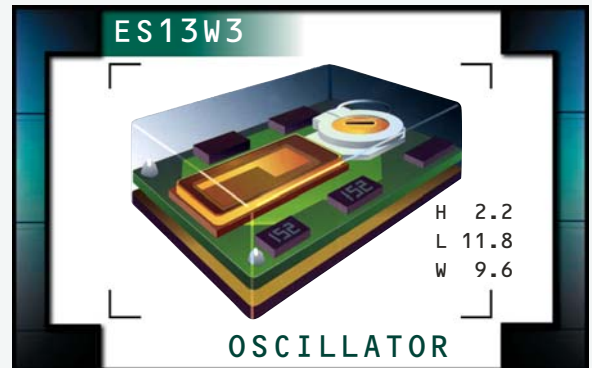


ES13W3 Series

- Temperature Compensated Crystal Oscillator (TCXO)
- Low Voltage Clipped Sinewave Output
- 3.0V Supply Voltage
- PCB 8-pad SMD package
- Stability to 1.5ppm
- External voltage control option available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		10.000MHz to 20.000MHz
Storage Temperature Range		-30°C to 85°C
Operating Temperature Range		See Table 1
Supply Voltage (V_{DD})		3.0V _{DC} ±5%
Load Drive Capability		10kOhms // 10pF
Input Current		2.0mA Maximum
Aging (at 25°C)		±1ppm / Year Maximum
External Trim (Voltage Control Option)	1.5V _{DC} ±1.0V _{DC} ; Positive Transfer Characteristic	±8ppm Minimum
Output Voltage		0.7Vp-p Clipped Sinewave Minimum
Frequency Stability	vs. Operating Temperature Range	See Table 1
	vs. Frequency Tolerance (25°C ±2°C)	±2.0ppm Maximum
	vs. Input Voltage (±5%)	±0.3ppm Maximum
	vs. Load (±1kΩ//±1pF)	±0.2ppm Maximum
Start Up Time		5mSec Maximum
Harmonics	2nd Harmonic	-3dBc Maximum
	3rd Harmonic	-6dBc Maximum
	Other	-10dBc Maximum
Typical Phase Noise	At offset of 10Hz	-80dBc/Hz Maximum
	At offset of 100Hz	-125dBc/Hz Maximum
	At offset of 1kHz	-145dBc/Hz Maximum
	At offset of 10kHz	-148dBc/Hz Maximum
	At offset of 100kHz	-150dBc/Hz Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES ES13W3	PACKAGE 8-PCB	VOLTAGE 3.0V	CLASS OS97	REV. DATE 04/02
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PART NUMBERING GUIDE

ES13W3 C 25 V - 12.800M TR

OPERATING TEMP. RANGE
One Letter Code Per Table 1

FREQUENCY STABILITY
Two Digit Code Per Table 1

EXTERNAL TRIM
N=None (No Connection on Pin 1)
V=Voltage Control

PACKAGING OPTIONS
Blank=Bulk
TR=Tape and Reel

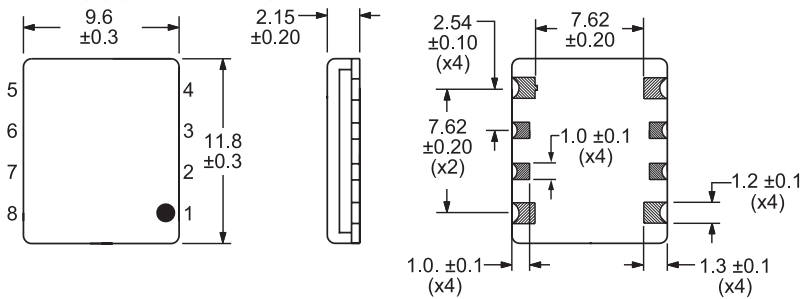
FREQUENCY

TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability X Denotes Availability			
		±1.5ppm	±2.0ppm	±2.5ppm	±3.0ppm
		15	20	25	30
0°C to +50°C	A	X	X	X	X
-10°C to 60°C	B		X	X	X
-20°C to +70°C	C		X	X	X
-30°C to +60°C	D		X	X	X
-30°C to +75°C	E		X	X	X
-30°C to +85°C	F			X	X

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

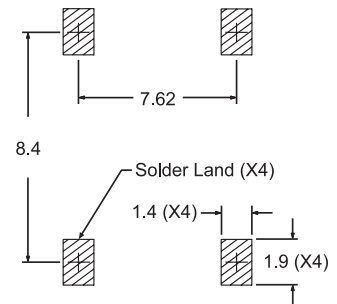


Pin 1: Control Voltage or No Connection
 Pin 4: Case Ground
 Pin 6-7: No Connection

Pin 2-3: No Connection
 Pin 5: Output
 Pin 8: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

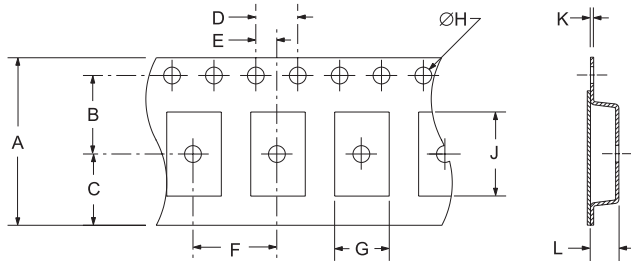
ALL DIMENSIONS IN MILLIMETERS



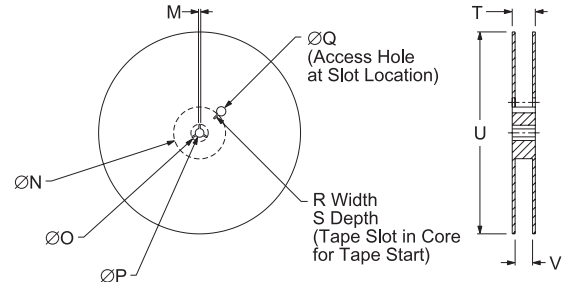
Tolerances= ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	24±.3	10.75±.1	11.5±.1	4±.2	2±.1
F	G	H	J	K	L
	12±.2	80*	1.55±.05	A0*	0.3±.05



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.2	40 MIN
R	S	T	U	V	W
	2.5 MIN	10 MIN	30.4 MAX	360 MAX	24.4±2.0

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Shock	Random drop on hard wooden plate 3 times from a height of 50cm.
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
Line 3: XX YY ZZ

Frequency in MHz (5 Digits Maximum + Decimal)

Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES13W3	8-PCB	3.0V	0S97	04/02