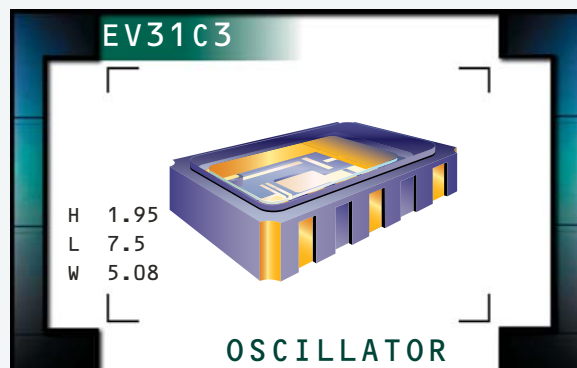


EV31C3 Series

- Voltage Controlled Crystal Oscillator (VCXO)
- 5.0V Supply Voltage
- HCMOS 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)		12.288MHz to 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})		5.0V _{DC} $\pm 10\%$
Input Current (I_{DD})	≤ 27.000 MHz	15mA Maximum
	> 27.000 MHz	35mA Maximum
Frequency Tolerance/Stability		Inclusive of Operating Temperature Range, Supply Voltage, and Load ± 50 ppm Typical
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum
Rise Time / Fall Time (T_R/T_F)		20% to 80% of Waveform w/HCMOS Load or w/TTL Load 5 nSeconds Maximum
Duty Cycle (SYM)		at 50% of Waveform 50 ± 5 (%) Typical, 50 ± 10 (%) Maximum
Load Drive Capability (C_{LOAD})		10TTL Load or 30pF HCMOS Load Maximum
Aging (at 25°C)		± 2 ppm/1st year Typical, ± 10 ppm/10 years Max.
Start Up Time (T_s)		10 mSeconds Maximum
Pin 5 Tri-State Input Voltage		V_{IH} : No Connection Enables Output V_{IH} : $\geq 2.0V_{DC}$ Enables Output V_{IL} : $\leq 0.8V_{DC}$ Disables Output: High Impedance
Period Jitter: RMS		6pSec Maximum
Absolute Pull Range (APR)		Inclusive of Operating Temp. Range, Supply Voltage, Load, and Aging over Control Voltage (V_C) ± 50 ppm Minimum ± 80 ppm Minimum ± 100 ppm Minimum > 14.31818 MHz Only
Linearity		10% Typical, 20% Maximum
Control Voltage (V_C): Test Conditions for APR		0.5V _{DC} to 4.5V _{DC}
Control Voltage Range (V_{CR})		0.0V _{DC} to V_{DD}
Transfer Function		Positive Transfer Characteristic
Input Impedance (Z_i)		50kOhms Typical
Modulation Bandwidth (MBW)		-3dB, $V_C = 2.5V_{DC}$ 10kHz Minimum
Typical Phase Noise		At offset of 10Hz -70dBc/Hz At offset of 100Hz -100dBc/Hz At offset of 1kHz -130dBc/Hz At offset of 10kHz -147dBc/Hz At offset of 100kHz -152dBc/Hz

PART NUMBERING GUIDE

EV31C3 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

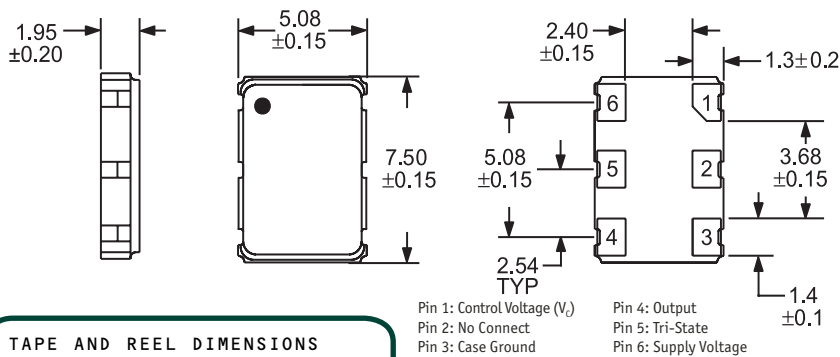
AVAILABLE OPTIONS

Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

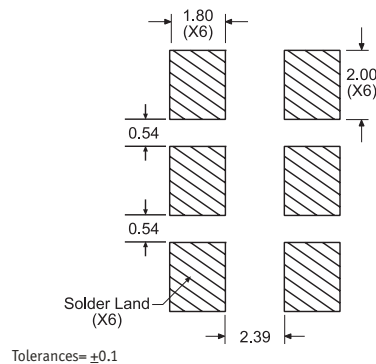
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



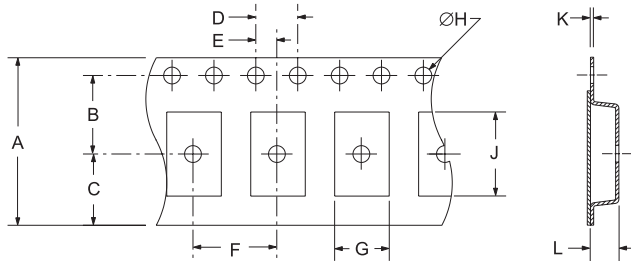
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

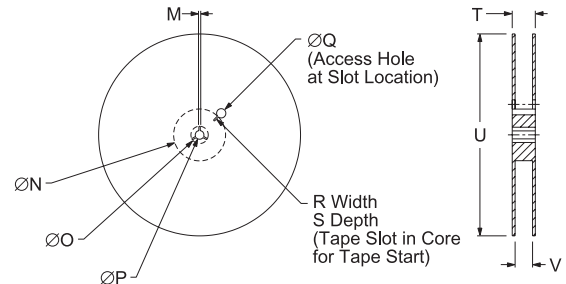


TAPE AND REEL DIMENSIONS

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+1.0-0	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	Specification
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum.
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 50cm.
Thermal Shock	300 Cycles from -55°C to +125°C, 5 minute dwell

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ

Week of Year

Last Digit of Year

Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EV31C3	CERAMIC	5.0V	OS57	03/02