



**Data Sheet**



Product Category: Crystal Oscillator

Series Number	Package	Description	Last Modified
320	Metal Dip Half Size	Clock Oscillators	July 01 2005

**FEATURES**

- HCMOS/TTL logic compatible
- Wide frequency range
- Low power consumption
- Industry standard package
- 5V or 3.3V optional
- RoHs / Lead Free compliant

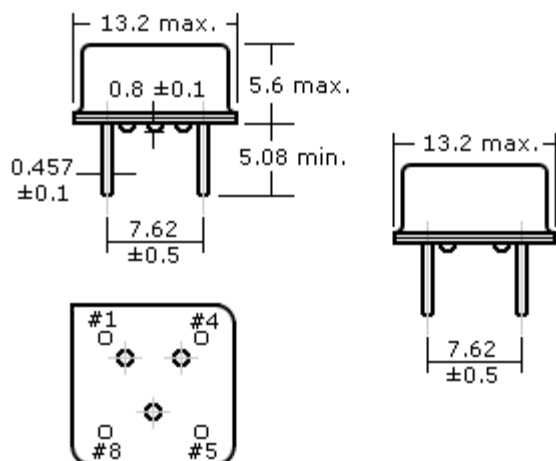


**OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS**

PARAMETERS	CONDITIONS	CHARACTERISTICS		UNITS
<b>Output Logic</b>	-	HCMOS / TTL Output		-
<b>Input Voltage (VDD)</b>	-	3.3 ±10%	5.0 ±10%	VDC
<b>Frequency Range (f<sub>O</sub>)</b>	-	0.50 ~ 125.000	0.50 ~ 125.000	MHz
<b>Operating Temperature (T<sub>OPR</sub>)</b>	-	0 ~ +70 (Std.) / -40 ~ 85 (Option)		°C
<b>Storage Temperature (T<sub>STG</sub>)</b>	-	-55 ~ +125		°C
<b>Overall Frequency Stability</b>	a + b + c + d	±20, ±25, ±50, ±100 max.		PPM
	(a) Frequency Tolerance	Inclusive of Overall Stability		-
	(b) Temperature Stability	Inclusive of Overall Stability (Operating Temperature)		-
	(c) Input Voltage Stability	Inclusive of Overall Stability (VDD ±5%)		-
	(d) Load Stability	Inclusive of Overall Stability (RL ±5%)		-
<b>Input Current (I<sub>DD</sub>)</b>	-	10 ~ 45 max.	15 ~ 85 max.	mA
<b>Aging</b>	@ 25°C	±5 max.		PPM/Y
<b>Rise Time (T<sub>R</sub>) / Fall Time (T<sub>F</sub>)</b>	< 66.660 MHz	10 max. (0.4V to 2.4V w/ TTL, Waveform / HCMOS)		nS
<b>Rise Time (T<sub>R</sub>) / Fall Time (T<sub>F</sub>)</b>	66.660 MHz	4 max. (0.4V to 2.4V w/ TTL, Waveform / HCMOS)		nS
<b>Output Voltage High "1" VOH</b>	TTL Load	2.4 min.		VDC
	HCMOS Load	2.7 min.	VDD-0.5 min.	
<b>Output Voltage Low "0" VOL</b>	TTL Load	0.4 max.		VDC
	HCMOS Load	0.5 max.		
<b>Duty Cycle</b>	-	50 ±10 (Std.) / 50 ±5 (Option)		%
<b>Start-Up Time (T<sub>S</sub>)</b>	-	10 max.		ms
<b>Jitter</b>	(One Sigma)	±25 max.		ps

PIN CONNECTIONS	
#1	No Connection or Tri-State

**PACKAGE DIMENSIONS (mm)**



	Enable High
#4	Case Ground
#5	Output
#8	Vdd

**PART NUMBER GUIDE**

Series Number	Frequency	Voltage Supply Option	Frequency Tolerance & Stability (max.)	Operating Temp. (°C)	Duty Cycle	Pin 1 Connection	Gullwing
<b>320</b>	<b>- 4.0 M</b>	<b>- 3</b>	<b>E</b>	<b>N</b>	<b>- T</b>	<b>TS</b>	<b>G</b>
Oscilent Clock Oscillators	Enter your desired frequency e.g. <b>12.0M = 12.000MHz</b> See table below for standard frequencies.	5 = 5VDC 3 = 3.3VDC	D = ±100 PPM E = ±50 PPM F = ±25 PPM G = ±20 PPM	Blank* = 0~+70 N = -40~+85	Blank* = 50±10% T = 50±5%	NC = No Connection TS = Tri-State Enable High	Blank* = Std. G = Gullwing
<p><b>NOTE:</b> - Deviations on all parameters available. Please consult Oscilent for details.  <b>DEFINITIONS:</b> - Click on the characteristic names above for definitions of that particular characteristic.  <b>*STANDARDS:</b> - "Blank" part number selections indicate standard variables for that particular characteristic.  <b>PACKAGING:</b> - Standard tube packaging, add <b>-TR</b> for Tape/Reel. Click <a href="#">here</a> for tape/reel specifications</p>							

**STANDARD OSCILLATOR FREQUENCIES - GUIDE ONLY / OTHER FREQUENCIES AVAILABLE**

FREQUENCY (1.000 - 9.8304MHz)	FREQUENCY (10.00 - 24.000MHz)	FREQUENCY (24.576 - 80.000MHz)
1.000	10.00	24.576
1.2288	11.0592	25.000
1.8432	12.000	25.175
2.000	12.288	28.322
2.4576	12.800	30.000
3.579545	14.31818	32.000
3.6864	14.7456	32.514
4.000	15.9744	33.000
4.9152	16.000	35.000
5.000	16.257	40.000

5.0688	16.384	48.000
6.000	17.734475	50.000
6.144	18.000	64.000
7.3728	18.432	65.000
8.000	19.6608	66.666
9.216	20.000	80.000
9.8304	24.000	-
<b>NOTE: Other frequencies available. PLEASE SPECIFY IN PART NUMBER GUIDE</b>		

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**Series No.:** 320

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