



Data Sheet



Product Category: SMD Oscillators

Series Number	Package	Description	Last Modified
433	7 x 5 SMD Ceramic	Ultra Low Jitter 1pS	Jan. 01 2007

FEATURES

- Ultra low jitter at 1 ps
- Low power consumption
- Standby function
- Tape and Reel
- Miniature profile
- 3.3V or 5.0V optional
- RoHs / Lead Free compliant



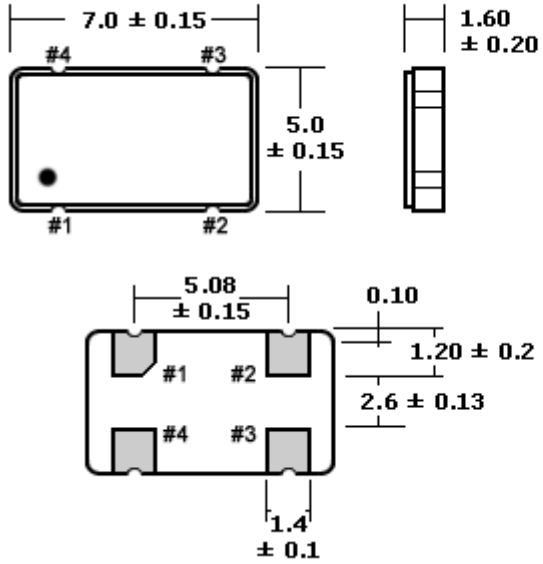
OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	CHARACTERISTICS		UNITS
Output Logic	-	HCMOS / TTL Output		-
Input Voltage (VDD)	-	3.3 ±10%	5.0 ±10%	VDC
Frequency Range (f_O)	-	1.544 ~ 133.333		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	±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 ±10%)		-
	(d) Load Stability	Inclusive of Overall Stability (RL ±5%)		-
Input Current (I_{DD})	-	12 ~ 60 max.	25 ~ 100 max.	mA
Aging	@ 25°C	±5 max.		PPM/Y
Rise Time (T_R) / Fall Time (T_F)	-	8 max. (0.4V to 2.4V w/ TTL, 20% ~ 80% / HCMOS)		nS
PIN 1 Tri-State	-	Option		-
Output Voltage High "1" VOH	TTL Load	2.4 min.		VDC
	HCMOS Load	2.7 min.	VDD-0.5 min.	
Output Voltage Low "0" VOL	TTL Load	0.4 max.		VDC
	HCMOS Load	0.5 max.		
Duty Cycle	-	50 ±10 (Std.) / 50 ±5 (Option)		%
Start-Up Time (T_S)	1 ~ 35 MHz	4 max.		mS
	35 ~ 125.000 MHz	10 max.		
Jitter	(Bandwidth 12KHz ~ 20Mhz)	±1		ps RMS

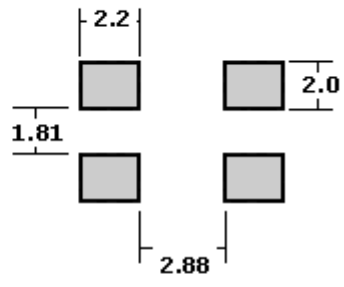
PIN CONNECTIONS

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PACKAGE DIMENSIONS (mm)



Suggested Solder Pad Layout



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

PART NUMBER GUIDE

Series Number	Frequency	Voltage Supply Option	Frequency Tolerance & Stability (max.)	Operating Temp. (°C)	Duty Cycle	Pin 1 Connection
433	- 24.0M	- 3	E	N	- T	TS
Oscilent SMD Oscillators	Enter your desired frequency e.g. 24.0M = 24.000MHz	5 = 5VDC 3 = 3.3VDC	D = ±100 PPM E = ±50 PPM F = ±25 PPM G = ±20 PPM J = ±15 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.: 433

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