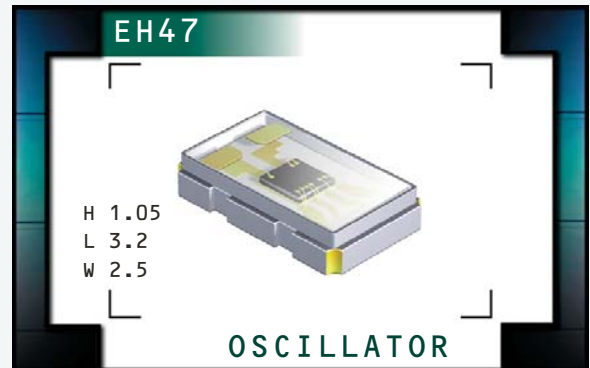


EH47 Series



ECLIPTEK[®]
CORPORATION

- 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)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		2.500MHz 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)	2.500MHz to 25.000MHz	6mA Maximum
	25.001MHz to 75.000MHz	7mA Maximum
	75.001MHz to 100.000MHz	8mA Maximum
	100.001MHz to 166.000MHz	9mA 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, 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	2.500MHz to 50.000MHz 20% to 80% of Waveform	6 nSeconds Maximum
	50.001MHz to 75.000MHz 20% to 80% of Waveform	4 nSeconds Maximum
	75.001MHz to 166.000MHz 20% to 80% of Waveform	2 nSeconds Maximum
Load Drive Capability		15pF Maximum
Duty Cycle	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)
Tri-State Input Voltage	V _{IH} : ≥90% of V _{DD} or No Connection V _{IH} : ≤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
Period Jitter: Absolute		±100pSec Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH47

PACKAGE
CERAMIC

VOLTAGE
2.5V

CLASS
057C

REV. DATE
06/09

PART NUMBERING GUIDE

EH47 00 ETTTS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00 = ±100ppm Maximum
 45 = ±50ppm Maximum
 25 = ±25ppm Maximum
 20 = ±20ppm Maximum

OPERATING TEMP. RANGE

Blank = 0°C to 70°C
 ET = -40°C to 85°C

DUTY CYCLE

Blank = 50 ±10(%)
 T = 50 ±5(%)

AVAILABLE OPTIONS

Blank = Bulk
 TR = Tape & Reel

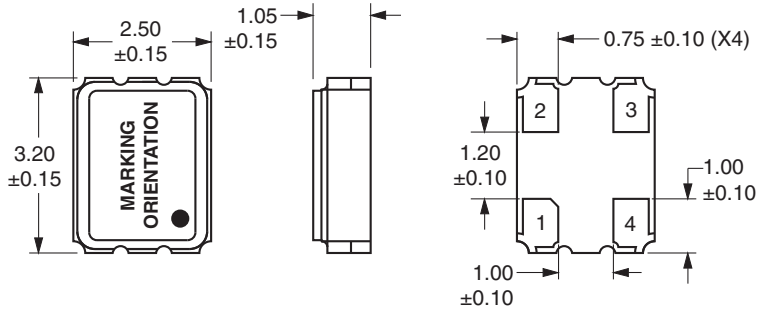
FREQUENCY

OUTPUT CONTROL FUNCTION

TS = Tri-State (High Impedance)

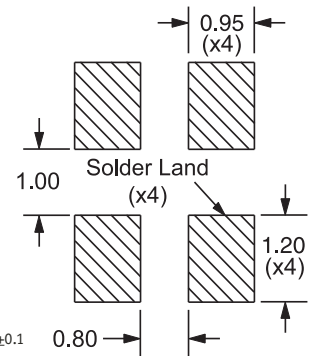
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



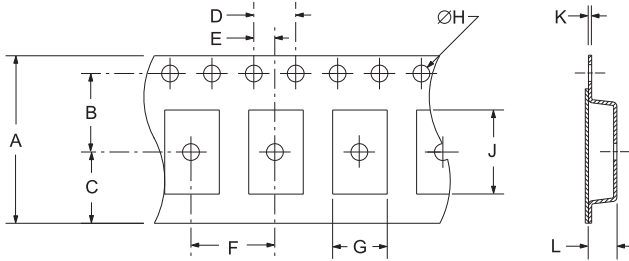
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

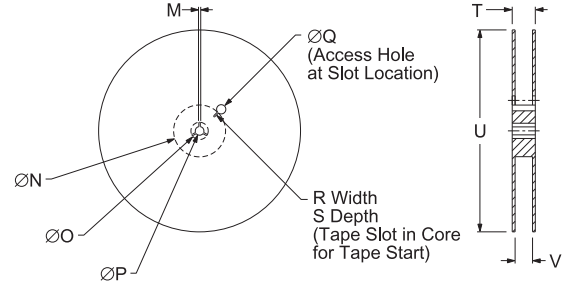


TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



REEL	A	B	C	D	E
	12.0 ±0.3	5.5 ±0.05	4.75 ±0.10	4.0 ±0.1	2.0 ±0.05
F	G	H	J	K	L
4.0 ±0.1	A0*	1.5 +0.1 -0.0	B0*	0.6 MAX	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: EPO
 Line 2: XXXXX
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH47	CERAMIC	2.5V	057C	06/09