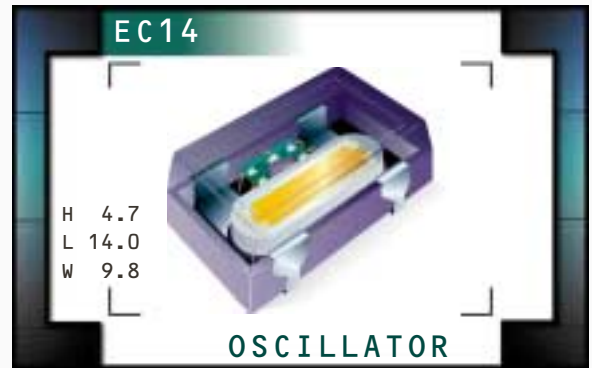


EC14 Series

- Plastic surface mount package
- 5.0V supply voltage
- HCMOS/TTL output
- Stability to 50ppm
- Available on tape and reel

NOTES



ELECTRICAL SPECIFICATIONS

Frequency Range*		1.000MHz to 66.667MHz	
Operating Temperature Range		0°C to 70°C or -40°C to 85°C (≤30.000MHz)	
Storage Temperature Range		-55°C to 125°C	
Supply Voltage (V_{DD})		5.0V _{DC} ±10%	
Frequency Tolerance / Stability*		Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm Maximum or ±50ppm Maximum (0°C to 70°C Only)
Input Current	≤30.000MHz		23mA Maximum (Unloaded)
	30.001MHz to 50.000MHz		35mA Maximum (Unloaded)
	>50.000MHz		50mA Maximum (Unloaded)
Load Drive Capability	≤53.125MHz		10TTL Load or 50pF HCMOS Load
	>53.125MHz		15pF HCMOS Load
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum	I _{OH} = -16mA
	w/HCMOS Load	V _{DD} -0.5V _{DC} Minimum	I _{OH} = -16mA
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4V _{DC} Maximum	I _{OL} = +16mA
	w/HCMOS Load	0.5V _{DC} Maximum	I _{OL} = +16mA
Duty Cycle	at 50% of waveform w/HCMOS Load at 1.4V _{DC} w/TTL Load		50 ±10(%) (Standard)
	at 1.4V _{DC} w/HCMOS Load or w/TTL Load		50 ±5(%) (Optional)
Rise Time / Fall Time		20% to 80% of waveform w/HCMOS Load; 0.4V _{DC} to 2.4V _{DC} w/TTL Load	8 nSeconds Maximum
Aging (at 25°C)			±5ppm / year Maximum
Pin 1 Tri-State Input Voltage	No Connection		Enables Output
	V _{IH} : ≥2.0V _{DC}		Enables Output
	V _{IL} : ≤0.8V _{DC}		Disables Output: High Impedance
Start Up Time	1.000MHz to 26.000MHz		4 mSeconds Maximum
	26.001MHz to 50.000MHz		10 mSeconds Maximum
Period Jitter: Absolute			±100pSeconds Maximum
Period Jitter: One Sigma			±25pSeconds Maximum

*Note: Not all Frequency Tolerance/Stability options available, see Eclipsek website for the "Qualified Frequency List".

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC14	PACKAGE PLASTIC	VOLTAGE 5.0V	CLASS OS33	REV. DATE 01/01
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PART NUMBERING GUIDE

EC14 00 SJ ET TS - 50.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
45=±50ppm Maximum

OPERATING TEMP. RANGE

Blank=0°C to 70°C
ET=-40°C to 85°C

DUTY CYCLE

Blank=50 ±10(%) (Standard)
T=50 ±5(%)

PACKAGING OPTIONS

Blank=Bulk
TR=Tape and Reel (Standard)

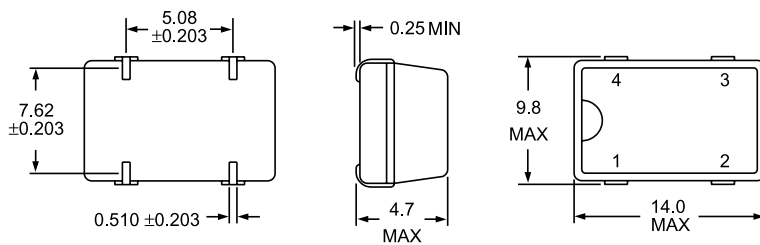
FREQUENCY

PIN 1 CONNECTION

Blank=No Connection (Standard)
TS=Tri-State Enable High

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

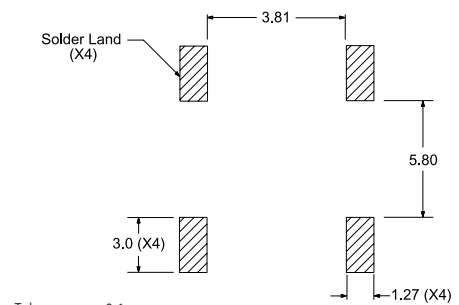


Pin 1: No Connect or Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

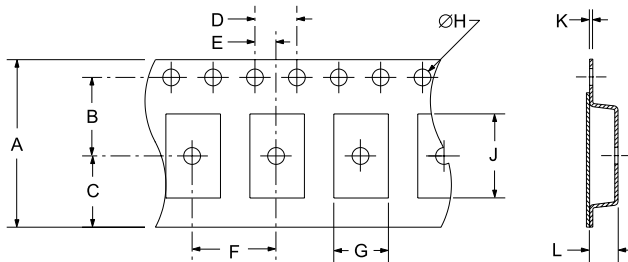
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.1

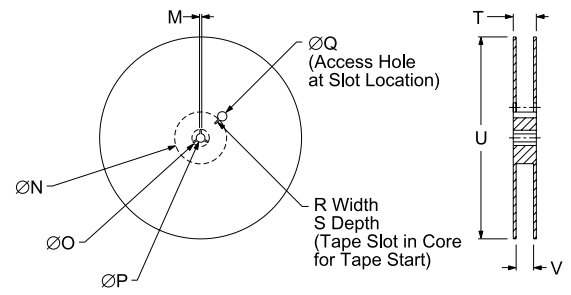
TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	24 ±3	11.5 ±1	10.75 ±1	4 ±.2	2 ±.1
F	G	H	J	K	L
12 ±.2	B0*	1.5 ±.1-0	A0*	.3 ±.1	K0*

*Compliant to EIA 481A



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	30.4 MAX	360 MAX	24.4 ±2-0	1,000

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum (internal crystal only).
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 20cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours.

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX YY ZZ

Week of Year

Last Digit of Year

Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC14	PLASTIC	5.0V	OS33	01/01