



Data Sheet



Product Category: SMD Oscillators

Series Number	Package	Description	Last Modified
470	4 Pad PCB Base	HCMOS / TTL Output	Jan. 01 2007

FEATURES

- Extended temperature range capabilities
- Tape and Reel
- Tri-State enable / disable
- 5V or 3.3V optional
- RoHs / Lead Free compliant

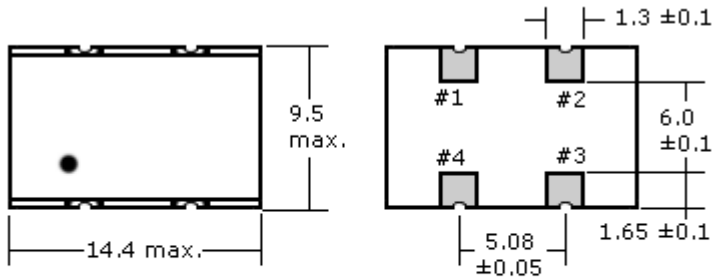


OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

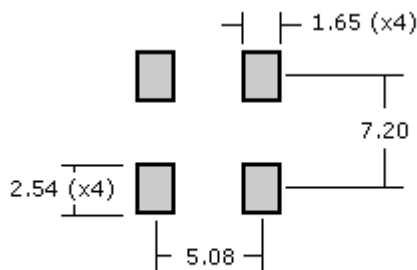
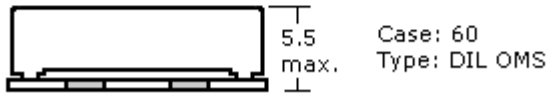
PARAMETERS	CONDITIONS	CHARACTERISTICS		UNITS
Output Logic	-	HCMOS / TTL Output		-
Input Voltage (VDD)	-	3.3 ±10%	5.0 ±10%	V
Frequency Range (f _O)	-	1.000 ~ 225.000		MHz
Operating Temperature (T _{OPR})	-	0 ~ +70 (Std.) / -40 ~ 85 (Option)		°C
Storage Temperature (T _{STG})	-	-55 ~ +125		°C
Frequency Stability	a + b + c + d	±10, ±20, ±25, ±50 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%)		-
Input Current (I _{DD})	-	10 ~ 45 max.	15 ~ 85 max.	mA
Aging	@ 25°C	±3 max.		ppm/Y
Rise Time (T _R) / Fall Time (T _F)	-	10 max.		nS
Rise Time (T _R) / Fall Time (T _F)	-	10 max.		nS
Output Voltage High "1" VOH	-	2.97 min.	4.5 min.	Vdc
Output Voltage Low "0" VOL	-	0.33 max.	0.5 max.	Vdc
Duty Cycle	-	50 ±10 (Std.) / 50 ±5 (Option)		%
Start-Up Time (T _S)	-	10 max.		mS
Output Load	-	50 max.		pF

PIN CONNECTIONS

PACKAGE DIMENSIONS (mm)



#1	No Connection or Tri-State Enable High
#2	Case Ground
#3	Ouput
#4	Vdd



Suggested Solder Pad Layout

PART NUMBER GUIDE

Series Number	Frequency	Voltage Supply Option	Frequency Tolerance & Stability (max.)	Operating Temp. (°C)	Duty Cycle	Pin 1 Connection
470	- 8.0 M	- 3	E	N	- T	TS
Oscilent SMD Oscillators	Enter your freq. e.g. 8.0M = 8.00 MHz See table below for standard freq.	5 = 5VDC 3 = 3.3VDC	E = ±50 ppm F = ±25 ppm G = ±20 ppm H = ±10 ppm	Blank* = 0~+70 C = -10~+70 D = -20~+70 N = -40~+85	Blank* = 50±10% T = -50±5%	NC = No Connection TS = Tri-State Enable High

NOTE: - Deviations on all parameters available. Please consult Oscilent for details.

DEFINITIONS: - Click on the characteristic names above, for definitions of the particular characteristic.

***STANDARDS:** - "Blank" part number selections, indicate standard variables for the particular characteristic.

PACKAGING: - Add **-TR** for Tape/Reel. Click [here](#) for tape/reel specifications

Oscilent Corporation - CALL **949.252.0522**

Series No.: 470

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