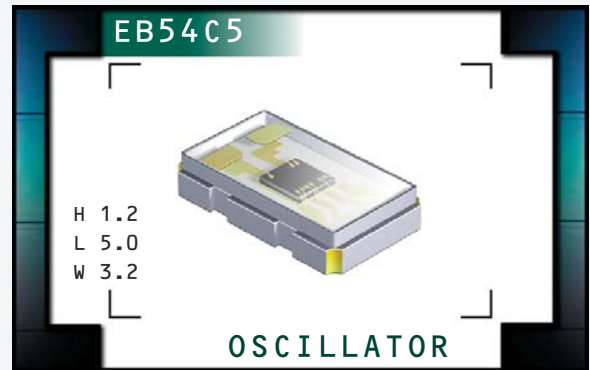


EB54C5 Series



ECLIPTEK[®]
CORPORATION

- Temperature Compensated Crystal Oscillators (TCXO)
- LVCMOS Output
- +2.5V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



NOTES

ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	12.800MHz, 14.7456MHz, 16.384MHz, 19.200MHz, 19.440MHz, 25.000MHz, 26.000MHz, 32.000MHz, and 40.000MHz	
Frequency Stability	vs. Frequency Tolerance (25°C ±2°C, V _{DD} = 2.5V _{DC})	±3.0ppm Maximum
	vs. Temperature (V _{DD} = 2.5V _{DC})	±2.5ppm Maximum (-20°C to +70°C only)
	vs. Input Voltage (±5%)	±5.0ppm Maximum
	vs. Aging (at 25°C)	±0.5ppm Maximum
	vs. Load (±1pF)	±1.0ppm / Year Maximum
	vs. Reflow (at 25°C, 1 hour after reflow, 2 times)	±0.2ppm Maximum
		±1.0ppm Maximum
Operating Temperature Range	-20°C to +70°C, -40°C to +85°C	
Supply Voltage (V_{DD})	2.5V _{DC} ±5%	
Input Current	12.800MHz to 19.440MHz	3mA Maximum
	19.440001MHz to 40.000MHz	5mA Maximum
Output Voltage Logic High (V_{OH})	I _{OH} = -4mA	90% of V _{DD} Minimum
Output Voltage Logic Low (V_{OL})	I _{OL} = +4mA	10% of V _{DD} Maximum
Rise/Fall Time	Measured at 20% to 80% of Waveform	6nSec Maximum
Duty Cycle	Measured at 50% of Waveform	50 ±5(%)
Load Drive Capability		15pF Maximum
Phase Noise (at 25°C)	At offset of 100Hz	-100dBc/Hz
	At offset of 1kHz	-125dBc/Hz
	At offset of 10kHz	-143dBc/Hz
Tri-State Input Voltage (V_{IH} and V_{IL})	90% of V _{DD} Minimum or No Connect	Enables Output
	10% of V _{DD} Maximum	Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10µA Maximum
RMS Phase Jitter	F _J = 12kHz to 20MHz	1pSec Maximum
Start Up Time		3mSec Maximum
Storage Temperature Range		-55°C to +125°C

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB54C5	CERAMIC	2.5V	057Z	05/10

PART NUMBERING GUIDE

EB54C5 C 25 C H - 25.000M TR

FREQUENCY STABILITY VS. FREQUENCY TOLERANCE

C=±3.0ppm Maximum

FREQUENCY STABILITY VS. TEMPERATURE

25=±2.5ppm Maximum

50=±5.0ppm Maximum

OPERATING TEMPERATURE RANGE

C=-20°C to +70°C

G=-40°C to +85°C

PACKAGING OPTIONS

Blank=Bulk

TR=Tape & Reel

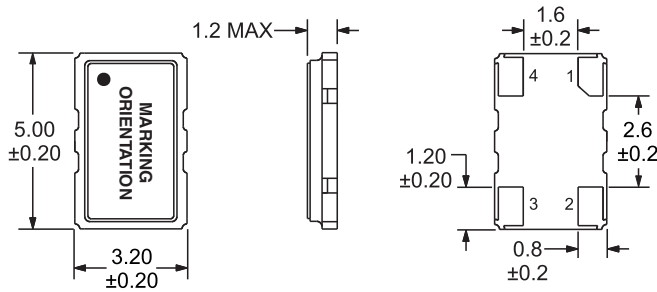
FREQUENCY

PIN 1 CONNECTION

H=Tri-State (High Impedance)

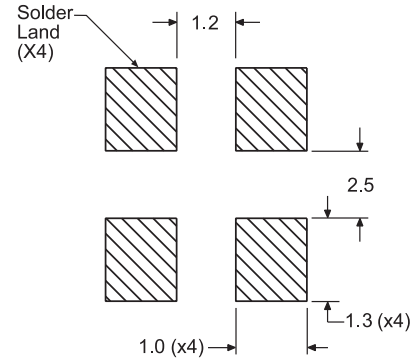
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



SUGGESTED SOLDER PAD LAYOUT

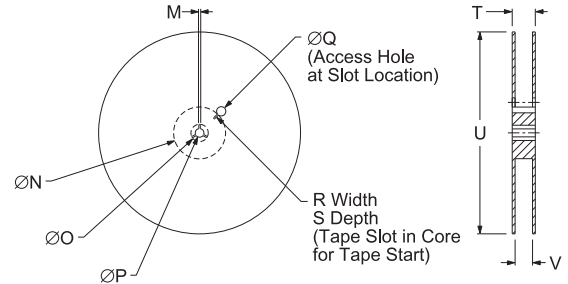
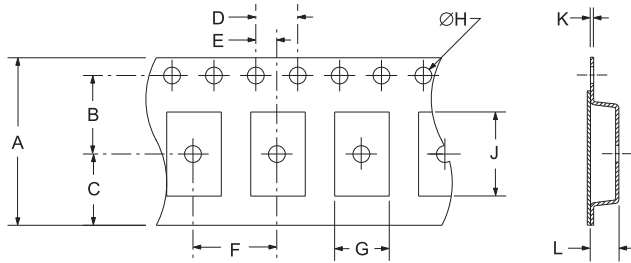
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	12.0±0.2	5.5±0.1	6.5±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	K0*

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	18.4 MAX	180 MAX	12.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

Line 1: E XX.XXX
Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XXXXX
Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB54C5	CERAMIC	2.5V	OS7Z	05/10