EV32C8 Series

- Voltage Controlled Crystal Oscillators (VCXO)
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function (Pad 2)
- External Voltage Control Function
- 6 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)

ELECTRICAL SPECIFICATIONS

Frequency Range (F_O)	1.544MHz, 2.000MHz, 2.048MHz, 3.088MHz, 3.580MHz, 3.686MHz, 4.000MHz, 4.032MHz, 4.096MHz, 4.434MHz, 5.000MHz, 6.144MHz, 6.176MHz, 6.312MHz, 6.400MHz, 8.000MHz, 8.192MHz, 8.448MHz, 10.000MHz, 12.000MHz, 12.288MHz, 12.352MHz, 12.960MHz, 13.000MHz, 13.500MHz, 14.318MHz, 15.360MHz, 15.440MHz, 16.000MHz, 16.384MHz, 16.660MHz, 17.664MHz, 18.432MHz, 19.200MHz, 19.440MHz, 20.000MHz, 20.480MHz, 24.000MHz, 24.576MHz, 24.704MHz, 25.000MHz, 25.920MHz, 26.000MHz, 27.000MHz, 28.636MHz, 30.000MHz, 30.720MHz, 32.000MHz, 32.768MHz, 34.368MHz, 35.328MHz, 36.864MHz, 38.880MHz, 40.000MHz, 40.960MHz, 44.736MHz, 49.152MHz, 50.000MHz, 51.840MHz, 52.000MHz, 62.208MHz, 65.536MHz, 74.250MHz, 77.760MHz	
Operating Temperature Range (OTR)		0°C to +70°C or -40°C to +85°C
Storage Temperature Range (STR)		-55°C to +125°C
Supply Voltage (V_{DD})		3.3V_{DC} ±10%
Input Current (I_{DD})		15mA Maximum
Frequency Tolerance/Stability	Inclusive of All Conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, Shock, and Vibration	±50ppm 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 Time / Fall Time (T_R/T_F)	20% to 80% of Waveform	5 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 ±5(%) Typical, 50 ±10(%) Maximum
Load Drive Capability (C_{LOAD})		15pF Maximum
Aging (at 25°C)		±2ppm/1st year typical, ±10ppm /10 years Max.
Start Up Time (T_S)		10 mSeconds Maximum
Tri-State Input Voltage	V_{IH}: No Connection V_{IH}: ≥0.9V_{DD} V_{IL}: ≤0.1V_{DD}	Enables Output Enables Output Disables Output: High Impedance
RMS Phase Jitter	F_J=12kHz to 20MHz	1pSec Maximum
Absolute Pull Range (APR)	Inclusive of All Conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, Shock, Vibration, and Aging over Control Voltage (V_C)	±50ppm Minimum ±80ppm Minimum ≤ 51.840MHz only ±100ppm Minimum ≤ 36.000MHz only
Linearity		10% Typical, 20% Maximum
Control Voltage (V_C)	Test Condition for APR	0.3V_{DC} to 3.0V_{DC}
Control Voltage Range (V_{CR})		0.0V_{DC} to V_{DD}
Transfer Function		Positive Transfer Characteristic
Input Impedance (Z_I)		50kOhms Minimum
Input Leakage Current		10µA Maximum
Modulation Bandwidth (MBW)	-3dB, V_C = 1.65V_{DC}	10kHz Minimum
Typical Phase Noise (Fo = 27.000MHz)	At offset of 10Hz At offset of 100Hz At offset of 1kHz At offset of 10kHz At offset of 100kHz At offset of 1MHz	-65dBc/Hz -95dBc/Hz -120dBc/Hz -142dBc/Hz -152dBc/Hz -154dBc/Hz

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EV32C8	CERAMIC	3.3V	OS7M	09/09

PART NUMBERING GUIDE

EV32C8 B 3 A 1 - 35.328M TR

OPERATING TEMPERATURE RANGE
A=0°C to +70°C,
B=-40°C to +85°C

ABSOLUTE PULL RANGE (APR)
3=±50ppm Minimum
4=±80ppm Minimum,
5=±100ppm Minimum

LINEARITY
A=10% Typical, 20% Maximum

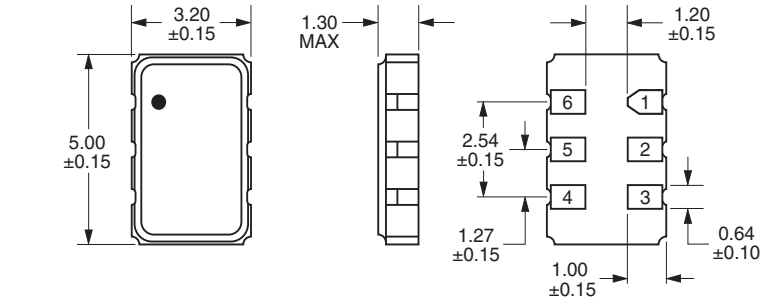
AVAILABLE OPTIONS
Blank=Bulk
TR=Tape & Reel

FREQUENCY

DUTY CYCLE
1=50 ±5(%) Typical, 50 ±10(%) Maximum

MECHANICAL DIMENSIONS

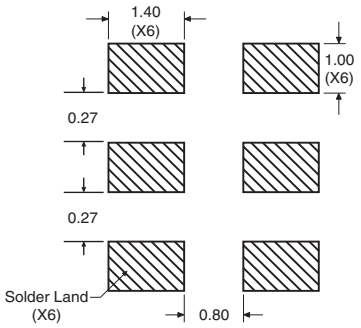
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Control Voltage (V_C)
Pin 2: Tri-State
Pin 3: Case Ground
Pin 4: Output
Pin 5: No Connect
Pin 6: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

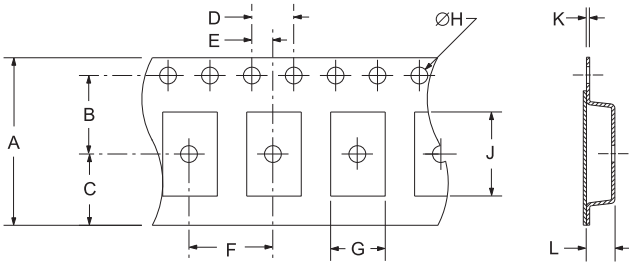
ALL DIMENSIONS IN MILLIMETERS

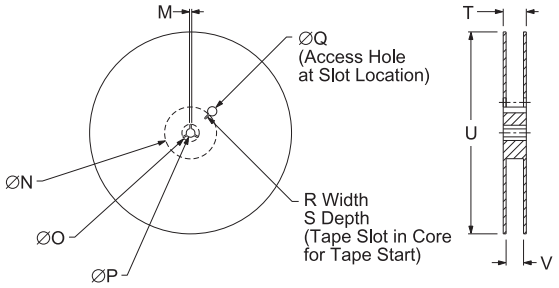


Tolerances= ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS





TAPE	A	B	C	D	E
	16.0 ±0.3	7.5 ±0.1	6.75 ±0.1	4.0 ±0.1	2.0 ±0.05
F	G	H	J	K	L
8.0 ±0.1	B0*	1.5 +0.1-0.0	A0*	0.3 ± 0.1	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	22.4 MAX	360 MAX	16.4+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: EXX.XXX
- Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XX Y ZZ
- Week of Year
- Last Digit of Year
- Ecliptek Manufacturing Identifier

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ECLIPTEK CORP.	OSCILLATOR	EV32C8	CERAMIC	3.3V	OS7M	09/09