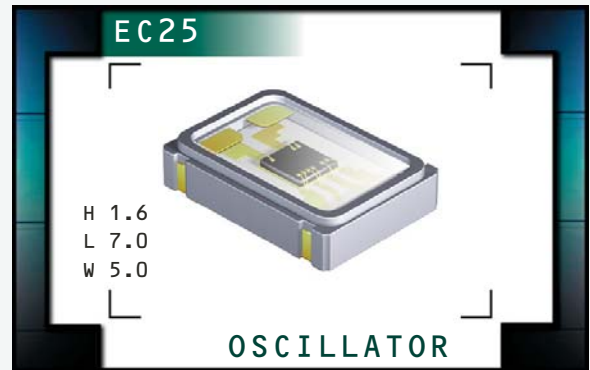


EC25 Series

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



ECLIPTEK[®]
CORPORATION



ELECTRICAL SPECIFICATIONS

Frequency Range		1.544MHz to 106.250MHz
Operating Temperature Range		-10°C to +70°C or -40°C to +85°C
Storage Temperature Range		-55°C to +125°C
Supply Voltage (V_{DD})		5.0V _{DC} ±10%
Input Current (No Load)	1.544MHz to 32.000MHz	10mA Maximum
	32.001MHz to 50.000MHz	30mA Maximum
	50.001MHz to 70.000MHz	50mA Maximum
	70.001MHz to 106.250MHz	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	2.4V _{DC} Minimum
	w/CMOS Load	V _{DD} - 0.5V _{DC} Minimum
Output Current (I_{OH})	Load Drive Option "Blank"	-4mA ≤35.000MHz, -16mA >35.000MHz
	Load Drive Option "Y"	-16mA ≤70.000MHz
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4V _{DC} Maximum
	w/CMOS Load	0.5V _{DC} Maximum
Output Current (I_{OL})	Load Drive Option "Blank"	+4mA ≤35.000MHz, +16mA >35.000MHz
	Load Drive Option "Y"	+16mA ≤70.000MHz
Rise / Fall Time	10% to 90% of Waveform w/30pF CMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10LSTTL Load	10nSec Max. ≤70.000MHz
	10% to 90% of Waveform w/15pF CMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10LSTTL Load	5nSec Max. >70.000MHz
	10% to 90% of Waveform w/50pF CMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10TTL Load	5nSec Max. ≤70.000MHz
Duty Cycle	at 50% of Waveform w/CMOS Load or 1.4V _{DC} w/TTL Load ≤70.000MHz	50 ±10% (Standard)
	at 50% of Waveform w/TTL Load or w/CMOS Load >70.000MHz	50 ±10% (Standard)
	at 50% of Waveform w/TTL Load or w/CMOS Load ≤80.000MHz	50 ±5% (Optional)
	at 50% of Waveform w/CMOS Load (80.001MHz to 100.000MHz)	50 ±5% (Optional) -10°C to +70°C Only
Load Drive Capability	≤70.000MHz	10LSTTL Load or 30pF CMOS Load
	>70.000MHz	10LSTTL Load or 15pF CMOS Load
	≤70.000MHz (Option "Y")	10TTL Load or 50pF CMOS Load
Tri-State Input Voltage	No Connection	Enables Output
	V _{IH} : ≥2.0V _{DC}	Enables Output
	V _{IL} : ≤0.8V _{DC}	Disables Output: High Impedance
Start Up Time		10mSeconds Maximum
RMS Phase Jitter	12KHz to 20MHz offset frequency	1pSeconds Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC25

PACKAGE
CERAMIC

VOLTAGE
5.0V

CLASS
0529

REV. DATE
11/10

PART NUMBERING GUIDE

EC25 00 ETT TS Y - 40.000M 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

DUTY CYCLE

Blank = 50 ±10(%)
 T = 50 ±5(%)

PACKAGING OPTIONS

Blank = Bulk
 TR = Tape & Reel

FREQUENCY

LOAD DRIVE CAPABILITY

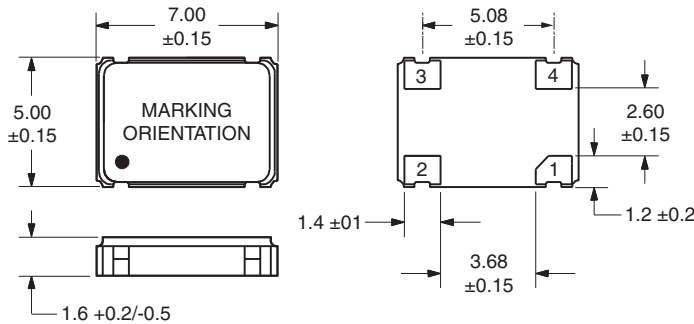
Blank = 10LSTTL/30pF HCMOS Load Maximum (≤70MHz)
 Blank = 10LSTTL/15pF HCMOS Load Maximum (>70MHz)
 Y = 10TTL or 50pF HCMOS Load Maximum (≤70MHz)

OUTPUT CONTROL FUNCTION

TS = Tri-State

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

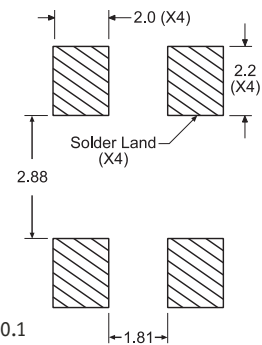


Pin 1: Tri-State
 Pin 2: Case Ground

Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

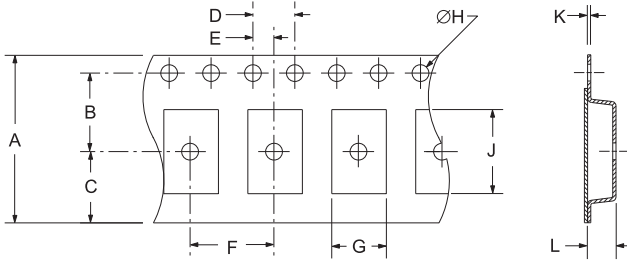
ALL DIMENSIONS IN MILLIMETERS



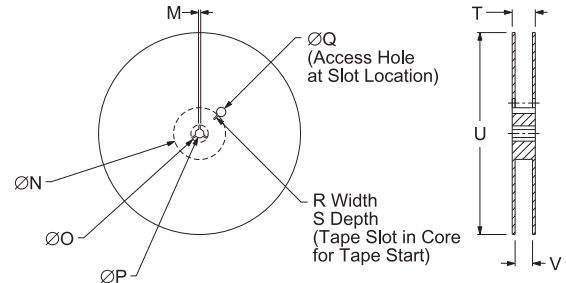
Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16+3-1	7.5±1	6.75±1	4 ±1	2±1
F	G	H	J	K	L
8±1	B0*	1.5+1-0	A0*	.3±.05	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4+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: ECLIPTEK

Line 2: XX.XXX M
 Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC25	CERAMIC	5.0V	OS29	11/10