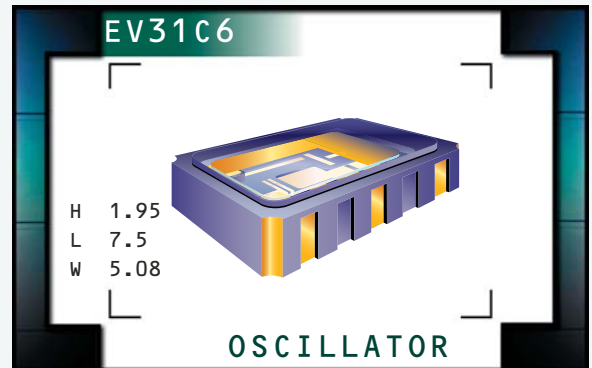


EV31C6 Series

- Voltage Controlled Crystal Oscillator (VCXO)
- 5.0V Supply Voltage
- HCMOS output with Tri-State function
- Ceramic 6-pad SMD package
- APR Performance to $\pm 100\text{ppm}$
- 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})	$\leq 27.000\text{MHz}$	15mA Maximum
	$> 27.000\text{MHz}$	35mA Maximum
Frequency Tolerance/Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	$\pm 50\text{ppm}$ 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 $\pm 5(\%)$ Typical, 50 $\pm 10(\%)$ Maximum
Load Drive Capability (C_{LOAD})		10TTL Load or 30pF HCMOS Load Maximum
Aging (at 25°C)		$\pm 2\text{ppm}/1\text{st year}$ Typical, $\pm 10\text{ppm}/10\text{ years}$ Max.
Start Up Time (T_S)		10 mSeconds Maximum
Pin 2 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)	$\pm 50\text{ppm}$ Minimum
		$\pm 80\text{ppm}$ Minimum
		$\pm 100\text{ppm}$ Minimum $> 14.31818\text{MHz}$ 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

EV31C6 B 3 A 1 - 35.328M TR

OPERATING TEMPERATURE RANGE

A=0°C to 70°C,
B=-40°C to 85°C

AVAILABLE OPTIONS

Blank=Bulk (Standard)
TR=Tape and Reel

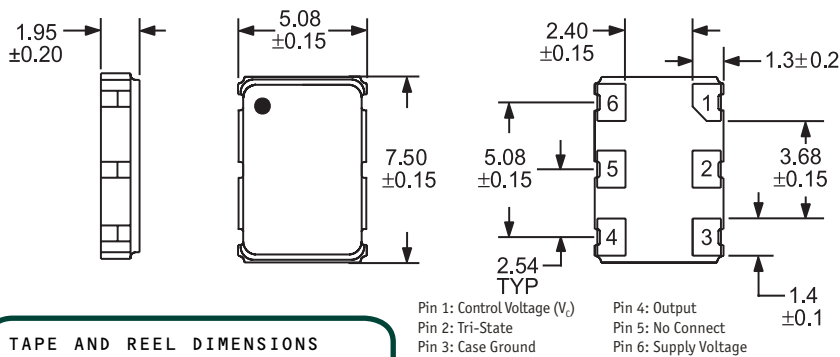
FREQUENCY

ABSOLUTE PULL RANGE (APR)

3=±50ppm Minimum, 4=±80ppm Minimum,
5=±100ppm Minimum

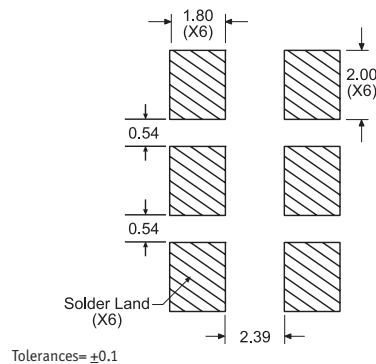
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



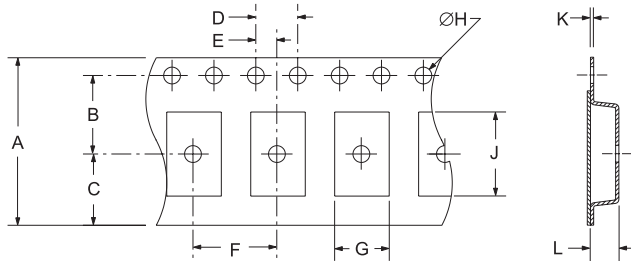
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

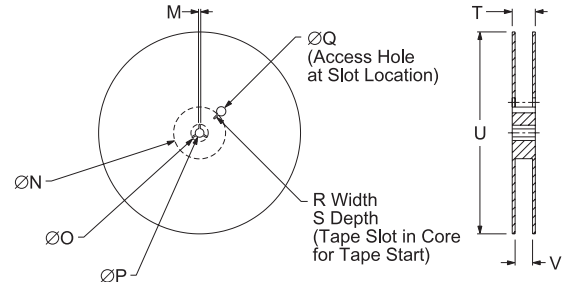


TAPE AND REEL DIMENSIONS

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

Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EV31C6	CERAMIC	5.0V	OS60	03/02