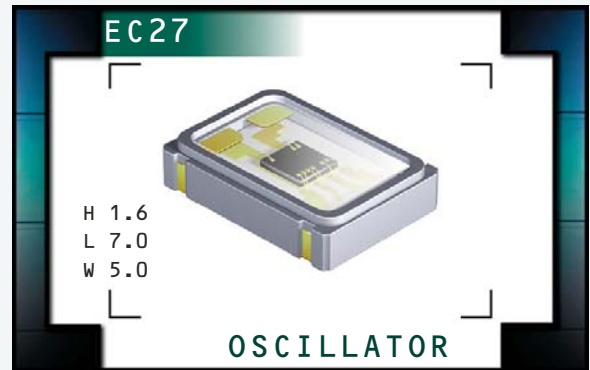


EC27 Series



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)



ELECTRICAL SPECIFICATIONS

Frequency Range (M=MHz) 1.544M to 125M, 125.009M, 125.00093M, 125.00312M, 125.009M, 125.00937M, 125.01M, 126M, 127M, 128M, 131M, 131.072M, 131.25M, 132M, 133M, 133.33M, 133.333M, 133.3333M, 135M, 136M, 137.472M, 140M, 142M, 142.85M, 143M, 145M, 148.351M, 148.3516M, 148.5M, 155M, 155.52M, 156.25M, 159.375M, 159.38M, 161.1328M, 162.5M, 166M, 175M, 187.5M, or 200MHz

Operating Temperature Range (OTR) -10°C to +70°C or -40°C to +85°C

Storage Temperature Range (STR) -55°C to +125°C

Supply Voltage (V_{DD}) 2.5V_{DC} ±5%

Input Current (I_{DD})	1.544MHz to 9.999MHz	3mA Maximum
	10.000MHz to 19.999MHz	4mA Maximum
	20.000MHz to 39.999MHz	5mA Maximum
	40.000MHz to 50.000MHz	6mA Maximum
	50.001MHz to 69.999MHz	10mA Maximum
	70.000MHz to 110.000MHz	15mA Maximum
	110.001MHz to 125.000MHz	35mA Maximum
	125.001MHz to 155.000MHz	45mA Maximum
155.001MHz to 200.000MHz	58mA Maximum	

Frequency Tolerance/Stability Inclusive of all conditions: Calibration Tolerance at 25°C, ±100ppm
Frequency Stability over the Operating Temperature Range, ±50ppm
Supply Voltage Change, Output Load Change, First Year ±25ppm
Aging at 25°C, Shock, and Vibration ±20ppm

Output Voltage Logic High (V_{OH}) 90% of V_{DD} Minimum $I_{OH} = -4mA$

Output Voltage Logic Low (V_{OL}) 10% of V_{DD} Maximum $I_{OL} = +4mA$

Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform, 1.544MHz to 24MHz	6nSeconds Maximum
	20% to 80% of Waveform, 24.001MHz to 50MHz	4nSeconds Maximum
	20% to 80% of Waveform, 50.001MHz to 110MHz	3nSeconds Maximum
	20% to 80% of Waveform, 110.001MHz to 200MHz	2nSeconds Maximum

Duty Cycle (SYM) 50% of Waveform 50 ±10(%) (Standard)
50% of Waveform 50 ±5(%) (Optional)

Load Drive Capability (C_{LOAD}) 15pF Maximum

Tri-State Input Voltage No Connection Enables Output
 $V_{IH} \geq 90\%$ of V_{DD} Enables Output
 $V_{IL} \leq 10\%$ of V_{DD} Disables Output: High Impedance

Standby Current Disabled Output: High Impedance 10µA Maximum

Aging (at 25°C) ±5ppm /year Maximum

Start Up Time (T_S) 10 mSeconds Maximum

RMS Phase Jitter 12kHz to 20MHz offset frequency 1pSeconds Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC27	PACKAGE CERAMIC	VOLTAGE 2.5V	CLASS OS52	REV. DATE 02/10
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PART NUMBERING GUIDE

EC27 00 ET TS - 30.000M TR

FREQUENCY TOLERANCE / STABILITY

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

PACKAGING OPTIONS

Blank = Bulk
 TR = Tape & Reel

FREQUENCY

DUTY CYCLE

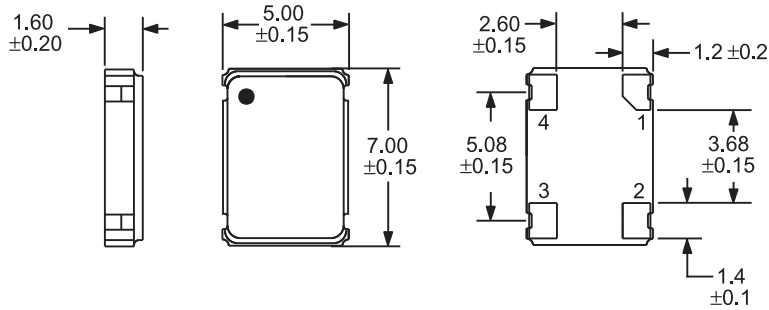
Blank = 50 ±10(%)
 T = 50 ±5(%)

OPERATING TEMPERATURE RANGE

Blank = -10°C to +70°C
 ET = -40°C to +85°C

MECHANICAL DIMENSIONS

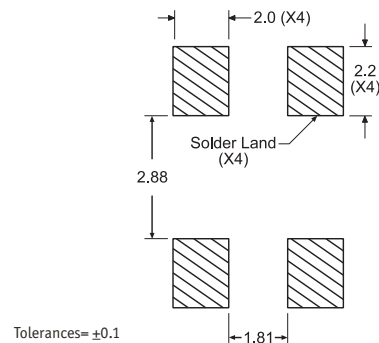
ALL DIMENSIONS IN MILLIMETERS



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

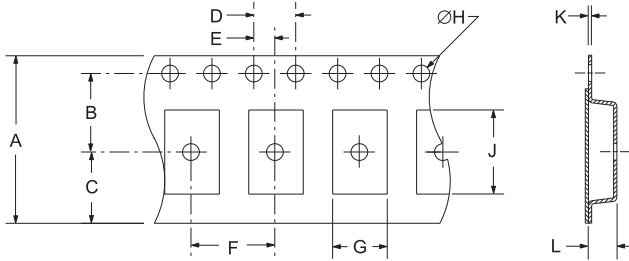
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

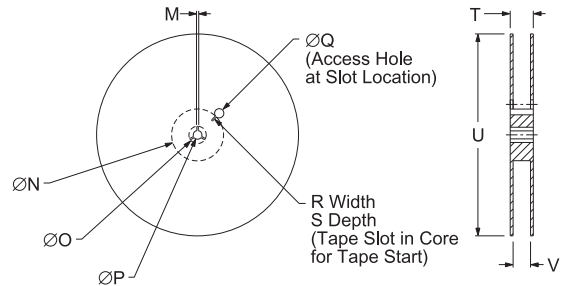


TAPE AND REEL DIMENSIONS

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: XXYYZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC27	CERAMIC	2.5V	OS52	02/10