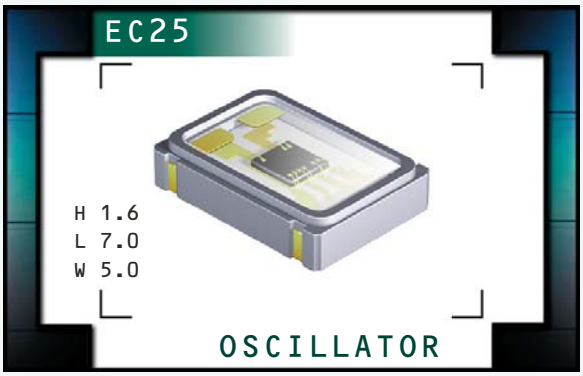
EC25 Series

- 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)



ELECTRICAL SPECIFICATIONS

Frequency Range		1.544MHz to 100.000MHz
Operating Temperature Range		-10°C to +70°C -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 32.001MHz to 50.000MHz 50.001MHz to 70.000MHz 70.001MHz to 100.000MHz	10mA Maximum 30mA Maximum 50mA 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})	with (LS) TTL Load with CMOS Load	2.4V_{DC} Minimum V_{DD} -0.5V_{DC} Minimum
Output Current (I_{OH})	with Low Drive Option with High Drive Option	-4mA (≤35MHz), -16mA (>35MHz) -16mA (≤70MHz)
Output Voltage Logic Low (V_{OL})	with (LS) TTL Load with CMOS Load	0.4V_{DC} Maximum 0.5V_{DC} Maximum
Output Current (I_{OL})	with Low Drive Option with High Drive Option	+4mA (≤35MHz), +16mA (>35MHz) +16mA (≤70MHz)
Rise / Fall Time	at 0.4V_{DC} to 2.4V_{DC} w/LSTTL Load; 10% to 90% of Waveform w/CMOS Load (≤70MHz) at 0.4V_{DC} to 2.4V_{DC} w/LSTTL Load; 10% to 90% of Waveform w/CMOS Load (>70MHz) at 0.4V_{DC} to 2.4V_{DC} w/TTL Load; 10% to 90% of Waveform w/CMOS Load (≤70MHz)	10nSec Maximum (w/Low Drive Option) 5nSec Maxaximum (w/Low Drive Option 5nSec Maximum (w/High Drive Option)
Duty Cycle	at 50% of Waveform w/CMOS Load or 1.4V_{DC} w/(LS)TTL Load ≤70MHz at 50% of Waveform w/(LS)TTL Load or w/CMOS Load >70MHz at 50% of Waveform w/(LS)TTL Load or w/CMOS Load ≤80MHz at 50% of Waveform w/CMOS Load (>80MHz)	50 ±10(%) 50 ±10(%) 50 ±5(%) 50 ±5(%)
Load Drive Capability	Low Drive Option (≤70MHz) Low Drive Option (>70MHz) High Drive Option (≤70MHz)	10LSTTL Load or 30pF CMOS Load 10LSTTL Load or 15pF CMOS Load 10TTL Load or 50pF CMOS Load
Output Logic Type		CMOS
Tri-State Input Voltage	No Connection V_{IH}: ≥2.0V_{DC} V_{IL}: ≤0.8V_{DC}	Enables Output Enables Output Disables Output: High Impedance
Start Up Time		10mSeconds Maximum
RMS Phase Jitter	12kHz to 20MHz Offset	1pSeconds Maximum

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

PART NUMBERING GUIDE

EC25 00 ET T 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

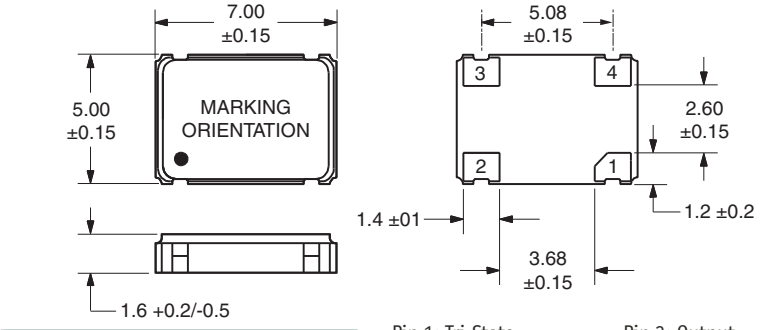
FREQUENCY

LOAD DRIVE CAPABILITY
Blank = Low Drive
Y = High Drive

OUTPUT CONTROL FUNCTION
TS = Tri-State

MECHANICAL DIMENSIONS

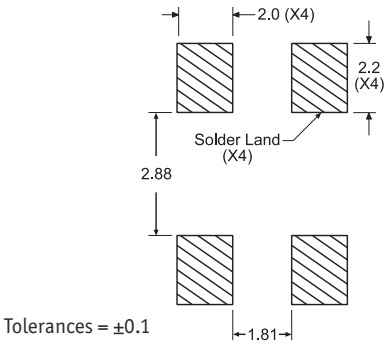
ALL DIMENSIONS IN MILLIMETERS



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

SUGGESTED SOLDER PAD LAYOUT

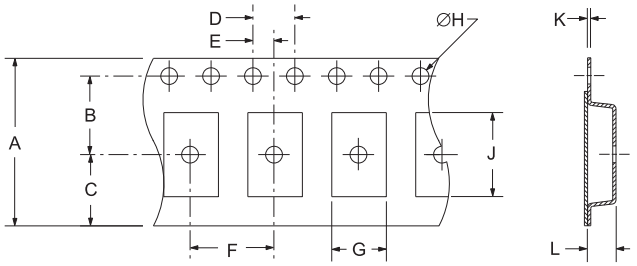
ALL DIMENSIONS IN MILLIMETERS

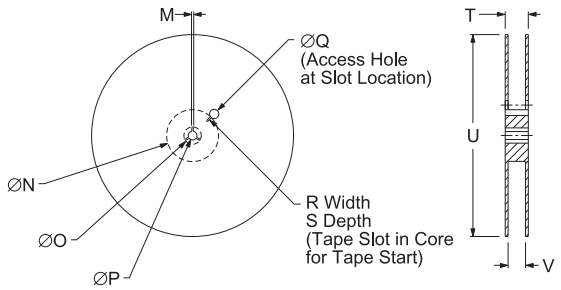


Tolerances = ±0.1

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	10/11