

CMC251-SERIES



- Low Power Oscillator
- HCMOS/ LVCMOS output
- SMD package 2.5 x 2.0 mm

ELECTRICAL SPECIFICATIONS

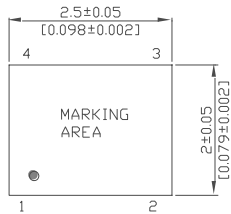
PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max.	
Frequency Range	f_0	Any Frequency between Frequency range, accurate to 6 decimal places	1.0		110.0	MHz
Supply Voltage	V_s		1.8		3.3	V
Supply Current	I_s	$V_s = 1.8V, f_0=20MHz, no load$ $V_s = 2.5V, f_0=20MHz, no load$ $V_s = 2.8V, f_0=20MHz, no load$ $V_s = 3.3V, f_0=20MHz, no load$		3.5 3.7 3.8 3.8	4.1 4.2 4.5 4.5	mA mA mA mA
Operating Temperature	T_a		-20 -40		+70 +85	°C °C
Frequency Stability	$\Delta f/f_0$	Including First Year aging, initial frequency tolerance at 25°C, Frequency stability over temperature range, supply variation, load variation	-20 -25 -50		+20 +25 +50	ppm ppm ppm
Enable / Disable/ Standby Function	E/D/St	Enable = Open or "1" ($V_{IH} \geq 0.75V_s$) (output signal active) Disable = GND or "0" ($V_{IL} < 0.25V_s$) (output high impedance, oscillator operates) Standby = GND or "0" ($V_{IL} < 0.25V_s$) (output weakly pulled down, oscillator sleep mode)	0.75Vs		0.25Vs 0.25Vs	V V V
Enable / Disable Time	$T_{E/D}$	$f_0=110MHz$			130	ms
Enable / Disable Current	$I_{E/D}$	$V_s=1.8V, E/D = GND$ $V_s=2.5V to 3.3V, E/D = GND$ Output in high impedance state			4.0 4.2	mA mA
Standby Current	I_{stby}	STBY=GND, $V_s=1.8V$ STBY=GND, $V_s=2.5V$ STBY=GND, $V_s=2.8V to 3.3V$ Output is weakly pulled down		0.2 1.1 2.1	1.3 2.5 4.3	μA μA μA
Startup Time	T_{ST}				5	ms
RMS Phase Jitter	J_{PH}	$f_0=75MHz, BW 900KHz to 7.5MHz$ $f_0=75MHz, BW 12KHz to 20MHz$		0.5 1.3	0.9 2.0	ps ps
RMS Period Jitter	J_P	$f_0=75MHz$		1.8	3	ps
Peak to Peak Period Jitter	J_{PK-PK}	$f_0=75MHz, V_s=2.5 to 3.3V$ $f_0=75MHz, V_s=1.8V$		12 14	25 30	ps ps



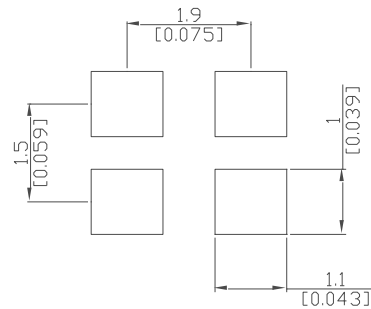
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MECHANICAL DIMENSIONS AND PIN FUNCTIONING

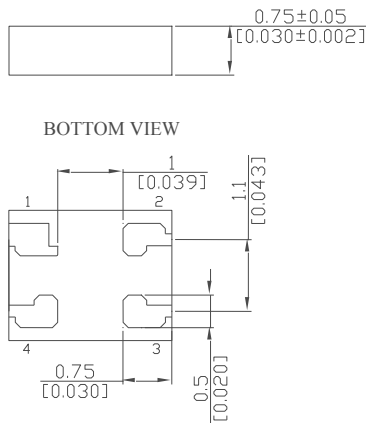
TOP VIEW



RECOMMENDED LAND PATTERN



BOTTOM VIEW



PIN	SYMBOL	FUNCTION
1	E/D/STBY/N	H :Enable output frequency L:Disable output frequency , high impedance In E/D or STBY mode connect a pull-up resistor of 10kΩ to pin 1, in case not externally driven. In case pin1 is left floating, use N option
2	GND	Electrical Ground
3	OUTPUT	Output Signal
4	Vs	Supply Voltage