

EC36 Series



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



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)		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} $\pm 10\%$
Input Current (I_{DD})	1.544MHz to 9.999MHz	8mA Maximum
	10.000MHz to 34.999MHz	10mA Maximum
	35.000MHz to 49.999MHz	25mA Maximum
	50.000MHz to 100.000MHz	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	± 100 ppm, ± 50 ppm, 25ppm, or ± 20 ppm Maximum
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum ($I_{OH} = -8$ mA)
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum ($I_{OL} = +8$ mA)
Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform from 1.544MHz to 35.000MHz	6 nSeconds Maximum
	20% to 80% of Waveform from 35.001MHz to 80.000MHz	4 nSeconds Maximum
	20% to 80% of Waveform from 80.001MHz to 100.000MHz	2 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 ± 10 (%) (Standard)
	at 50% of Waveform	50 ± 5 (%) (Optional)
Load Drive Capability (C_{LOAD})	≤ 35.000 MHz	30pF HCMOS Load Maximum
	> 35.000 MHz	15pF HCMOS Load Maximum
Tri-State Input Voltage	No Connection	Enables Output
	V_{IH} : 90% of V_{DD} Minimum	Enables Output
	V_{IL} : 10% of V_{DD} Maximum	Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10 μ A Maximum
Start Up Time (T_S)		10 mSeconds Maximum
Period Jitter: One Sigma		25pSeconds Maximum

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

EC36 00 ET TS - 30.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
 45=±50ppm Maximum
 25=±25ppm Maximum
 20=±20ppm Maximum

PACKAGING OPTIONS

Blank=Bulk (Standard)
 TR=Tape and Reel

FREQUENCY

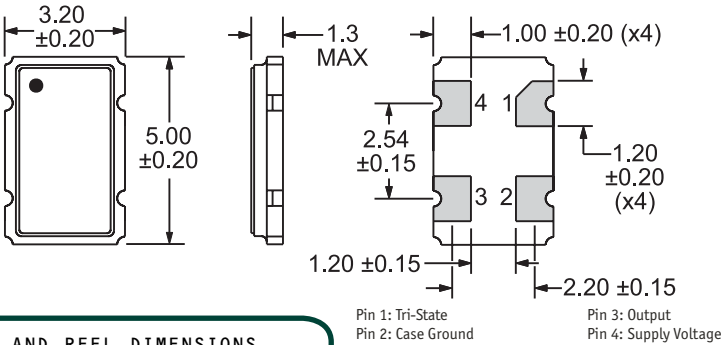
DUTY CYCLE

Blank=50±10%(Standard)
 T=50±5%

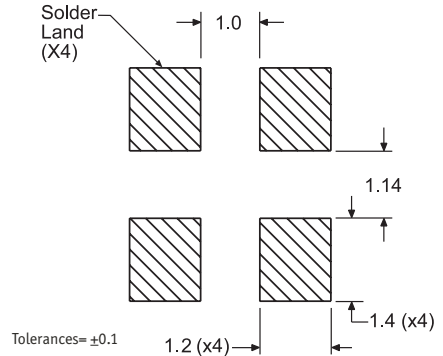
OPERATING TEMPERATURE RANGE

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

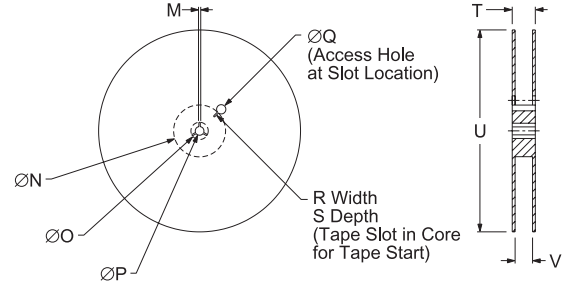
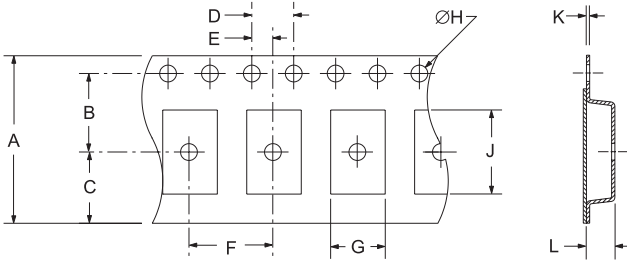
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



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*

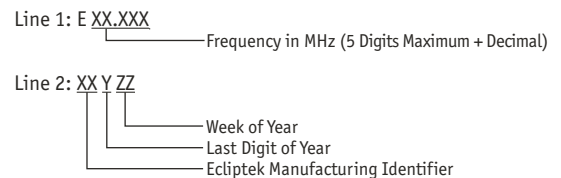
REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0	1,000

*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



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