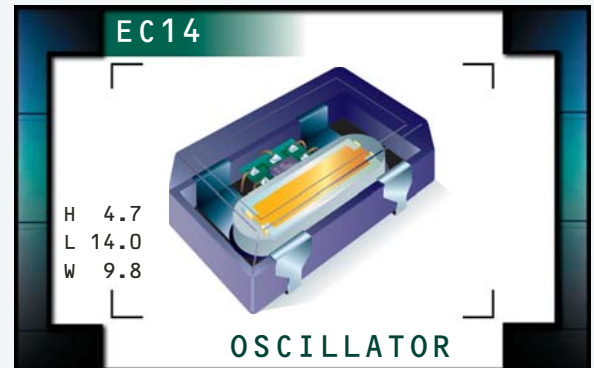


EC14 Series

- 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 ($\leq 30.000\text{MHz}$)	
Storage Temperature Range		-55°C to 125°C	
Supply Voltage (V_{DD})		5.0V _{DC} $\pm 10\%$	
Frequency Tolerance / Stability*		Inclusive of Operating Temperature Range, Supply Voltage, and Load	$\pm 100\text{ppm}$ Maximum or $\pm 50\text{ppm}$ Maximum (0°C to 70°C Only)
Input Current	$\leq 30.000\text{MHz}$	23mA Maximum (Unloaded)	
	30.001MHz to 50.000MHz	35mA Maximum (Unloaded)	
	$> 50.000\text{MHz}$	50mA Maximum (Unloaded)	
Load Drive Capability	$\leq 53.125\text{MHz}$	10TTL Load or 50pF HCMOS Load	
	$> 53.125\text{MHz}$	15pF HCMOS Load	
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum	$I_{OH} = -16\text{mA}$
	w/HCMOS Load	$V_{DD} - 0.5V_{DC}$ Minimum	$I_{OH} = -16\text{mA}$
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4V _{DC} Maximum	$I_{OL} = +16\text{mA}$
	w/HCMOS Load	0.5V _{DC} Maximum	$I_{OL} = +16\text{mA}$
Duty Cycle	at 50% of waveform w/HCMOS Load at 1.4V _{DC} w/TTL Load	50 $\pm 10\%$ (Standard)	
	at 1.4V _{DC} w/HCMOS Load or w/TTL Load	50 $\pm 5\%$ (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)		$\pm 5\text{ppm} / \text{year}$ Maximum	
Tri-State Input Voltage	No Connection	Enables Output	
	$V_{IH} \geq 2.0V_{DC}$	Enables Output	
	$V_{IL} \leq 0.8V_{DC}$	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		$\pm 100\text{pSeconds}$ Maximum	
Period Jitter: One Sigma		$\pm 25\text{pSeconds}$ Maximum	

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)

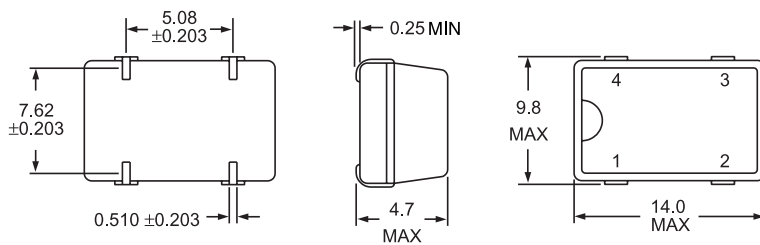
FREQUENCY

OUTPUT CONTROL FUNCTION

Blank=None (No Connection on Pin 1)
TS=Tri-State Enable High

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

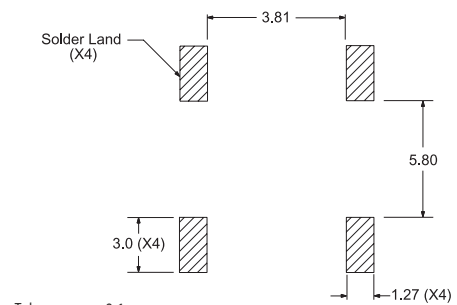


Pin 1: No Connect or Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

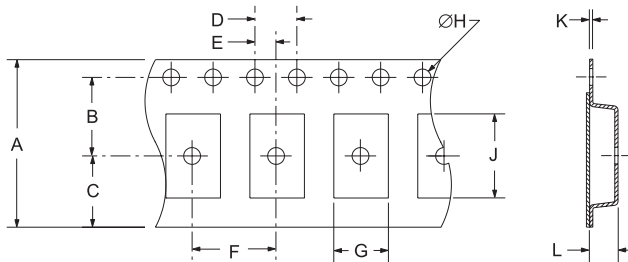
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.1

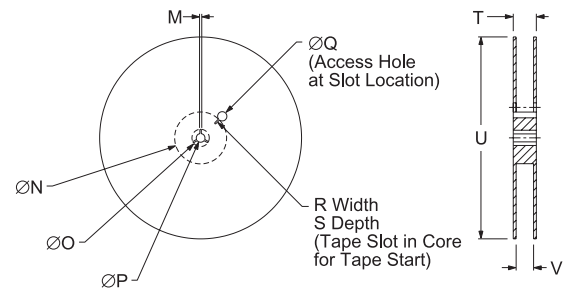
TAPE AND REEL DIMENSIONS

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	03/02