EC36 Series

- RoHS Compliant (Pb-Free)
- LVHCMOS output
- 3.3V Supply Voltage
- Ceramic SMD package
- Stability to ±20ppm
- Standby Function
- Available on Tape and Reel

NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_O)		1.544MHz to 100.000MHz
Operating Temperature Range (OTR)		-10°C to 70°C -40°C to 85°C
Storage Temperature Range (STR)		-55°C to 125°C
Supply Voltage (V_{DD})		3.3V_{DC} ±10%
Input Current (I_{DD})	1.544MHz to 9.999MHz 10.000MHz to 34.999MHz 35.000MHz to 49.999MHz 50.000MHz to 100.000MHz	8mA Maximum 10mA Maximum 25mA Maximum 35mA Maximum
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, ±50ppm, 25ppm, or ±20ppm Maximum
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum (I_{OH} = -8mA)
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum (I_{OL} = +8mA)
Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform from 1.544MHz to 35.000MHz 20% to 80% of Waveform from 35.001MHz to 80.000MHz 20% to 80% of Waveform from 80.001MHz to 100.000MHz	6 nSeconds Maximum 4 nSeconds Maximum 2 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform at 50% of Waveform	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability (C_{LOAD})	≤ 35.000MHz > 35.000MHz	30pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Tri-State Input Voltage	No Connection V_{IH}: 90% of V_{DD} Minimum V_{IL}: 10% of V_{DD} Maximum	Enables Output Enables Output Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10µA Maximum
Start Up Time (T_S)		10 mSeconds Maximum
Period Jitter: One Sigma		25pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC36	CERAMIC	3.3V	OS91	09/03

PART NUMBERING GUIDE

EC36 00 ET T TS - 30.000M TR

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Maximum (Standard)
45=±50ppm Maximum
25=±25ppm Maximum
20=±20ppm Maximum

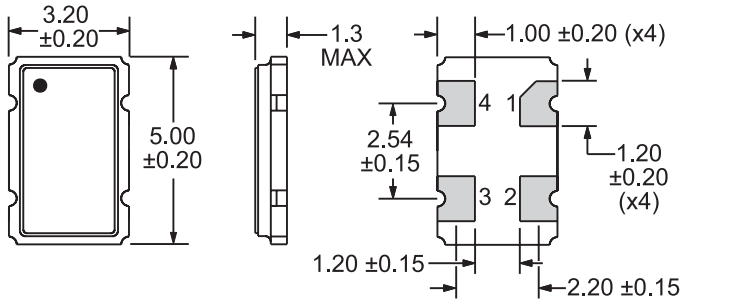
OPERATING TEMPERATURE RANGE
Blank=-10°C to 70°C (Standard)
ET=-40°C to 85°C

PACKAGING OPTIONS
Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

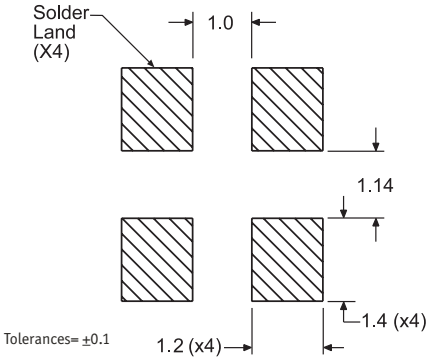
DUTY CYCLE
Blank=50 ±10(%) (Standard)
T=50 ±5(%)

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



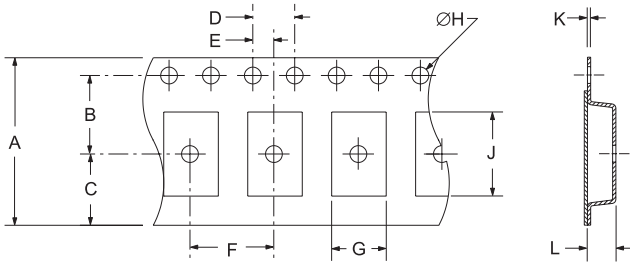
Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

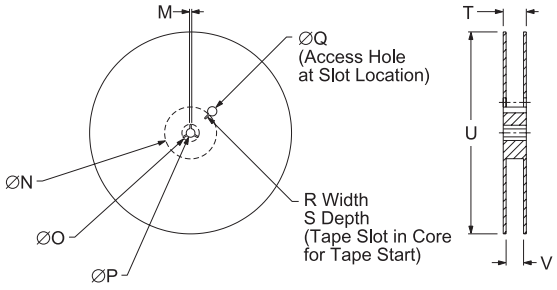
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



Tolerances= ±0.1

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





TAPE	A	B	C	D	E
	12.0±0.2	5.5±0.1	6.5±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
8.0±0.1	B0*	1.5 +0.1-0.0	A0*	0.30 ±0.05	K0*

REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0	1,000

*Compliant to EIA 481A

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
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: E XX.XXX
Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XX Y ZZ
Week of Year
Last Digit of Year
Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC36	CERAMIC	3.3V	OS91	09/03