

## Marketing Bulletin

**DATE:** March 6, 2003  
**TO:** Affected Customers  
**FROM:** Mark Stoner  
**RE:** Product Termination

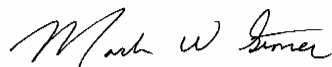
To all concerned parties,

This bulletin is to notify all customers of the termination of the following Ecliptek series effective March 1<sup>st</sup>, 2002:

<b>Series</b>	<b>Description</b>
ES11C7	Ceramic 5 x 7 x 1.2mm (VC)TCXO, 5V
ES13C7	Ceramic 5 x 7 x 1.2mm (VC)TCXO, 3.3V

Because of the circumstances surrounding this termination, there will be no end-of-life policy exercised. The series will be terminated with no purchasing or lifetime buy window available. The recommended alternative to the ES13C7 is the ES52C8 series. There will be no replacement for the ES11C7. All of us at Ecliptek Corporation apologize for any inconvenience this may have caused and can assure you we are taking measures to insure this will not happen again in the future.

Best Regards,



Mark W. Stoner  
Director of Marketing  
Ecliptek Corporation

# ES11C7 Series

- Temperature Compensated Crystal Oscillator (TCXO)
- Clipped Sinewave Output
- 5.0V Supply Voltage
- Ceramic 8-pad SMD package
- Stability to 1.5ppm
- External voltage control option available



## NOTES

OBSOLETE

### ELECTRICAL SPECIFICATIONS

<b>Nominal Frequency</b>		13.0MHz, 19.2MHz, 19.68MHz, or 19.8MHz
<b>Storage Temperature Range</b>		-30°C to 85°C
<b>Operating Temperature Range</b>		See Table 1
<b>Supply Voltage (V<sub>DD</sub>)</b>		5.0V <sub>DC</sub> ±5%
<b>Load Drive Capability</b>		10kOhms // 10pF
<b>Input Current</b>		2.0mA Maximum
<b>Aging (at 25°C)</b>		±1ppm / Year Maximum
<b>External Trim (Voltage Control Option)</b>	1.5V <sub>DC</sub> ±1.0V <sub>DC</sub> ; Positive Transfer Characteristic	±8ppm Minimum
<b>Output Voltage</b>		1.0Vp-p Clipped Sinewave Minimum
<b>Frequency Stability</b>	vs. Operating Temperature Range vs. Frequency Tolerance (25°C ±2°C) vs. Input Voltage (±5%) vs. Load (±1kΩ//±1pF)	See Table 1 ±2.0ppm Maximum ±0.3ppm Maximum ±0.2ppm Maximum
<b>Start Up Time</b>		5mSec Maximum
<b>Harmonics</b>	2nd Harmonic 3rd Harmonic Other	-3dBc Maximum -6dBc Maximum -10dBc Maximum
<b>Typical Phase Noise</b>	At offset of 10Hz At offset of 100Hz At offset of 1kHz At offset of 10kHz At offset of 100kHz	-80dBc/Hz Maximum -125dBc/Hz Maximum -145dBc/Hz Maximum -148dBc/Hz Maximum -150dBc/Hz Maximum

## PART NUMBERING GUIDE

### ES11C7 C 25 V - 13.000M TR

**OPERATING TEMP. RANGE**  
One Letter Code Per Table 1

**FREQUENCY STABILITY**  
Two Digit Code Per Table 1

**OUTPUT CONTROL FUNCTION**  
N=None (No Connection on Pin 1)  
V=Voltage Control

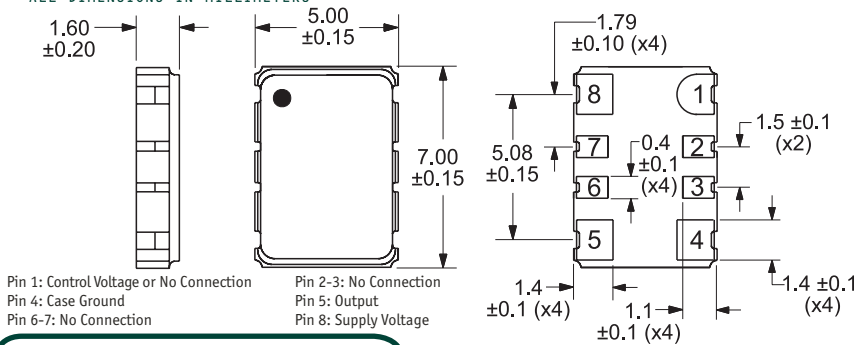
**PACKAGING OPTIONS**  
Blank=Bulk  
TR=Tape and Reel

**FREQUENCY**

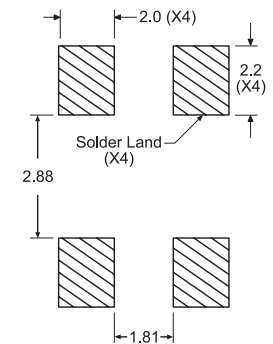
# OBSOLETE

TABLE 1: PART NUMBERING CODES					
Operating Temperature Range	Frequency Stability X Denotes Availability				
		±1.5ppm	±2.0ppm	±2.5ppm	±3.0ppm
	Code	15	20	25	30
0°C to +50°C	A	X	X	X	X
-10°C to 60°C	B		X	X	X
-20°C to +70°C	C		X	X	X
-30°C to +60°C	D		X	X	X
-30°C to +75°C	E		X	X	X
-30°C to +85°C	F			X	X

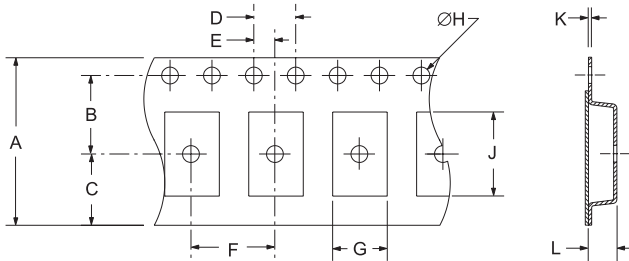
#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



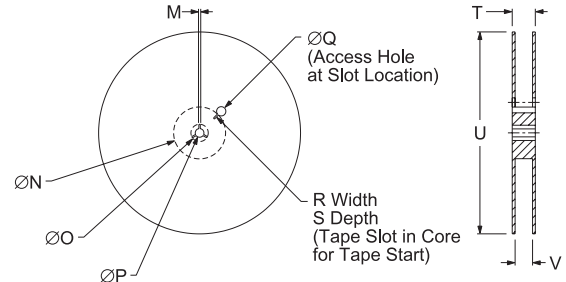
#### SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



#### 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	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: XXYYZZ  
Week of Year  
Last Digit of Year  
Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES11C7	CERAMIC	5.0V	OS94	09/02

# ES13C7 Series

- Temperature Compensated Crystal Oscillator (TCX0)
- Low Voltage Clipped Sinewave Output
- 3.0V Supply Voltage
- Ceramic 8-pad SMD package
- Stability to 1.5ppm
- External voltage control option available



## NOTES

OBSOLETE

## ELECTRICAL SPECIFICATIONS

<b>Nominal Frequency</b>		13.0MHz, 19.2MHz, 19.680MHz, or 19.8MHz
<b>Storage Temperature Range</b>		-30°C to 85°C
<b>Operating Temperature Range</b>		See Table 1
<b>Supply Voltage (V<sub>DD</sub>)</b>		3.0V <sub>DC</sub> ±5%
<b>Load Drive Capability</b>		10kOhms // 10pF
<b>Input Current</b>		2.0mA Maximum
<b>Aging (at 25°C)</b>		±1ppm / Year Maximum
<b>External Trim (Voltage Control Option)</b>	1.5V <sub>DC</sub> ±1.0V <sub>DC</sub> Positive Transfer Characteristic	±8ppm Minimum
<b>Output Voltage</b>		0.7Vp-p Clipped Sinewave Minimum
<b>Frequency Stability</b>	vs. Operating Temperature Range vs. Frequency Tolerance (25°C ±2°C) vs. Input Voltage (±5%) vs. Load (±1kΩ//±1pF)	See Table 1 ±2.0ppm Maximum ±0.3ppm Maximum ±0.2ppm Maximum
<b>Start Up Time</b>		5mSec Maximum
<b>Harmonics</b>	2nd Harmonic 3rd Harmonic Other	-3dBc Maximum -6dBc Maximum -10dBc Maximum
<b>Typical Phase Noise</b>	At offset of 10Hz At offset of 100Hz At offset of 1kHz At offset of 10kHz At offset of 100kHz	-80dBc/Hz Maximum -125dBc/Hz Maximum -145dBc/Hz Maximum -148dBc/Hz Maximum -150dBc/Hz Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES ES13C7	PACKAGE CERAMIC	VOLTAGE 3.0V	CLASS OS95	REV. DATE 09/02
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One Letter Code Per Table 1

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Two Digit Code Per Table 1

**EXTERNAL TRIM**  
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V=Voltage Control

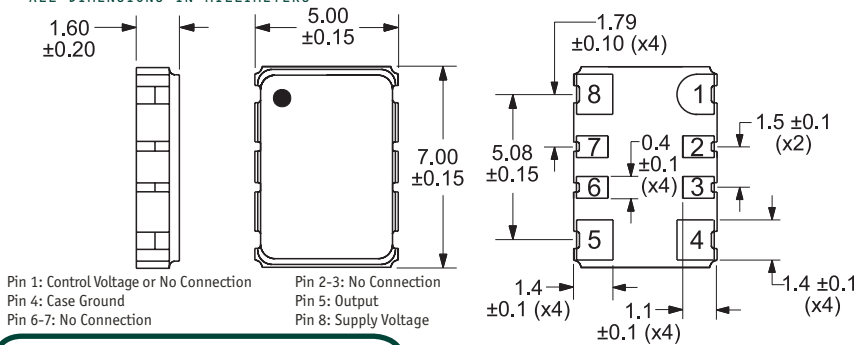
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Blank=Bulk  
TR=Tape and Reel

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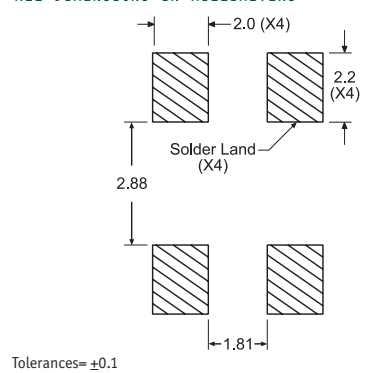
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-10°C to 60°C	B		X	X	X
-20°C to +70°C	C		X	X	X
-30°C to +60°C	D		X	X	X
-30°C to +75°C	E		X	X	X
-30°C to +85°C	F			X	X

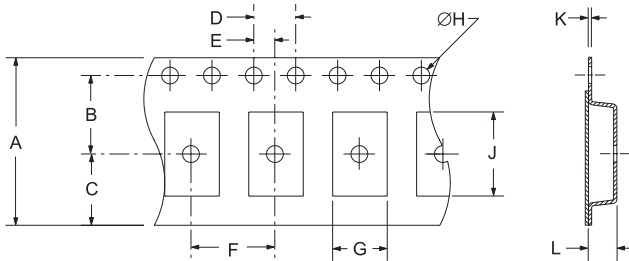
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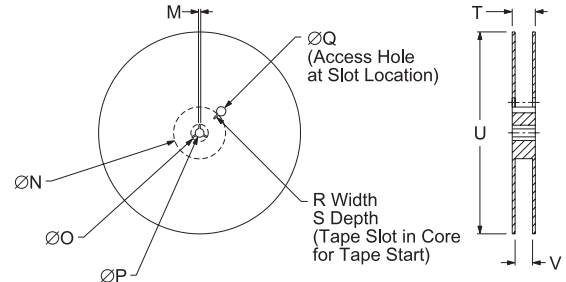
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F	G	H	J	K	L
8±.1	B0*	1.5 ±.1-0	A0*	.3 ±.05	K0*



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 Line 3: XY ZZ  
 Week of Year  
 Last Digit of Year  
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES13C7	CERAMIC	3.0V	OS95	09/02