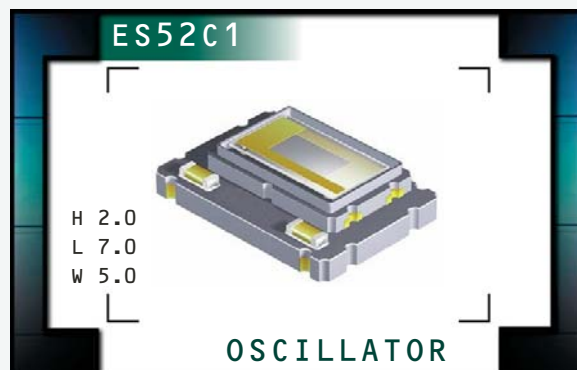


ES52C1 Series

- RoHS Compliant (Pb-free)
- Temperature Compensated Crystal Oscillator (TCXO)
- Clipped Sinewave Output
- 3.3V Supply Voltage
- Ceramic 10-pad SMD package
- Stability to 1.0ppm
- External voltage control option available



www.DataSheet4U.com®
ECLIPTEK
CORPORATION



ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	10.000, 10.240, 10.245, 11.0592, 12.000, 12.288, 12.800, 13.000, 14.000, 14.400, 14.7456, 15.360, 16.000, 16.03495, 16.3676, 16.367667, 16.3677, 16.368, 16.384, 16.800, 17.500, 18.414, 18.432, 19.200, 19.440, 19.680, 19.800, 20.000, 20.480, 24.000, 24.5535, 25.000, and 26.000MHz	
Frequency Stability	vs. Operating Temperature Range	See Part Numbering Guide
	vs. Frequency Tolerance (25°C ±2°C, V _{DD} = 3.3V _{DC} , V _C = 1.5V _{DC})	±1.0ppm Maximum
	vs. Input Voltage (±5%)	±0.2ppm Maximum
	vs. Load (±1kΩ/±1pF)	±0.2ppm Maximum
Aging (at 25°C)		±1ppm / Year Maximum
Operating Temperature Range		See Part Numbering Guide
Supply Voltage (V_{DD})		3.3V _{DC} ±5%
Input Current	10.000MHz to 14.999999MHz	1.5mA Maximum
	15.000MHz to 25.999999MHz	2.0mA Maximum
	26.000MHz to 26.0000MHz	2.5mA Maximum
Output Voltage		0.8Vp-p Clipped Sinewave Minimum
Load Drive Capability		10kOhms // 10pF
External Trim (Voltage Control Option)	1.5V _{DC} ±1.0V _{DC} ; Positive Transfer Characteristic	±8ppm Minimum
Linearity		10% Maximum
Modulation Bandwidth	Measured at -3dB, V _C = 1.5V _{DC}	3kHz Minimum
Input Impedance		100kOhms Minimum
Typical Phase Noise (at 12.800MHz)	At offset of 10Hz	-80dBc/Hz
	At offset of 100Hz	-115dBc/Hz
	At offset of 1kHz	-135dBc/Hz
	At offset of 10kHz	-145dBc/Hz
	At offset of 100kHz	-145dBc/Hz
Start Up Time		5mSec Maximum
Storage Temperature Range		-55°C to 125°C

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
ES52C1

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS4K

REV. DATE
09/07

PART NUMBERING GUIDE

www.DataSheet4U.com

ES52C1 C 25 V - 13.000M TR

OPERATING TEMPERATURE RANGE

A=0°C to 50°C
B=0°C to 70°C
C=-20°C to 70°C
D=-30°C to 85°C
E=-40°C to 85°C

FREQUENCY STABILITY

10 = ±1.0ppm Maximum
15 = ±1.5ppm Maximum
20 = ±2.0ppm Maximum
25 = ±2.5ppm Maximum

PACKAGING OPTIONS

Blank=Bulk
TR=Tape and Reel

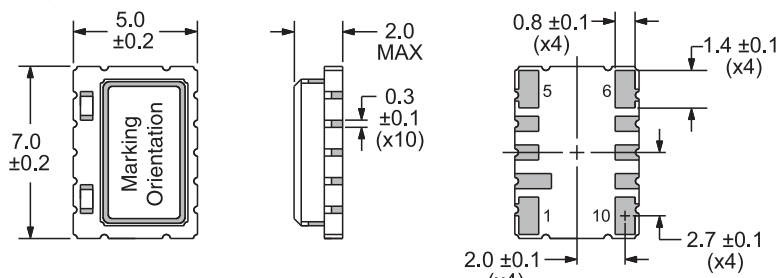
FREQUENCY

EXTERNAL TRIM

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

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

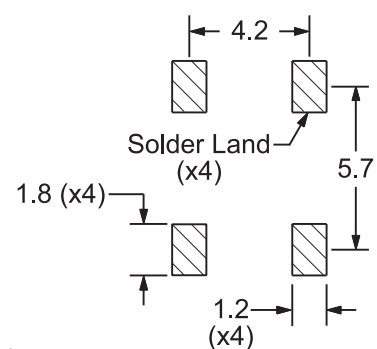


Pin 1: Control Voltage
or No Connect
Pin 5: Case Ground

Pin 6: Output
Pin 10: Supply Voltage
Pin 2-4, 7-9: Do Not Connect

SUGGESTED SOLDER PAD LAYOUT

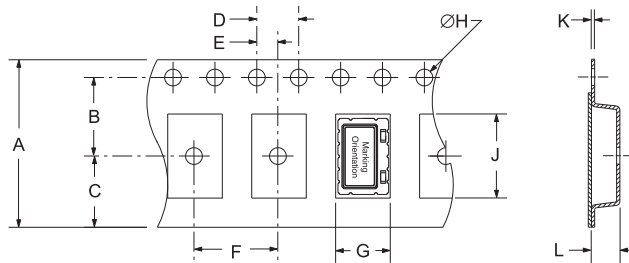
ALL DIMENSIONS IN MILLIMETERS



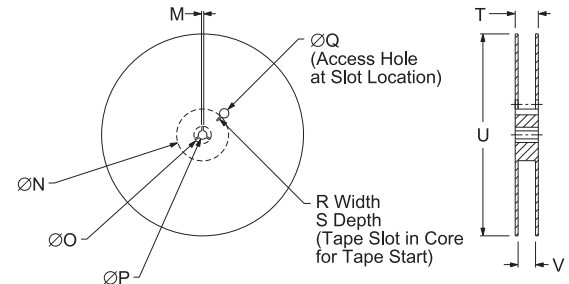
Tolerances= ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16.0±0.2	7.5±0.1	6.75±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
	8.0±0.1	B0*	1.5+0.1-0.0	A0*	0.30 ±0.05



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
	2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4±2-0

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
Solderability
Temperature Cycling
Resistance to Soldering Heat
Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-202, Method 213, Condition C
MIL-STD-883, Method 2007, Condition A
MIL-STD-883, Method 2003
MIL-STD-883, Method 1010
MIL-STD-202, Method 210
MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: E XX.XXX

Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XX Y ZZ

Week of Year
Last Digit of Year
Ecliptek Manufacturing Identifier

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
ES52C1

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS4K

REV. DATE
09/07