EC35 Series

- Crystal Clock Oscillators
- CMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)

NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_O)		1.544MHz to 100.000MHz
Operating Temperature Range (OTR)		-10°C to +70°C or -40°C to +85°C
Storage Temperature Range (STR)		-55°C to +125°C
Supply Voltage (V_{DD})		5.0V_{DC} ±10%
Input Current (I_{DD}) (No Load)	1.544MHz to 35.000MHz 35.001MHz to 70.000MHz 70.001MHz to 100.000MHz	20mA Maximum 40mA Maximum 60mA 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})	w/ TTL Load w/ CMOS Load	2.4V_{DC} Minimum (I_{OH} = -16mA) V_{DD}-0.5V_{DC} Minimum (I_{OH} = -16mA)
Output Voltage Logic Low (V_{OL})	w/ TTL Load w/ CMOS Load	0.4V_{DC} Maximum (I_{OL} = +16mA) 0.5V_{DC} Maximum (I_{OL} = +16mA)
Rise Time / Fall Time (T_R/T_F)	≤ 35.000MHz 20% to 80% of Waveform > 35.000MHz 20% to 80% of Waveform	6 nSeconds Maximum 4 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability (C_{LOAD})	1.544MHz to 35.000MHz 35.001MHz to 70.000MHz 70.001MHz to 100.000MHz	10TTL Load or 50pF CMOS Load 50pF CMOS Load 30pF CMOS Load
Tri-State Input Voltage	No Connection V_{IH}: ≥90% of V_{DD} V_{IL}: ≤10% of V_{DD}	Enables Output Enables Output Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10µA Maximum
Start Up Time (T_S)		10 mSeconds Maximum
RMS Phase Jitter	12kHz to 20MHz offset frequency	1pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC35	CERAMIC	5.0V	OS90	10/10

PART NUMBERING GUIDE

EC35 00 ET T TSY - 30.000M TR

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

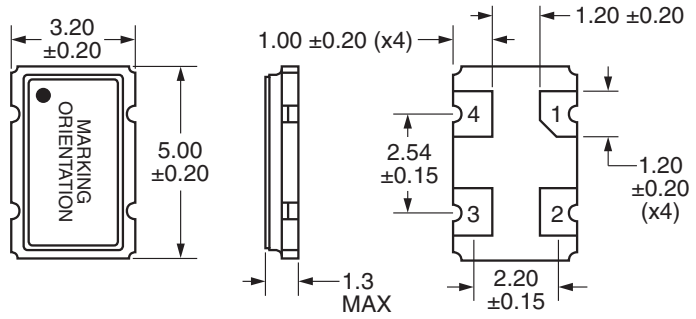
OPERATING TEMPERATURE RANGE
Blank = -10°C to +70°C
ET = -40°C to +85°C

PACKAGING OPTIONS
Blank = Bulk
TR = Tape & Reel

FREQUENCY

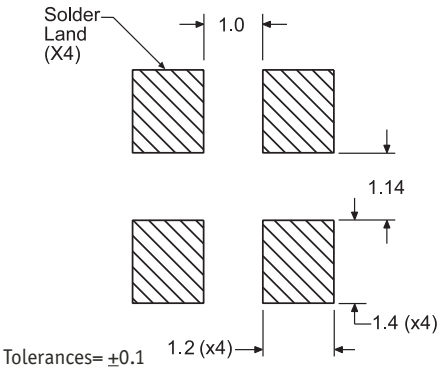
DUTY CYCLE
Blank = 50 ±10(%)
T = 50 ±5(%)

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



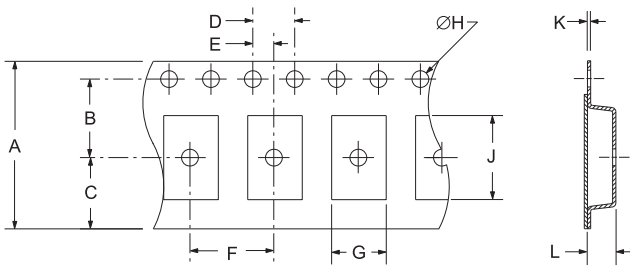
Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

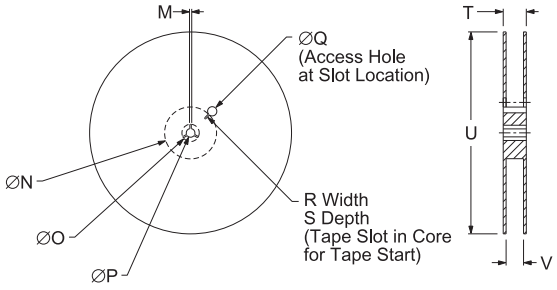
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



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
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

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

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ECLIPTEK CORP.	OSCILLATOR	EC35	CERAMIC	5.0V	OS90	10/10