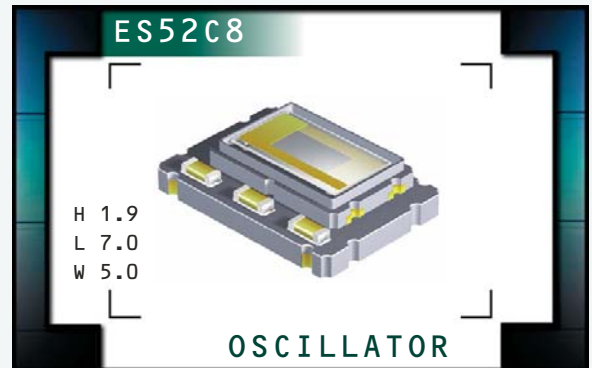


ES52C8 Series

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



NOTES

ELECTRICAL SPECIFICATIONS

Nominal Frequency	12.800MHz, 13.000MHz, 13.5625MHz, 14.400MHz, 16.000MHz, 16.368MHz, 18.432MHz, 19.200MHz, 20.000MHz, or 26.000MHz	
Storage Temperature Range	-40°C to 85°C	
Operating Temperature Range	See Table 1	
Supply Voltage (V_{DD})	3.00V _{DC} ±0.15Vdc	
Load Drive Capability	10kOhms // 10pF	
Input Current	2mA Maximum	
Aging (at 25°C)	±1ppm / Year Maximum	
External Trim (Voltage Control Option)	1.5V _{DC} ±1.0V _{DC} ; Positive Transfer Characteristic	±8ppm Minimum, ±20ppm Maximum
Output Voltage	0.7Vp-p Clipped Sinewave Minimum	
Frequency Stability	vs. Operating Temperature Range	See Table 1
	vs. Frequency Tolerance (25°C ±2°C)	±0.5ppm Maximum
	vs. Input Voltage (±5%)	±0.2ppm 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
	At offset of 100Hz	-125dBc/Hz
	At offset of 1kHz	-145dBc/Hz
	At offset of 10kHz	-148dBc/Hz
	At offset of 100kHz	-150dBc/Hz

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES ES52C8	PACKAGE CERAMIC	VOLTAGE 3.0V	CLASS OS1J	REV. DATE 12/04
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PART NUMBERING GUIDE

ES52C8 C 25 V - 13.000M 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

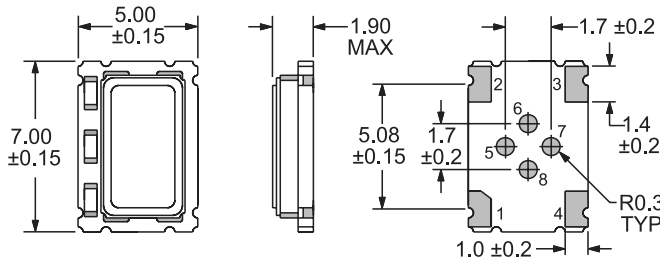
PACKAGING OPTIONS
Blank=Bulk
TR=Tape and Reel

FREQUENCY

TABLE 1: PART NUMBERING CODES

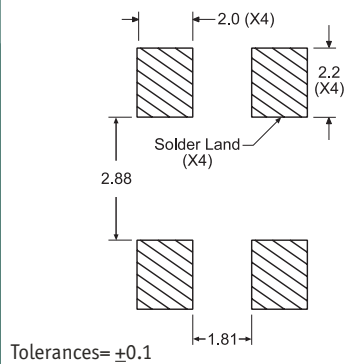
Operating Temperature Range	Code	Frequency Stability X Denotes Availability			
		±1.5ppm	±2.0ppm	±2.5ppm	±3.0ppm
		15	20	25	30
0°C to +50°C	A	X	X	X	X
-10°C to 60°C	B		X	X	X
-20°C to +70°C	C		X	X	X
-30°C to +60°C	D		X	X	X
-30°C to +75°C	E		X	X	X
-30°C to +85°C	F			X	X

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



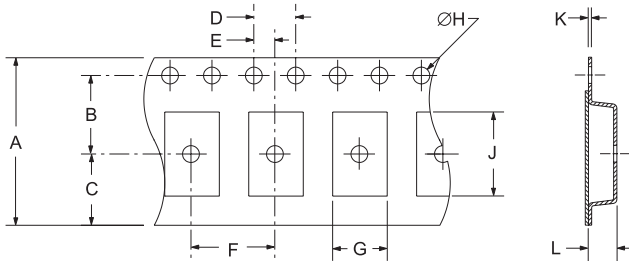
Pin 1: Control Voltage or No Connection
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage
Pin 5-8: No Connection

SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS

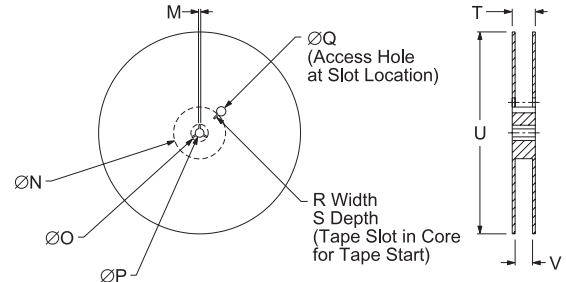


Tolerances= ±0.1

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 2002
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
Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES52C8	CERAMIC	3.0V	051J	12/04