

EV34C6 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- Voltage Controlled Crystal Oscillator (VCXO)
- 2.5V Supply Voltage
- LVCMOS output with Tri-State function
- Ceramic 6-pad SMD package
- APR Performance to ± 100 ppm
- Commercial and Industrial Temperature Range



ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)	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})	2.5V _{DC} $\pm 5\%$	
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. ± 50 ppm Maximum	
Output Voltage Logic High (V_{OH})	$I_{OH} = -4$ mA	90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})	$I_{OL} = +4$ mA	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)	± 2 ppm/1st year typical, ± 10 ppm/10 years Max.	
Start Up Time (T_S)	10 mSeconds Maximum	
Tri-State Input Voltage	V_{IH} : No Connection V_{IH} : $\geq 0.9V_{DD}$ V_{IL} : $\leq 0.1V_{DD}$	Enables Output Enables Output Disables Output: High Impedance
RMS Phase Jitter	$F_J = 12$ kHz 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) ± 50 ppm Minimum ± 80 ppm Minimum ≤ 51.840 MHz only ± 100 ppm Minimum ≤ 36.000 MHz only	
Linearity	10% Typical, 20% Maximum	
Control Voltage (V_C): Test Conditions for APR	0.2V _{DC} to 2.3V _{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	10 μ A Maximum	
Modulation Bandwidth (MBW)	-3dB, $V_C = 1.25V_{DC}$	10kHz Minimum
Typical Phase Noise ($F_0 = 27.000$MHz)	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
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EV34C6

PACKAGE
CERAMIC

VOLTAGE
2.5V

CLASS
OS7J

REV. DATE
09/09

PART NUMBERING GUIDE

EV34C6 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 (Standard)
TR=Tape and Reel

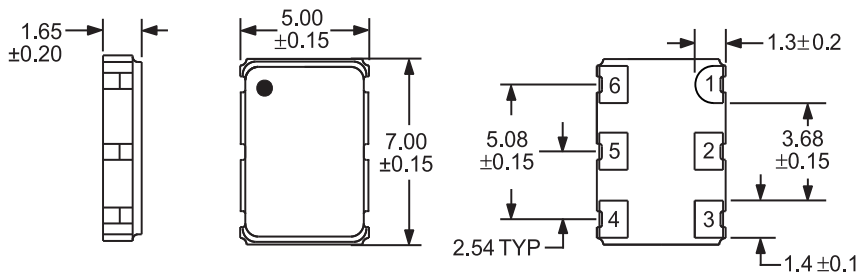
FREQUENCY

DUTY CYCLE

1=50 ±5(%) Typical, 50 ±10(%) Maximum

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

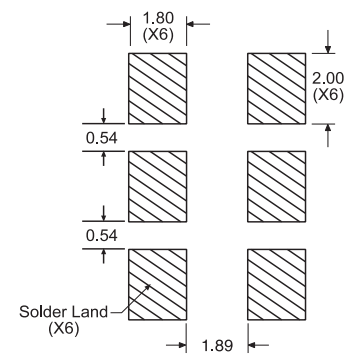


Pin 1: Control Voltage (V_c)
Pin 2: Tri-State
Pin 3: Case Ground

Pin 4: Output
Pin 5: No Connect
Pin 6: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

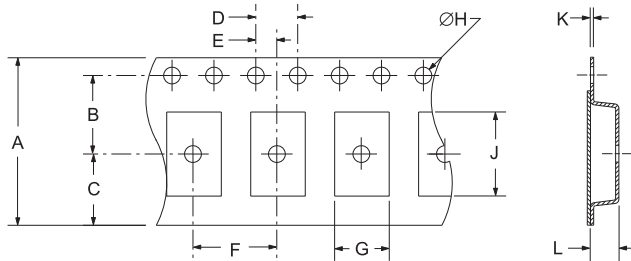
ALL DIMENSIONS IN MILLIMETERS



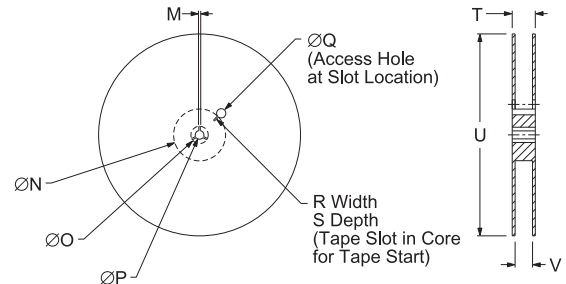
Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16±.3-1	7.5±.1	6.75±.1	4 ±.1	2±.1
F	G	H	J	K	L
8±.1	B0*	1.5+1-0	A0*	.3 ±.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	22.4 MAX	360 MAX	16.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

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: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XXY ZZ

Week of Year

Last Digit of Year

Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EV34C6	CERAMIC	2.5V	057J	09/09