ECLIPTEK® CORPORATION

Marketing Bulletin

DATE: May 10, 2004

TO: Affected Customers

FROM: Mark Stoner
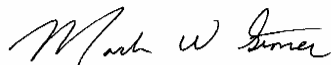
RE: Product Termination

To all concerned parties,

This bulletin is to notify all customers of the termination of the following Ecliptek series effective May 10th, 2004:

Series	Description	Recommended Replacement
EB51F2	5V 14 Pin DIP TCXO, HCMOS	None
ES51F2	5V 14 Pin DIP TCXO, Sinewave	None
EB52F2	3.3V 14 Pin DIP TCXO, HCMOS	None
ES52F2	3.3V 14 Pin DIP TCXO, Sinewave	None

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. We will however have a recommended alternative product for these series within the next ninety (90) days.

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. If there are any questions pertaining to this bulletin, please feel free to contact me. Thank you for your cooperation.

Best Regards,

Mark W. Stoner
Director of Marketing
Ecliptek Corporation

STANDARD SPECIFICATIONS

Frequency Range:	1.544MHz to 44.736MHz
Frequency Tolerance/Stability:	
Initial Frequency Tolerance	±1ppm (at Nominal Vdd and Vc)
vs. Operating Temperature Range	See Table 1 for Maximum Values
vs. Input Voltage Change	±0.3ppm Maximum (VDD ±5%)
vs. Load Change	±0.2ppm Maximum (±10%)
vs. Aging	±1ppm/year Maximum (@25°C)
Operating Temperature Range	See Table 1 for Operating Temperature Range
Storage Temperature Range	-55°C to +125°C
Supply Voltage (VDD)	5.0Vdc ±5%
Input Current (Steady State @25°C)	15mA Maximum ≤ 20.000MHz
	30mA Maximum > 20.000MHz
Output Voltage Logic High	VDD-0.5Vdc Minimum
Output Voltage Logic Low	0.5Vdc Maximum
Rise/Fall Time	6nSec (20% to 80% of waveform)
Duty Cycle	50% ±5% (@ 50% of waveform)
Load Drive Capabillity	30pF HCMOS Load
Phase Noise (Typical)	-60dBc/Hz at 10Hz Offset, -90dBc/Hz at 100Hz Offset, -125dBc/Hz at 1kHz Offset, -135dBc/Hz at 10kHz Offset, -140dBc/Hz at 100kHz Offset,
Frequency Deviation	±7ppm Minimum, ±20ppm Maximum (Referenced to Fo at Vc=2.5Vdc; Vdd=5.0Vdc)
Control Voltage Range (VCR)	0.0VDC to VDD
Control Voltage / Transfer Function	2.5VDC ±2.0VDC / Positive Transfer Characteristic
Linearity	±10% Maximum
Input Impedance	10kOhms Typical

ENVIRONMENTAL & MECHANICAL

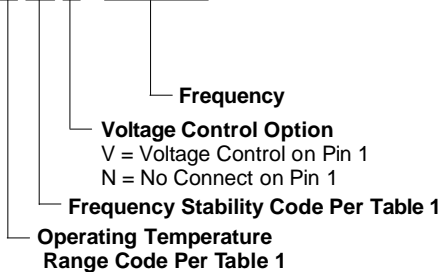|			
Fine Leak Test:	MIL-STD-883, Method 1014, Condition A	Solderability:	MIL-STD-883, Method 2002
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C	Temperature Cycling:	MIL-STD-883, Method 1010
Mechanical Shock:	MIL-STD-202, Method 213, Condition C	Resistance to Soldering Heat:	MIL-STD-202, Method 210
Vibration:	MIL-STD-883, Method 2007, Condition A	Resistance to Solvents:	MIL-STD-202, Method 215
Lead Integrity:	MIL-STD-883, Method 2004		

PART NUMBERING GUIDE

EB51F2 A 10 V - 20.000M

- **Frequency**
- **Voltage Control Option**
  V = Voltage Control on Pin 1
  N = No Connect on Pin 1
- **Frequency Stability Code Per Table 1**
- **Operating Temperature Range Code Per Table 1**

TABLE 1: PART NUMBERING CODES

OPERATING TEMPERATURE		FREQUENCY STABILITY X Denotes availability from 1.544MHz to 32.768MHz Y Denotes availability for any valid frequency				
Range	Code	15	20	30	50	Code
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm	Range
0°C to +50°C	A	Y	Y	Y	Y	
0°C to +70°C	B	X	Y	Y	Y	
-20°C to +70°C	C	X	X	Y	Y	
-30°C to +75°C	D		X	Y	Y	
-40°C to +85°C	E			X	Y	

MARKING GUIDE

(Line #1) **ECLIPTEK**

(Line #2) **XX.XXXM**
— **Frequency**

(Line #3) **XX Y ZZ**
— **Week of Year**
— **Last Digit of Year**
— **Ecliptek Manufacturing Code (TEN02-001-000)**

ECLIPTEK
XX.XXXM
XXYZZ

NOTE: Pin 1 shall be marked with a dot. Marking shall conform to conditions listed in TQC41-001-000.

Dimensional drawings:

15.240 ±0.203
7.620 ±0.203
20.3 ±0.5
13.0 ±0.5
0.6 MAX
∅0.457 ±0.100 (X4)
5.08 MIN
8.3 MAX

ALL DIMENSIONS IN MILLIMETERS

PIN	CONNECTION
1	No Connect or Voltage Control
7	Ground/Case Ground
8	Output
14	Supply Voltage

SPECIFICATION CONTROL DRAWING

ECLIPTEK® CORPORATION
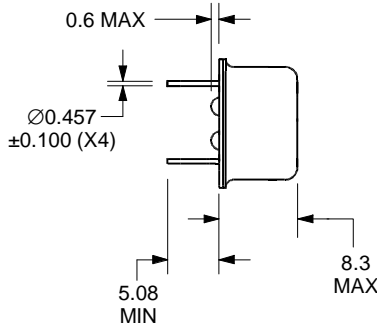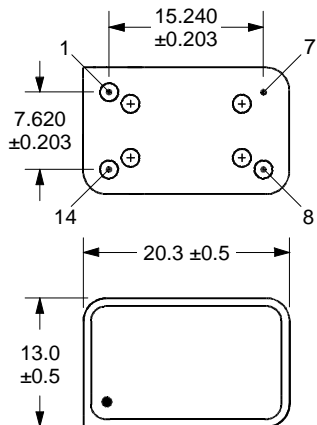
Drawing Number	CSC26-140-001
Title	5.0V Full Size (VC)TCXO
Revision A	**Effectivity Date** 09-09-03
ECN Number 8159	PAGE 1 OF 2
Approved By Date	**Released By** Date

STANDARD SPECIFICATIONS

Frequency Range:	9.600MHz to 44.736MHz
Frequency Tolerance/Stability:	
Initial Frequency Tolerance	±1ppm (at Nominal Vdd and Vc)
vs. Operating Temperature Range	See Table 1 for Maximum Values
vs. Input Voltage Change	±0.3ppm Maximum (VDD ±5%)
vs. Load Change	±0.2ppm Maximum (±10%)
vs. Aging	±1ppm/year Maximum (@25°C)
Operating Temperature Range	See Table 1 for Operating Temperature Range
Storage Temperature Range	-55°C to +125°C
Supply Voltage (VDD)	5.0Vdc ±5%
Input Current (Steady State @25°C)	10mA Maximum
Output Voltage	1.0Vp-p Minimum Clipped Sinewave
Load Drive Capabillity	10kOhms//10pF
Phase Noise (Typical)	-60dBc/Hz at 10Hz Offset, -90dBc/Hz at 100Hz Offset, -125dBc/Hz at 1kHz Offset, -135dBc/Hz at 10kHz Offset, -140dBc/Hz at 100kHz Offset
Frequency Deviation	±7ppm Minimum, ±20ppm Maximum (Referenced to Fo at Vc=2.5Vdc; Vdd=5.0Vdc)
Control Voltage Range (VCR)	0.0VDC to VDD
Control Voltage /Transfer Function	2.5VDC ±2.0VDC / Positive Transfer Characteristic
Linearity	±10% Maximum
Input Impedance	10kOhms Typical

ENVIRONMENTAL & MECHANICAL

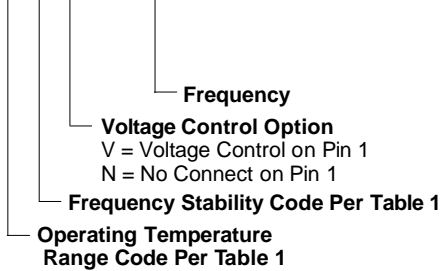|			
Fine Leak Test:	MIL-STD-883, Method 1014, Condition A	Solderability:	MIL-STD-883, Method 2002
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C	Temperature Cycling:	MIL-STD-883, Method 1010
Mechanical Shock:	MIL-STD-202, Method 213, Condition C	Resistance to Soldering Heat:	MIL-STD-202, Method 210
Vibration:	MIL-STD-883, Method 2007, Condition A	Resistance to Solvents:	MIL-STD-202, Method 215
Lead Integrity:	MIL-STD-883, Method 2004		

PART NUMBERING GUIDE

ES51F2 A 10 V - 20.000M

- **Frequency**
- **Voltage Control Option**
  V = Voltage Control on Pin 1
  N = No Connect on Pin 1
- **Frequency Stability Code Per Table 1**
- **Operating Temperature Range Code Per Table 1**

TABLE 1: PART NUMBERING CODES

OPERATING TEMPERATURE		FREQUENCY STABILITY X Denotes availability from 9.600MHz to 32.768MHz Y Denotes availability for any valid frequency				
Range	Code	15	20	30	50	Code
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm	Range
0°C to +50°C	A	Y	Y	Y	Y	
0°C to +70°C	B	X	Y	Y	Y	
-20°C to +70°C	C		X	Y	Y	
-30°C to +75°C	D			Y	Y	
-40°C to +85°C	E			X	Y	

MARKING GUIDE

(Line #1) **ECLIPTEK**

(Line #2) **XX.XXXM**
 └ **Frequency**

(Line #3) **XX Y ZZ**
 └ **Week of Year**
 └ **Last Digit of Year**
 └ **Ecliptek Manufacturing Code (TEN02-001-000)**

ECLIPTEK
XX.XXXM
XXYZZ

NOTE: Pin 1 shall be marked with a dot. Marking shall conform to conditions listed in TQC41-001-000.

15.240 ±0.203
7.620 ±0.203
1 7
14 8
0.6 MAX
∅0.457 ±0.100 (X4)
8.3 MAX
5.08 MIN
20.3 ±0.5
13.0 ±0.5

ALL DIMENSIONS IN MILLIMETERS

PIN	CONNECTION
1	No Connect or Voltage Control
7	Ground/Case Ground
8	Output
14	Supply Voltage

SPECIFICATION CONTROL DRAWING

ECLIPTEK® CORPORATION
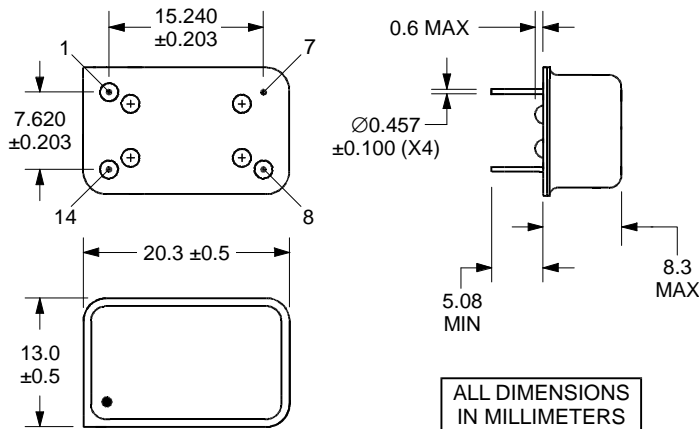
Drawing Number	CSC26-160-001
Title	5.0V Clipped Sinewave Full Size (VC)TCXO
Revision A	**Effectivity Date** 09-09-03
ECN Number 8163	PAGE 1 OF 2
Approved By Date	**Released By** Date

STANDARD SPECIFICATIONS

Frequency Range:	1.544MHz to 44.736MHz
Frequency Tolerance/Stability:	
Initial Frequency Tolerance	±1ppm (at Nominal Vdd and Vc)
vs. Operating Temperature Range	See Table 1 for Maximum Values
vs. Input Voltage Change	±0.3ppm Maximum (VDD ±5%)
vs. Load Change	±0.2ppm Maximum (±10%)
vs. Aging	±1ppm/year Maximum (@25°C)
Operating Temperature Range	See Table 1 for Operating Temperature Range
Storage Temperature Range	-55°C to +125°C
Supply Voltage (VDD)	3.3Vdc ±5%
Input Current (Steady State @25°C)	15mA Maximum ≤ 20.000MHz
	25mA Maximum > 20.000MHz
Output Voltage Logic High	90% of Vdd Minimum
Output Voltage Logic Low	10% of Vdd Maximum
Rise/Fall Time	6nSec (20% to 80% of waveform)
Duty Cycle	50% ±5% (@ 50% of waveform)
Load Drive Capabillity	15pF HCMOS Load
Phase Noise (Typical)	-60dBc/Hz at 10Hz Offset, -90dBc/Hz at 100Hz Offset, -125dBc/Hz at 1kHz Offset, -135dBc/Hz at 10kHz Offset, -140dBc/Hz at 100kHz Offset,
Frequency Deviation	±7ppm Minimum, ±20ppm Maximum (Referenced to Fo at Vc=1.65Vdc; Vdd=3.3Vdc)
Control Voltage Range (VCR)	0.0VDC to VDD
Control Voltage / Transfer Function	1.65VDC ±1.35VDC / Positive Transfer Characteristic
Linearity	±10% Maximum
Input Impedance	10kOhms Typical

ENVIRONMENTAL & MECHANICAL
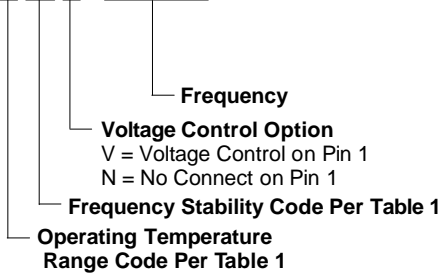
Fine Leak Test:	MIL-STD-883, Method 1014, Condition A	Solderability:	MIL-STD-883, Method 2002
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C	Temperature Cycling:	MIL-STD-883, Method 1010
Mechanical Shock:	MIL-STD-202, Method 213, Condition C	Resistance to Soldering Heat:	MIL-STD-202, Method 210
Vibration:	MIL-STD-883, Method 2007, Condition A	Resistance to Solvents:	MIL-STD-202, Method 215
Lead Integrity:	MIL-STD-883, Method 2004		

PART NUMBERING GUIDE

EB52F2 A 10 V - 20.000M

- **Frequency**
- **Voltage Control Option**
  V = Voltage Control on Pin 1
  N = No Connect on Pin 1
- **Frequency Stability Code Per Table 1**
- **Operating Temperature Range Code Per Table 1**

TABLE 1: PART NUMBERING CODES

OPERATING TEMPERATURE		FREQUENCY STABILITY X Denotes availability from 1.544MHz to 32.768MHz Y Denotes availability for any valid frequency				
Range	Code	15	20	30	50	Code
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm	Range
0°C to +50°C	A	Y	Y	Y	Y	
0°C to +70°C	B	X	Y	Y	Y	
-20°C to +70°C	C		X	Y	Y	
-30°C to +75°C	D			Y	Y	
-40°C to +85°C	E			X	Y	

MARKING GUIDE

(Line #1) **ECLIPTEK**

(Line #2) **XX.XXXM**
- **Frequency**

(Line #3) **XX Y ZZ**
- **Week of Year**
- **Last Digit of Year**
- **Ecliptek Manufacturing Code (TEN02-001-000)**

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ECLIPTEK
XX.XXXM
XXYZZ
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NOTE: Pin 1 shall be marked with a dot. Marking shall conform to conditions listed in TQC41-001-000.

Dimensions

15.240 ±0.203
7.620 ±0.203
0.6 MAX
⌀0.457 ±0.100 (X4)
20.3 ±0.5
13.0 ±0.5
5.08 MIN
8.3 MAX

ALL DIMENSIONS IN MILLIMETERS

PIN	CONNECTION
1	No Connect or Voltage Control
7	Ground/Case Ground
8	Output
14	Supply Voltage

SPECIFICATION CONTROL DRAWING

ECLIPTEK® CORPORATION

Drawing Number	CSC26-150-001
Title	3.3V FULL SIZE (VC)TCXO
Revision A	**Effectivity Date** 09-09-03
ECN Number 8161	PAGE 1 OF 2
Approved By Date	**Released By** Date

OBSOLETE

STANDARD SPECIFICATIONS

Frequency Range:	9.600MHz to 44.736MHz
Frequency Tolerance/Stability:	
Initial Frequency Tolerance	±1ppm (at Nominal Vdd and Vc)
vs. Operating Temperature Range	See Table 1 for Maximum Values
vs. Input Voltage Change	±0.3ppm Maximum (V$_{DD}$ ±5%)
vs. Load Change	±0.2ppm Maximum (±10%)
vs. Aging	±1ppm/year Maximum (@25°C)
Operating Temperature Range	See Table 1 for Operating Temperature Range
Storage Temperature Range	-55°C to +125°C
Supply Voltage (V$_{DD}$)	3.3Vdc ±5%
Input Current (Steady State @25°C)	10mA Maximum
Output Voltage	0.7Vp-p Minimum Clipped Sinewave
Load Drive Capabillity	10kOhms//10pF
Phase Noise (Typical)	-60dBc/Hz at 10Hz Offset, -90dBc/Hz at 100Hz Offset, -125dBc/Hz at 1kHz Offset, -135dBc/Hz at 10kHz Offset, -140dBc/Hz at 100kHz Offset
Frequency Deviation	±7ppm Minimum, ±20ppm Maximum (Referenced to Fo at Vc=1.65Vdc; Vdd=3.3Vdc)
Control Voltage Range (V$_{CR}$)	0.0V$_{DC}$ to V$_{DD}$
Control Voltage /Transfer Function	1.65V$_{DC}$ ±1.35V$_{DC}$ / Positive Transfer Characteristic
Linearity	±10% Maximum
Input Impedance	10kOhms Typical

OBSOLETE

ENVIRONMENTAL & MECHANICAL

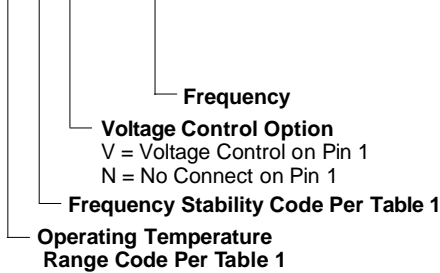|			
Fine Leak Test:	MIL-STD-883, Method 1014, Condition A	Solderability:	MIL-STD-883, Method 2002
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C	Temperature Cycling:	MIL-STD-883, Method 1010
Mechanical Shock:	MIL-STD-202, Method 213, Condition C	Resistance to Soldering Heat:	MIL-STD-202, Method 210
Vibration:	MIL-STD-883, Method 2007, Condition A	Resistance to Solvents:	MIL-STD-202, Method 215
Lead Integrity:	MIL-STD-883, Method 2004		

TABLE 1: PART NUMBERING CODES

OPERATING TEMPERATURE		FREQUENCY STABILITY X Denotes availability from 9.600MHz to 32.768MHz Y Denotes availability for any valid frequency				
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0°C to +70°C	B	X	Y	Y	Y	
-20°C to +70°C	C		X	Y	Y	
-30°C to +75°C	D			Y	Y	
-40°C to +85°C	E			X	Y	

PART NUMBERING GUIDE

ES52F2 A 10 V - 20.000M

- **Frequency**
- **Voltage Control Option**
  V = Voltage Control on Pin 1
  N = No Connect on Pin 1
- **Frequency Stability Code Per Table 1**
- **Operating Temperature Range Code Per Table 1**

MARKING GUIDE

(Line #1) **ECLIPTEK**

(Line #2) **XX.XXXM**
└ **Frequency**

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└ **Week of Year**
└ **Last Digit of Year**
└ **Ecliptek Manufacturing Code (TEN02-001-000)**

ECLIPTEK
XX.XXXM
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8.3 MAX
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20.3 ±0.5
13.0 ±0.5
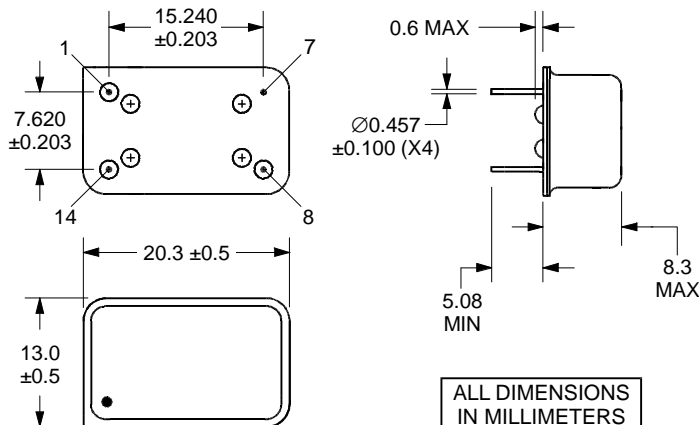
ALL DIMENSIONS IN MILLIMETERS

PIN	CONNECTION
1	No Connect or Voltage Control
7	Ground/Case Ground
8	Output
14	Supply Voltage

SPECIFICATION CONTROL DRAWING

ECLIPTEK® CORPORATION

Drawing Number	CSC26-170-001
Title	3.3V Clipped Sinewave Full Size (VC)TCXO
Revision A	**Effectivity Date** 09-09-03
ECN Number 8165	PAGE 1 OF 2
Approved By Date	**Released By** Date