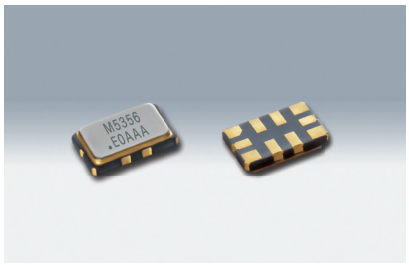
温度补偿MEMS振荡器(TC-MO/ VC TC-MO) - Super Low Jitter

MO5155/MO5156/MO5157/MO5356/MO5357/MO5358/MO5359



■ 优点

- 5.0×3.2 mm 陶瓷封装
- 外形尺寸：LVCMOS、Clipped Sinewave

■ 用途

- Synchronous Ethernet
- Small cell
- Optical transport-SONET/SDH、OTN
- IEEE1588
- Test and measurement

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
MO5155	10 std. GNSS Freq.	±0.5, ±1.0, ±2.5	+2.25 to +3.63	+40 to +45	5.0×3.2×0.95 (Ceramic)	Clipped Sinewave (1 to 60 MHz) LVCMOS
MO5156	1 to 60					
MO5157	60 to 220					
MO5356	1 to 60	±0.1, ±0.2, ±0.25				
MO5357	60 to 220					
MO5358	1.0 to 60	±0.05				Clipped sinewave, LVCMOS
MO5359	60 to 189, 200 to 220					LVCMOS

■ 一般规格(MO5356)

项目	符号	Min.	Typ.	Max.	单位	条件
输出频率范围	f	1	–	60	MHz	
电源电压	Vdd	+2.25	+2.50	+2.75	V	
		+2.52	+2.80	+3.08		
		+2.70	+3.00	+3.30		
		+2.97	+3.30	+3.63		
运行温度范围	T_use	−20	–	+70	℃	Extended commercial
		−40	–	+85		Industrial
		−40	–	+105		Extended Industrial, ambient temperature
常温特性	F_init	−1.0	–	+1.0	$\times 10^{-6}$	Inclusive of solder-down shift at 48 hours after 2 reflows at +25℃
温度特性	F_stab	−0.10	–	+0.10	$\times 10^{-6}$	Referenced to (fmas + fmin)/2 over the specified temperature range
		−0.20	–	+0.20		
		−0.25	–	+0.25		
长期变化（1 年）	F_aging1	–	±1.0	–	$\times 10^{-6}$	T_A = +25℃
频率可变范围	PR	±6.25			$\times 10^{-6}$	VC TC-MO mode. Contact KDS for ±12.5, ±25
		±6.25, ±10, ±12.5,±25, ±50, ±80, ±100, ±125, ±150, ±200, ±400, ±600, ±800, ±1200, ±1600, ±3200				DC TC-MO mode.
1 电平控制电压	VC_U	Vdd×0.9	–	–	V	
0 电平控制电压	VC_L	–	–	Vdd×0.1	V	
控制电压输入阻抗	VC_z	8	–	–	MΩ	
控制电压输入带宽	VC_c	–	10	–	kHz	
频率变化极性	–	Positive Slope			–	
消耗电流	Idd	–	+44	+53	mA	No load condition, f = 19.2 MHz, TC-MO and DC TC-MO mode.
		–	+48	+57		No load condition, f = 19.2 MHz, VC TC-MO mode.
OE 端子禁用电流	I_od	–	+43	+51	mA	OE = GND, output is weakly pull down, TC-MO and DC TC-MO mode.
		–	+47	+55		OE = GND, output is weakly pull down, VC TC-MO mode.
OE 端子 0 电平输入电压	V_{IL}	–	–	Vdd×0.3	V	For OE pin
OE 端子 1 电平输入电压	V_{IH}	Vdd×0.7	–	–	V	For OE pin
启动时间	T_start	–	2.5	3.5	ms	Vdd 达到额定最小值以后经过的时间
RMS 周期抖动	T_jitt	–	0.8	1.1	ps	f = 10 MHz
LVCMOS 输出						
占空比	DC	45	–	55	%	
0 电平电压	V_{OL}	–	–	Vdd×0.1	V	I_{OL} = −3 mA
1 电平电压	V_{OH}	Vdd×0.9	–	–	V	I_{OH} = +3 mA
上升时间、下降时间	Tr, Tf	0.8	1.2	1.9	ns	10% to 90% Vdd
RMS 相位抖动（随机）	T_phj	–	0.31	0.48	ps	f = 50 MHz, Integration bandwidth = 12 kHz to 20 MHz, − 40 to +85 ℃
CClipped Sinewave 输出						
输出电压电平	Vout	+0.8	–	+1.2	%	10kΩ ‖ 10pF ± 10%
上升时间、下降时间	Tr,Tf	–	3.5	4.6	ns	20% to 80% Vdd, 19.2MHz
RMS 相位抖动（随机）	T_phj	–	0.31	0.48	ps	f = 60 MHz, Integration bandwidth = 12 kHz to 20 MHz, − 40 to +85 ℃
包装单位	1000pcs./reel (φ180)					