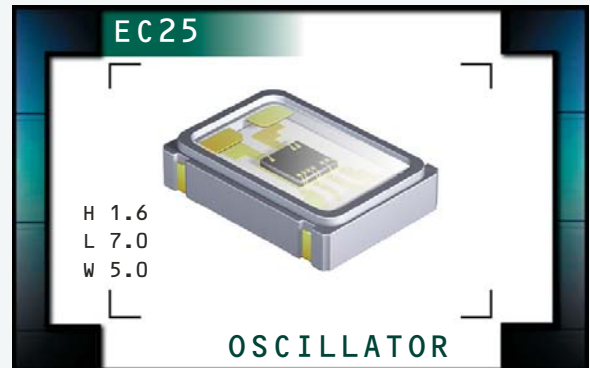


EC25 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 5.0V supply voltage
- HCMOS/TTL output
- Stability to 20ppm
- Available on tape and reel



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/HCMOS 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/HCMOS 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 HCMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10LSTTL Load	10nSec Max. ≤70.000MHz
	10% to 90% of Waveform w/15pF HCMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10LSTTL Load	5nSec Max. >70.000MHz
	10% to 90% of Waveform w/50pF HCMOS Load; 0.4V _{DC} to 2.4V _{DC} w/10TTL Load	5nSec Max. ≤70.000MHz
Duty Cycle	at 50% of Waveform w/HCMOS Load or 1.4V _{DC} w/TTL Load ≤70.000MHz	50 ±10% (Standard)
	at 50% of Waveform w/TTL Load or w/HCMOS Load >70.000MHz	50 ±10% (Standard)
	at 50% of Waveform w/TTL Load or w/HCMOS Load ≤80.000MHz	50 ±5% (Optional)
	at 50% of Waveform w/HCMOS Load (80.001MHz to 100.000MHz)	50 ±5% (Optional) -10°C to +70°C Only
Load Drive Capability	≤70.000MHz	10LSTTL Load or 30pF HCMOS Load
	>70.000MHz	10LSTTL Load or 15pF HCMOS Load
	≤70.000MHz (Option "Y")	10TTL Load or 50pF HCMOS 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
01/06

PART NUMBERING GUIDE

EC25 00 ETTTS Y - 40.000M 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

DUTY CYCLE

Blank=50 ±10(%) (Standard), T=50 ±5(%)

PACKAGING OPTIONS

Blank=Bulk (Standard)
 TR=Tape and Reel

FREQUENCY

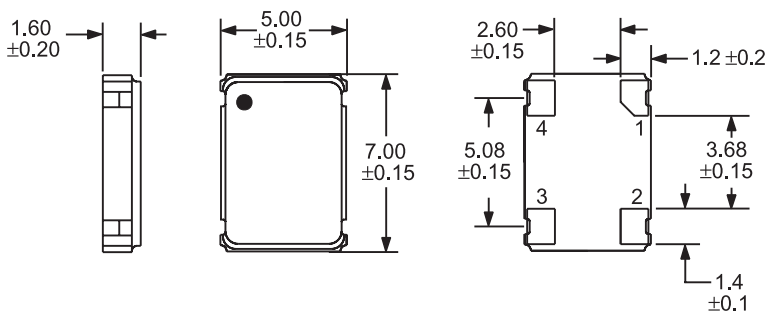
LOAD DRIVE CAPABILITY

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

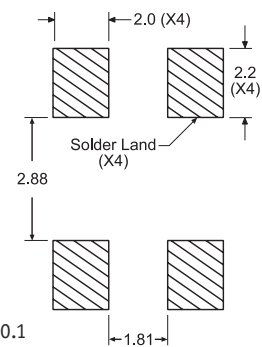
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State
 Pin 2: Case Ground

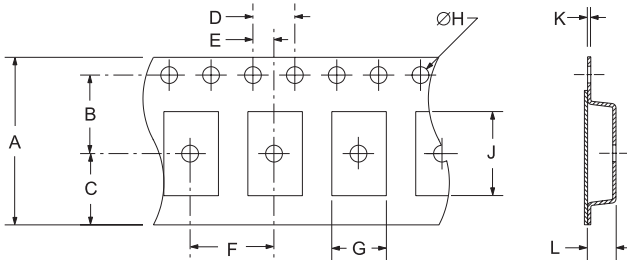
Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS

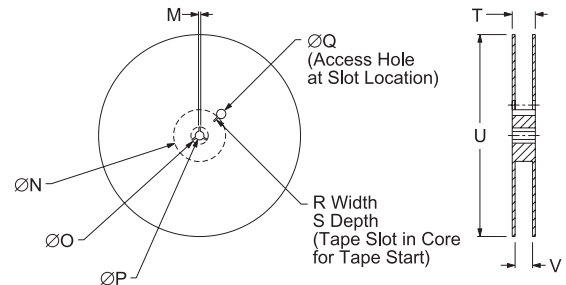


Tolerances = ±0.1

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
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-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

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	01/06