



Data Sheet



Product Category: SMD Oscillators

Series Number	Package	Description	Last Modified
489	6 Pad J-Lead Ceramic	PECL Output	Jan. 01 2007

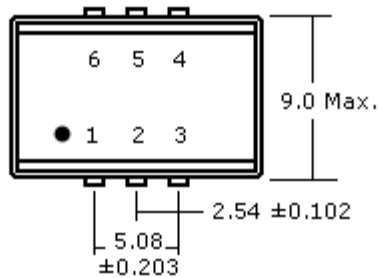
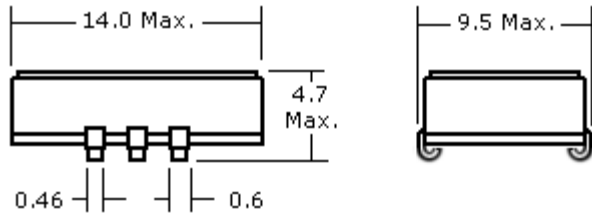
FEATURES

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

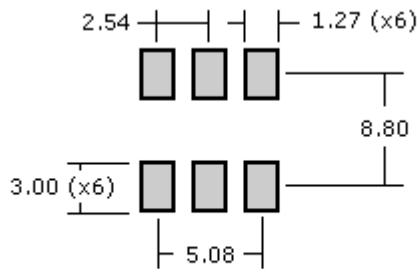


OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	CHARACTERISTICS	UNITS
Output Logic	-	Positive ECL Square Wave (PECL)	-
Input Voltage (VDD)	-	3.3 ±10% 5.0 ±10%	VDC
Frequency Range (f_O)	-	19.440 ~ 180.0 (Fund, Third, Fifth / UM-1)	MHz
Operating Temperature (T_{OPR})	-	0 ~ +70 (Std.) / -40 ~ 85 (Option)	°C
Storage Temperature (T_{STG})	-	-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_{DD})	-	80 max. 120 max.	mA
Aging	@ 25°C	±1 max.	PPM/Y
Rise Time (T_R)	20% to 80% of Waveform	1 max.	nS
Fall Time (T_F)	20% to 80% of Waveform	1 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	-	PECL 50 ohm to Vcc-2VDC	Ohms
Duty Cycle	50% of Waveform	50 ±10 (Std.) / 50 ±5 (Option)	%
Start-Up Time (T_S)	-	10 max.	mS
Jitter	-	0.5 typical , 1 RMS max.	pS
Tri-State Output	Input High = Output Disable	"Off" : 2.8V min.	-
	Input Low & Floating = Output Active	"On" : 0.6V max.	-

PACKAGE DIMENSIONS (mm)

PIN CONNECTIONS	
#1	No Connection
#2	Enable / Disable
#3	Ground
#4	Output
#5	Complimentary Output
#6	Vcc



Suggested Solder Pad Layout

PART NUMBER GUIDE

Series Number	Frequency	Voltage Supply Option	Frequency Tolerance & Stability (max.)	Operating Temp. (°C)	Duty Cycle	Tri State Connection
489	- 28.0 M	- 5	D	N	- T	TS
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%	TS = Enable / Disable (Pin 1) T2 = Enable / Disable (Pin 2)
<p>NOTE: - Deviations on all parameters available. Please consult Oscilent for details.</p> <p>DEFINITIONS: - Click on the characteristic names above, for definitions of the particular characteristic.</p> <p>*STANDARDS: - "Blank" part number selections, indicate standard variables for the particular characteristic.</p> <p>PACKAGING: - Add -TR for Tape/Reel. Click here for tape/reel specifications</p>						

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