EH37 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +2.5V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)

ELECTRICAL SPECIFICATIONS

Frequency Range *Some frequencies within this range may not be available*		2.600MHz to 166.000MHz
Operating Temperature Range		0°C to +70°C or -40°C to +85°C
Storage Temperature Range		-55°C to +125°C
Supply Voltage (V_{DD})		2.5V_{DC} ±5%
Input Current (No Load)	2.600MHz to 25.000MHz 25.001MHz to 75.000MHz 75.001MHz to 100.000MHz 100.001MHz to 166.000MHz	6mA Maximum 7mA Maximum 8mA Maximum 9mA Maximum
Frequency Tolerance / Stability *Some tolerance stability options may not be available*	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, 260°C Reflow, Shock, and Vibration	±100ppm Maximum ±50ppm Maximum ±25ppm Maximum ±20ppm Maximum
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum I_{OH} =-8mA
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum I_{OL} =+8mA
Rise Time / Fall Time	2.600MHz to 50.000MHz 20% to 80% of Waveform 50.001MHz to 75.000MHz 20% to 80% of Waveform 75.001MHz to 166.000MHz 20% to 80% of Waveform	6nSeconds Maximum 4nSeconds Maximum 2nSeconds Maximum
Load Drive Capability		15pF Maximum
Output Logic Type		CMOS
Duty Cycle	at 50% of Waveform	50 ±10(%) or 50 ±5(%)
Tri-State Input Voltage	V_{IH} :≥90% of V_{DD} or No Connection V_{IL} :≤10% of V_{DD}	Enables Output Disables Output: High Impedance
Standby Current	Pin 1 = Ground	10µA Maximum
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum
RMS Phase Jitter	Fj = 12kHz to 20MHz	20pSec Typical, 30pSec Maximum
Period Jitter (RMS)		13pSec Typical
Period Jitter (pk-pk)		85pSec Typical, 100pSec Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH37	CERAMIC	2.5V	OS7A	10/11

PART NUMBERING GUIDE

EH37 00 ET T TS - 24.000M TR

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

OPERATING TEMP. RANGE
Blank = 0ºC to +70ºC
ET = -40°C to +85°C

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

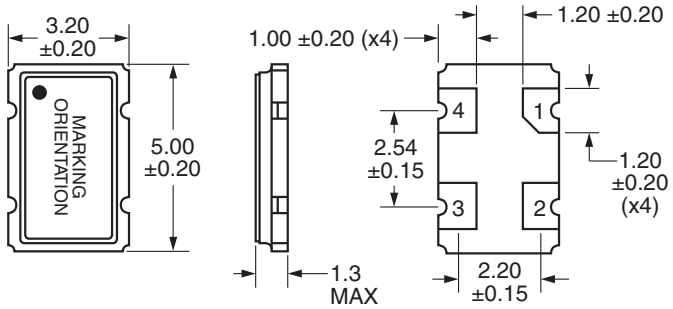
AVAILABLE OPTIONS
Blank = Bulk
TR = Tape & Reel

FREQUENCY

OUTPUT CONTROL FUNCTION
TS = Tri-State (High Impedance)

MECHANICAL DIMENSIONS

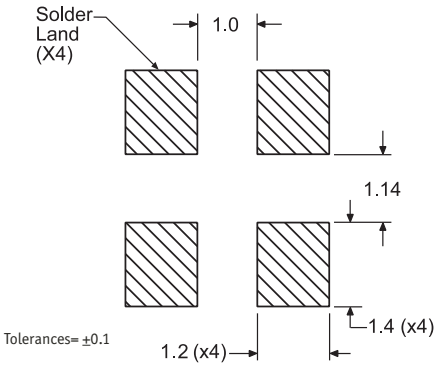
ALL DIMENSIONS IN MILLIMETERS



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

SUGGESTED SOLDER PAD LAYOUT

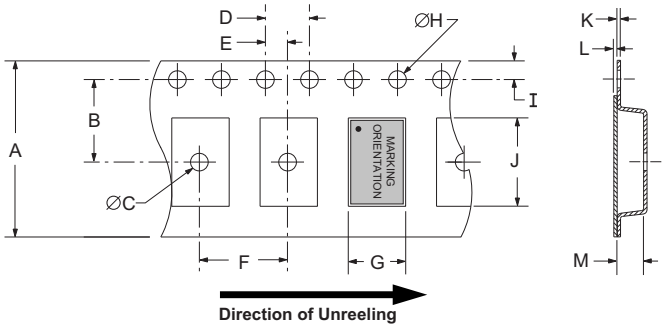
ALL DIMENSIONS IN MILLIMETERS



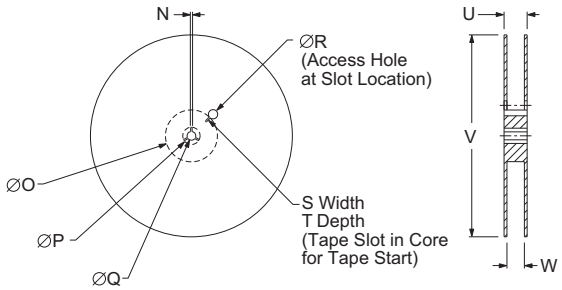
Tolerances= ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



Direction of Unreeling



TAPE	A	B	C	D	E	F
	16.0 ±0.3	7.5 ±0.1	1.50 MIN	4.0 ±0.1	2.0 ±0.1	8.0 ±0.1
G	H	I	J	K	L	M
A0	1.5 +0.1/-0.0	1.75 ±0.10	B0	0.60 MAX	0.10 MAX	K0

REEL	N	O	P	Q	R
	1.5 MIN	50 MIN	20.2 MIN	13.0 ±0.2	40 MIN
S	T	U	V	W	QTY/REEL
2.5 MIN	10 MIN	22.4 MAX	180 MAX	16.4 +2.0/-0.0	1,000

Note: Compliant to EIA-481

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: EPO

Line 2: XXXXX
Eclipitek Manufacturing Indentifier

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