




Data Sheet



Product Category: SMD Oscillators

Series Number	Package	Description	Last Modified
491	4 Pad PCB	PECL Output	Jan. 01 2002

## FEATURES

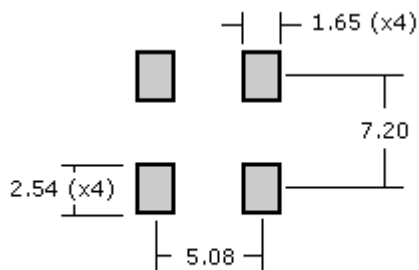
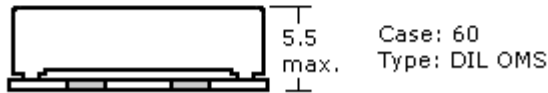
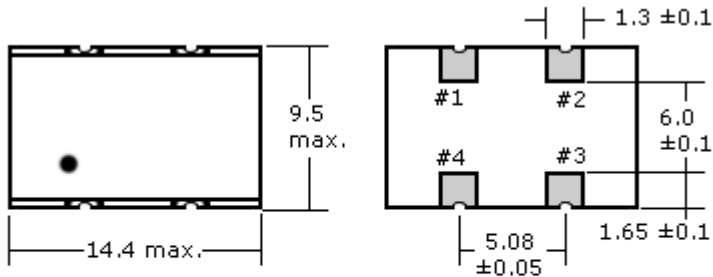
- Wave form symmetry of 40/60%
- PECL output
- Industry standard 4 Pad PCB SMD Package
- RoHs / Lead Free compliant 



## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	CHARACTERISTICS		UNITS
Output Logic	-	Positive ECL Square Wave (PECL)		-
Input Voltage (VDD)	-	3.3 ±10%	5.0 ±10%	VDC
Frequency Range (f <sub>O</sub> )	-	19.440 ~ 180.0 (Fund, Third, Fifth / UM-1)		MHz
Operating Temperature (T <sub>OPR</sub> )	-	0 ~ +70 (Std.) / -40 ~ 85 (Option)		°C
Storage Temperature (T <sub>STG</sub> )	-	-55 ~ +125		°C
Overall Frequency Stability	-	±20 (0 ~ +70°C Only), ±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%)		-
Input Current (I <sub>DD</sub> )	-	80 max.	120 max.	mA
Aging	@ 25°C	±1 max.		PPM/Y
Rise Time (T <sub>R</sub> )	20% to 80% of Waveform	2 max.		nS
Fall Time (T <sub>F</sub> )	20% to 80% of Waveform	2 max.		nS
Output Voltage High "1" VOH	PECL	VDD - 1.025 min.		VDC
Output Voltage Low "0" VOL	PECL	VDD - 1.620 max.		VDC
Load	-	50		Ohms
Duty Cycle	50% of Waveform	50 ±10 (Std.) / 50 ±5 (Option)		%
Start-Up Time (T <sub>S</sub> )	-	10 max.		mS
Jitter	RMS	3.5 max.		ps

## PACKAGE DIMENSIONS (mm)



Suggested Solder Pad Layout

PIN CONNECTIONS	
#1	Complimentary Output (CO) OR No Connection (NC)
#2	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
491	- 28.0 M	- 5	D	N	- T	CO
Oscilent SMD Oscillators	Enter your freq. e.g. 28.0M = 28.00 MHz	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%	CO = Complimentary Output NC = No Connection
<p><b>NOTE:</b> - Deviations on all parameters available. Please consult Oscilent for details.</p> <p><b>DEFINITIONS:</b> - Click on the characteristic names above, for definitions of the particular characteristic.</p> <p><b>*STANDARDS:</b> - "Blank" part number selections, indicate standard variables for the particular characteristic.</p> <p><b>PACKAGING:</b> - Add -TR for Tape/Reel. Click <a href="#">here</a> for tape/reel specifications</p>						

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