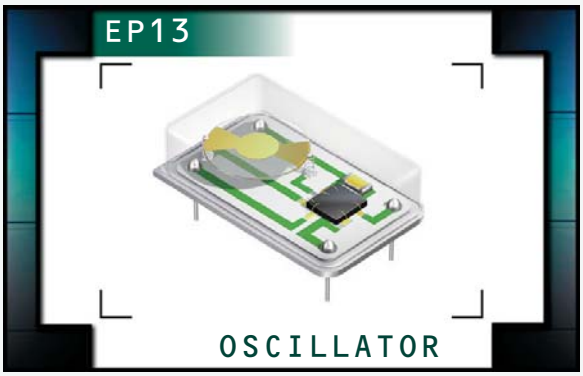
EP13 Series

- Programmable Crystal Oscillators
- HCMOS/TTL Output
- +3.3V Supply Voltage
- Tri-State and Power Down Options
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package
- RoHS Compliant (Pb-free)



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 106.250MHz
Operating Temperature Range		-20°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		$3.3V_{DC}$ ±$0.3V_{DC}$
Input Current		28mA Maximum (Unloaded)
Disable Current (TS Option)		16mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		20µA Maximum (Pin 1=Ground)
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	±100ppm or ±50ppm Maximum
Output Voltage Logic High (V_{OH})		V_{DD}-$0.4V_{DC}$ Minimum I_{OH}=-8mA
Output Voltage Logic Low (V_{OL})		$0.4V_{DC}$ Maximum I_{OL}=+8mA
Rise Time / Fall Time	20% to 80% of waveform	4 nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ±10(%) (Standard)
	at 50% of waveform (≤50.000MHz Only)	50 ±5(%) (Optional)
Load Drive Capability	≤50.000MHz	30pF Maximum
	>50.000MHz	15pF Maximum
Output Control Function	TS	Tri-State
	PD	Power Down
Output Control Function Input Voltage	V_{IH}: No Connection or ≥70% of V_{DD}	Enables Output
	V_{IL}: (TS Option) ≤20% of V_{DD}	Disable Output: High Impedance
	V_{IL}: (PD Option) ≤20% of V_{DD}	Disable Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
RMS Jitter	<12.000MHz	50pSec Maximum, 15pSec Typical
	≥12.000MHz	13pSec Maximum, 10pSec Typical
Peak to Peak Jitter	<12.000MHz	500pSec Maximum, 100pSec Typical
	≥12.000MHz	100pSec Maximum, 60pSec Typical

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP13	14 pin DIP	3.3V	OS44	12/05

PART NUMBERING GUIDE

EP13 00 ET T TS - 24.000M - CL125

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Maximum
45=±50ppm Maximum

OPERATING TEMP. RANGE
Blank=-20°C to 70°C or ET=-40°C to 85°C

DUTY CYCLE
Blank=50 ±10(%), T=50 ±5(%)

AVAILABLE OPTIONS
Blank=None
CLXXX=Custom Lead Length
G=Full Size Gull Wing

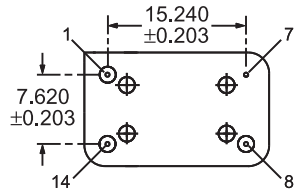
FREQUENCY

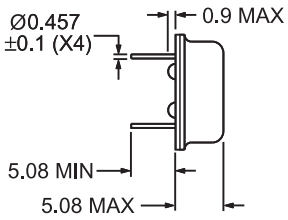
OUTPUT CONTROL FUNCTION
TS=Tri-State, PD=Power Down

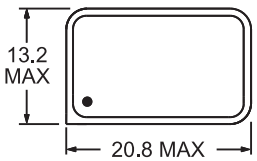
NOTES

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS







Pin 1: Tri-State or Power Down
Pin 7: Ground/Case Ground
Pin 8: Output
Pin 14: Supply Voltage

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EP13 TS
- TS: Output Control Function (PD = Power Down, TS = Tri-State Enable High)
- EP13: Series Designator

Line 3: XX.XXX M
- Frequency in MHz (5 Digits Maximum + Decimal)

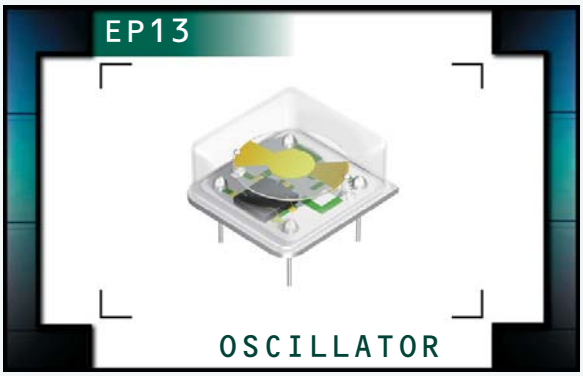
Line 4: XX Y ZZ
- ZZ: Week of Year
- Y: Last Digit of Year
- XX: Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP13	14 pin DIP	3.3V	OS44	12/05

EP13 Series

- Programmable Crystal Oscillators
- HCMOS/TTL Output
- +3.3V Supply Voltage
- Tri-State and Power Down Options
- Custom Lead Length & Gull Wing Options
- 8 pin DIP Metal Package
- RoHS Compliant (Pb-free)



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 106.250MHz
Operating Temperature Range		-20°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		$3.3V_{DC}$ ±$0.3V_{DC}$
Input Current		28mA Maximum (Unloaded)
Disable Current (TS Option)		16mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		20µA Maximum (Pin 1=Ground)
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	±100ppm or ±50ppm Maximum
Output Voltage Logic High (V_{OH})		V_{DD}-$0.4V_{DC}$ Minimum I_{OH}=-8mA
Output Voltage Logic Low (V_{OL})		$0.4V_{DC}$ Maximum I_{OL}=+8mA
Rise Time / Fall Time	20% to 80% of waveform	4 nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ±10(%) (Standard)
	at 50% of waveform (≤50.000MHz Only)	50 ±5(%) (Optional)
Load Drive Capability	≤50.000MHz	30pF Maximum
	>50.000MHz	15pF Maximum
Output Control Function	TS	Tri-State
	PD	Power Down
Output Control Function Input Voltage	V_{IH}: No Connection or ≥70% of V_{DD}	Enables Output
	V_{IL}: (TS Option) ≤20% of V_{DD}	Disable Output: High Impedance
	V_{IL}: (PD Option) ≤20% of V_{DD}	Disable Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
RMS Jitter	<12.000MHz	50pSec Maximum, 15pSec Typical
	≥12.000MHz	13pSec Maximum, 10pSec Typical
Peak to Peak Jitter	<12.000MHz	500pSec Maximum, 100pSec Typical
	≥12.000MHz	100pSec Maximum, 60pSec Typical

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP13	8 pin DIP	3.3V	OS45	08/05

PART NUMBERING GUIDE

EP13 00 HS ET T TS - 24.000M - G TR

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Maximum
45=±50ppm Maximum

PACKAGE
HS=Half Size 8 Pin DIP

OPERATING TEMP. RANGE
Blank=-20°C to 70°C or ET=-40°C to 85°C

DUTY CYCLE
Blank=50 ±10(%), T=50 ±5(%)

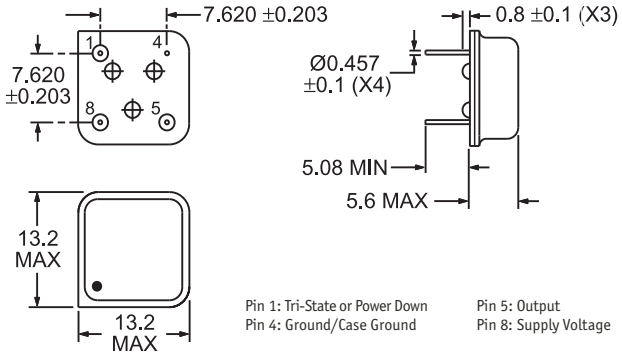
PACKAGING OPTIONS
Blank=Bulk
TR=Tape & Reel (only offered with Half Size G and Half Size G2 options)

AVAILABLE OPTIONS
Blank=None
CLXXX=Custom Lead Length
G=Half Size Gull Wing
G2=Half Size Gull Wing

FREQUENCY

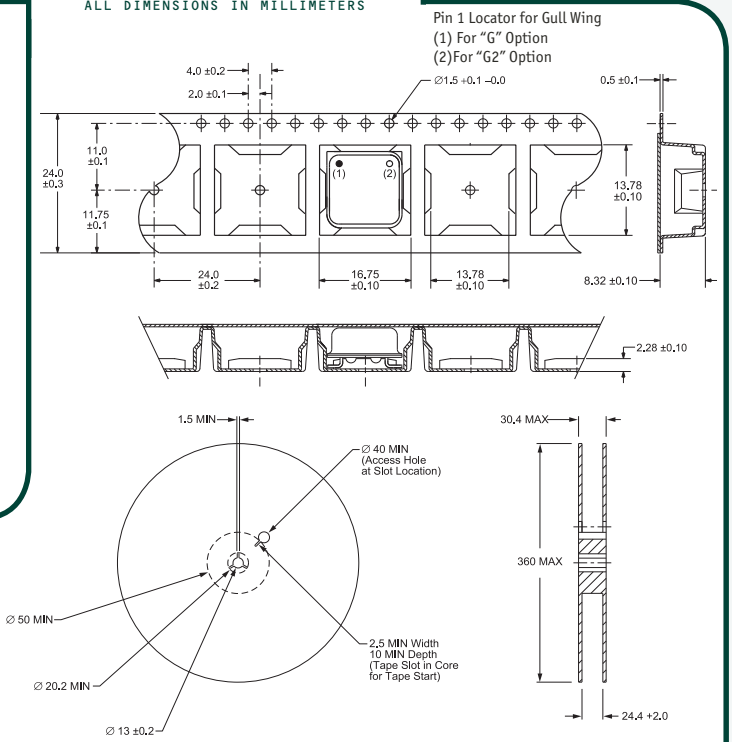
OUTPUT CONTROL FUNCTION
TS=Tri-State, PD=Power Down

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State or Power Down
Pin 4: Ground/Case Ground
Pin 5: Output
Pin 8: Supply Voltage

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



250 Pieces Per Reel
Compliant to EIA-481A

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EP13 TS
- Output Control Function
  - PD = Power Down
  - TS = Tri-State Enable High
- Series Designator

Line 3: XX.XXX M
- Frequency in MHz (5 Digits Maximum + Decimal)

Line 4: XX Y ZZ
- Week of Year
- Last Digit of Year
- Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP13	8 pin DIP	3.3V	OS45	08/05

Product EOL Announcement

The Product EOL Announcement signifies that a product series has entered the final phase of the Ecliptek Product Life Cycle, and serves as advance notice of product termination per the Ecliptek End of Life (EOL) policy.

Ecliptek Corporation announces End of Life initiation for the following product series with the intent of discontinuing its availability.

EOL Series	Description
EP13 (8 Pin Dip)	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 8 Pin DIP Metal Thru-Hole
EP13 (14 Pin Dip)	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 14 Pin DIP Metal Thru-Hole

EOL Timeline

The last date Ecliptek will accept orders (Stage 2) and the last date orders may be scheduled for shipment (Stage 3) are listed in the table below.

Stage 1 EOL Announce Date	Stage 2 Last Date to Order	Stage 3 Last Date to Ship
1-July-2012	31-December-2012	31-January-2013

Alternative Products

In order to fulfill your requirements beyond this product's discontinuation, we invite you to evaluate the recommended alternative Ecliptek product series referenced below. Please click on the link to view the data sheet.

Alternative Series	Description
EPH13	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 8 Pin DIP Metal Thru-Hole
EPF13	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 14 Pin DIP Metal Thru-Hole

Automated EOL Notification

Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized Parts List on our website and we'll email you when EOL is announced.

Please do not hesitate to contact us if you have any questions or need further assistance.

Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com

All product warranties for discontinued products will be honored in full according to Ecliptek Terms and Conditions of Sale.

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

Телефон: 8 (812) 309-75-97 (многоканальный)
Факс: 8 (812) 320-03-32
Электронная почта: ocean@oceanchips.ru
Web: http://oceanchips.ru/
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А