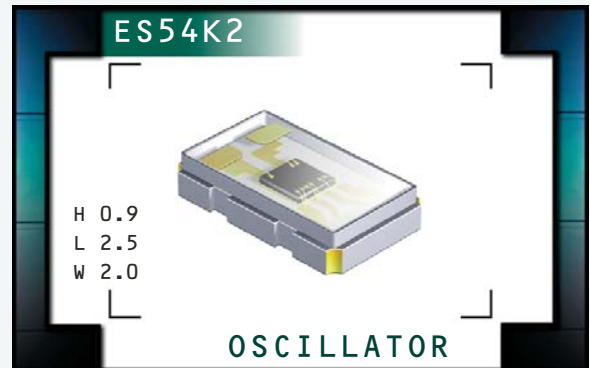


ES54K2 Series



ECLIPTEK[®]
CORPORATION

- Temperature Compensated Crystal Oscillators (TCXO)
- Clipped Sinewave Output
- +2.5V Supply Voltage
- External Voltage Control Option
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



NOTES

ELECTRICAL SPECIFICATIONS

Nominal Frequency	16.367667MHz, 16.368MHz, 16.369MHz, 19.200MHz, 26.000MHz, 38.400MHz, 40.000MHz	
Frequency Stability	vs. Frequency Tolerance (25°C ±2°C, V _{DD} =2.5V _{DC})	±1.0ppm Maximum
	vs. Operating Temperature Range (V _{DD} =2.5V _{DC})	See Table 1
	vs. Input Voltage (±5%)	±0.2ppm Maximum
	vs. Load (±1kΩ//±1pF)	±0.2ppm Maximum
	vs. Reflow (at 25°C, 1 hour after reflow, 2 times)	±1.0ppm Maximum
Aging (at 25°C)	±1.0ppm / Year Maximum	
Operating Temperature Range	See Table 1	
Supply Voltage (V_{DD})	2.5V _{DC} ±5%	
Input Current	16.367667MHz to 25.999MHz	2.0mA Maximum
	26.000MHz to 40.000MHz	2.5mA Maximum
Output Voltage	External DC-Cut Capacitor Required, 150pF NPO Recommended	0.8V _{p-p} Clipped Sinewave Minimum
Load Drive Capability	10kOhms // 10pF	
Control Voltage	1.4V _{DC} ±1.0V _{DC}	
Frequency Deviation	±5ppm Minimum	
Linearity	±10% Maximum	
Transfer Function	Positive Transfer Characteristic	
Input Impedance	500kOhms Minimum	
Storage Temperature Range	-55°C to 125°C	
Start Up Time	2mSec Maximum	
Phase Noise	At offset of 100Hz	-115dBc/Hz Typical
	At offset of 1kHz	-135dBc/Hz Typical
	At offset of 10kHz	-148dBc/Hz Typical

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES54K2	CERAMIC	2.5V	OS7T	01/10

PART NUMBERING GUIDE

ES54K2 C 25 V - 19.200M TR

OPERATING TEMP. RANGE
One Letter Code Per Table 1

FREQUENCY STABILITY
Two Digit Code Per Table 1

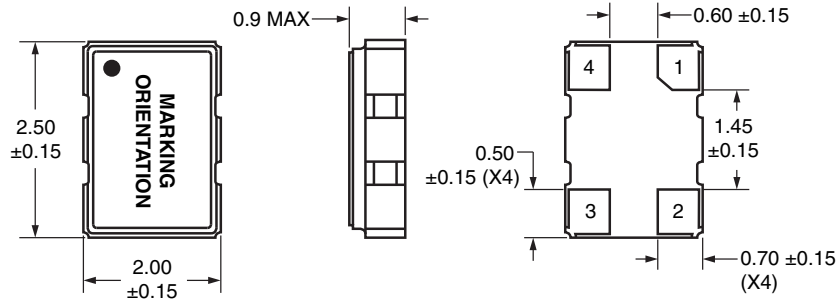
CONTROL VOLTAGE
N=None (No Connection on Pin 1)
V=1.4V_{DC} ±1.0V_{DC}

FREQUENCY

PACKAGING OPTIONS
Blank=Bulk
TR= Tape and Reel

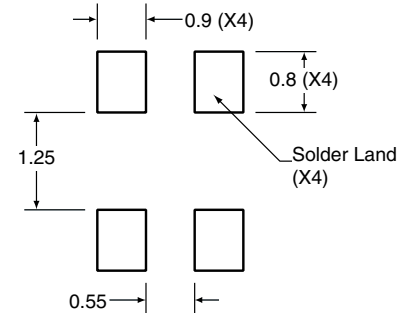
		Frequency Stability					
		X denotes availability for any valid frequency Y denotes availability for frequencies < 26.001MHz					
Operating Temperature Range	Code	±0.5ppm	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm	±3.0ppm
	0°C to +50°C	A	Y	X	X	X	X
-10°C to 60°C	B	Y	X	X	X	X	X
-20°C to +70°C	C	Y	X	X	X	X	X
-30°C to +60°C	D		X	X	X	X	X
-30°C to +75°C	E		X	X	X	X	X
-30°C to +85°C	F		X	X	X	X	X
-40°C to +85°C	G			X	X	X	X

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



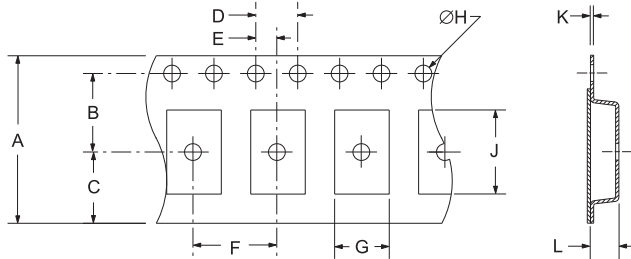
Pin 1: Control Voltage or No Connection Pin 3: Output
Pin 2: Case Ground Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS

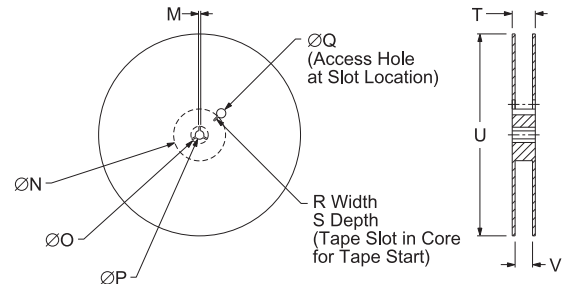


All Tolerances are ±0.1

TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	8.0 ±.2	3.5 ±.1	2.75 ±.1	4 ±.1	2 ±.1
F	G	H	J	K	L
4 ±.1	B0*	1.55 ±.05	A0*	.25 ±.05	K0*



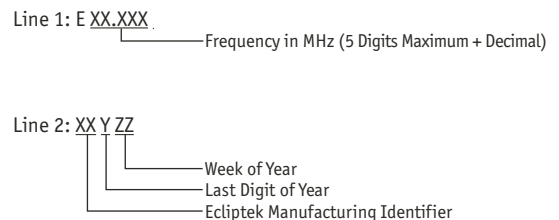
REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13 ±.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	14.4 MAX	360 MAX	8.4+1.5-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215

MARKING SPECIFICATIONS



MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES54K2	CERAMIC	2.5V	OS7T	01/10