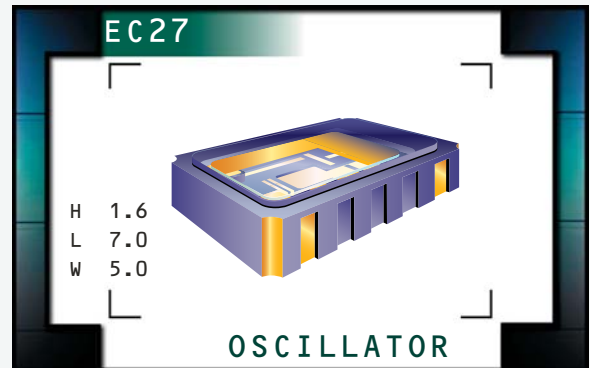


EC27 Series

- HCMOS output
- 2.5V Supply Voltage
- Ceramic 4-pad SMD package
- Stability to 20ppm
- Available on Tape and Reel



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)		1.544MHz to 70.000MHz
Operating Temperature Range (OTR)	$\pm 100\text{ppm}$, $\pm 50\text{ppm}$, or $\pm 25\text{ppm}$	0°C to 70°C or -40°C to 85°C
	$\pm 20\text{ppm}$	0°C to +70°C
Storage Temperature Range (STR)		-55°C to 125°C
Supply Voltage (V_{DD})		2.5V _{DC} $\pm 10\%$
Input Current (I_{DD})	$\leq 24.000\text{MHz}$	10mA Maximum
	$> 24.000\text{MHz}$	20mA Maximum
Frequency Tolerance/Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	$\pm 100\text{ppm}$, $\pm 50\text{ppm}$, $\pm 25\text{ppm}$, or $\pm 20\text{ppm}$ (0°C to +70°C only)
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum $I_{OH} = -4\text{mA}$
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum $I_{OL} = +4\text{mA}$
Rise Time / Fall Time (T_R/T_F)	$\leq 24.000\text{MHz}$ 10% to 90% of Waveform	6 nSeconds Maximum
	$> 24.000\text{MHz}$ 10% to 90% of Waveform	4 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 $\pm 10\%$ (Standard) or 50 $\pm 5\%$ (Optional)
Load Drive Capability (C_{LOAD})		15pF HCMOS Load 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
Aging (at 25°C)		$\pm 5\text{ppm}/\text{year}$ Maximum
Start Up Time (T_S)		10 mSeconds Maximum
Period Jitter: Absolute		$\pm 100\text{pSeconds}$ Maximum
Period Jitter: One Sigma		$\pm 25\text{pSeconds}$ Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC27	CERAMIC	2.5V	OS52	03/02

PART NUMBERING GUIDE

EC27 00 ET TS - 30.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm Maximum

OPERATING TEMPERATURE RANGE

Blank=0°C to 70°C (Standard)
 ET=-40°C to 85°C

PACKAGING OPTIONS

Blank=Bulk (Standard)
 TR=Tape and Reel

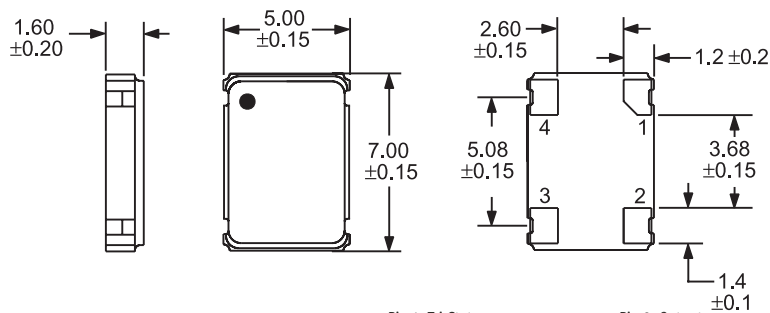
FREQUENCY

DUTY CYCLE

Blank=50±10%(%) (Standard)
 T=50±5(%)

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

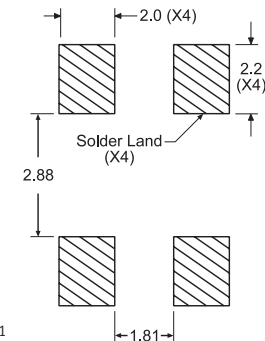


Pin 1: Tri-State
 Pin 2: Case Ground

Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

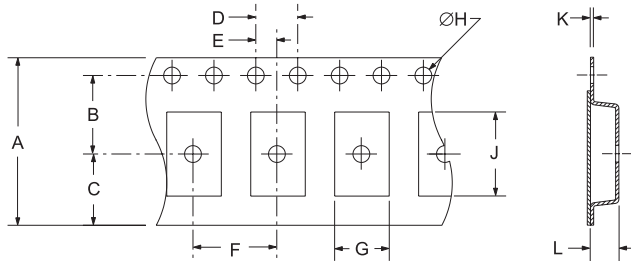
ALL DIMENSIONS IN MILLIMETERS



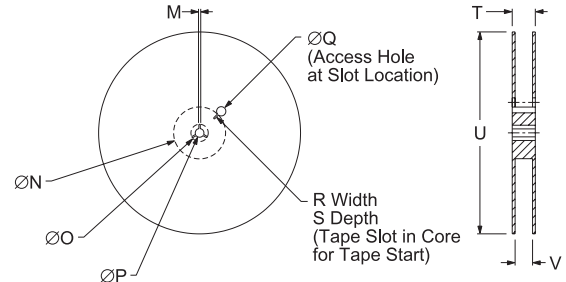
Tolerances= ±0.1

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
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum.
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 50cm.
Thermal Shock	300 Cycles from -55°C to +125°C, 5 minute dwell

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
 Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XY ZZ
 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	03/02