (随机)	T _{phj}	-	0.6	0.85	ps	f = 156.25 MHz, Integration bandwidth = 12 kHz to 20 MHz, all vdds
LVDS 输出、DC and AC Characteristics						
消耗电流	I _{dd}	-	+47	+55	mA	Excluding Load Termination Current, V _{dd} = +3.3V or +2.5V
差分输出电压	V _{OD}	+250	+350	+450	mV	
差分输出误差	ΔV _{OD}	-	-	+50	mV	
补偿电压	V _{OS}	+1.125	+1.2	+1.375	V	
补偿误差	ΔV _{OS}	-	-	+50	mV	
上升时间、下降时间	Tr, Tf	-	495	600	ps	20% to 80%
RMS 周期抖动	T _{jitt}	-	1.2	1.7	ps	f = 100 MHz, V _{dd} = +3.3V or +2.5V
		-	1.2	1.7		f = 156.25 MHz, V _{dd} = +3.3V or +2.5V
		-	1.2	1.7		f = 212.5 MHz, V _{dd} = +3.3V or +2.5V
RMS 相位抖动 (随机)	T _{phj}	-	0.6	0.85	ps	f = 156.25 MHz, Integration bandwidth = 12 kHz to 20 MHz, all vdds
包装单位	1000pcs./reel (φ180) or 3000pcs./reel (φ180: 3225 package)					