

Marketing Bulletin

DATE: May 1st, 2008
TO: All Sales Personnel
FROM: Isaac Gonzalez
RE: Product Termination

To all concerned parties,


This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective May 1st, 2008:

| Series | Description | Recommended Replacement |
|---------------|--|--------------------------------|
| EC1SM | Resistance Welded Short HC-49/UP SMD Crystal | E1S Series |
| EC2SM | Resistance Welded HC-49/UP SMD Crystal | E2S Series |

In compliance with our End of Life (EOL) policy, this will serve as advanced notice of product termination. New orders will not be accepted after September 1st, 2009, with delivery to conclude by December 31st, 2009.

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

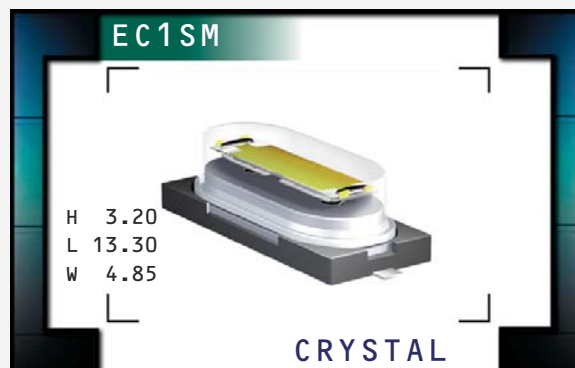
Best Regards,



Isaac Gonzalez
Configuration Manager
Ecliptek Corporation

EC1SM Series

- HC-49/UP short package
- AT or BT cut available
- Resistance weld seal
- Tight tolerance/stability
- Tape and reel available



OBSOLETE

ELECTRICAL SPECIFICATIONS

| | |
|------------------------------------|--|
| Frequency Range | 3.579545MHz to 50.000MHz |
| Frequency Tolerance / Stability | ±50ppm / ±100ppm (Standard), ±30ppm / ±50ppm (AT cut only), ±15ppm / ±30ppm (AT cut only), |
| Over Operating Temperature Range | ±15ppm / ±20ppm (AT cut only), or ±10ppm / ±15ppm (AT cut only) |
| Operating Temperature Range | 0°C to 70°C (Standard), -20°C to 70°C (AT cut only), or -40°C to 85°C (AT cut only) |
| Aging (at 25°C) | ±5ppm / year Maximum |
| Storage Temperature Range | -40°C to 85°C |
| Shunt Capacitance | 7pF Maximum |
| Insulation Resistance | 500 Megaohms Minimum at 100V _{DC} |
| Drive Level | 1 mWatt Maximum |
| Load Capacitance (C _L) | 18pF (Standard), Custom C _L ≥10pF, or Series Resonant |

EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT

| Frequency Range | ESR (Ω) | Mode / Cut | Frequency Range | ESR (Ω) | Mode / Cut |
|-------------------------|---------|------------------|-------------------------|---------|---------------------|
| 3.579545MHz to 4.999MHz | 200 Max | Fundamental / AT | 15.000MHz to 15.999MHz | 60 Max | Fundamental / AT |
| 5.000MHz to 5.999MHz | 150 Max | Fundamental / AT | 16.000MHz to 23.999MHz | 50 Max | Fundamental / AT |
| 6.000MHz to 7.999MHz | 120 Max | Fundamental / AT | 24.000MHz to 30.000MHz | 40 Max | Fundamental / AT |
| 8.000MHz to 8.999MHz | 90 Max | Fundamental / AT | 24.000MHz to 40.000MHz | 40 Max | Fundamental / BT |
| 9.000MHz to 9.999MHz | 80 Max | Fundamental / AT | 28.6363MHz to 29.999MHz | 150 Max | Third Overtone / AT |
| 10.000MHz to 14.999MHz | 70 Max | Fundamental / AT | 30.000MHz to 50.000MHz | 100 Max | Third Overtone / AT |

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
EC1SM

PACKAGE
HC-49/UP Short

CLASS
CR21

REV. DATE
03/06

PART NUMBERING GUIDE

EC1SM A - T - 20 - 30.00M TR

FREQUENCY TOLERANCE / STABILITY

Blank=±50ppm at 25°C, ±100ppm from 0°C to 70°C
 A=±50ppm at 25°C, ±100ppm from -20°C to 70°C
 B=±50ppm at 25°C, ±100ppm from -40°C to 85°C
 C=±30ppm at 25°C, ±50ppm from 0°C to 70°C
 D=±30ppm at 25°C, ±50ppm from -20°C to 70°C
 E=±30ppm at 25°C, ±50ppm from -40°C to 85°C
 F=±15ppm at 25°C, ±30ppm from 0°C to 70°C
 G=±15ppm at 25°C, ±30ppm from -20°C to 70°C
 H=±15ppm at 25°C, ±30ppm from -40°C to 85°C
 J=±15ppm at 25°C, ±20ppm from 0°C to 70°C
 K=±15ppm at 25°C, ±20ppm from -20°C to 70°C
 L=±15ppm at 25°C, ±20ppm from -40°C to 85°C
 M=±10ppm at 25°C, ±15ppm from 0°C to 70°C
 N=±10ppm at 25°C, ±15ppm from -20°C to 70°C

PACKAGING OPTIONS

Blank=Bulk, TR=Tape and Reel

FREQUENCY

LOAD CAPACITANCE

Blank=18pF (Standard), S=Series
 XX=XXpF (Custom)

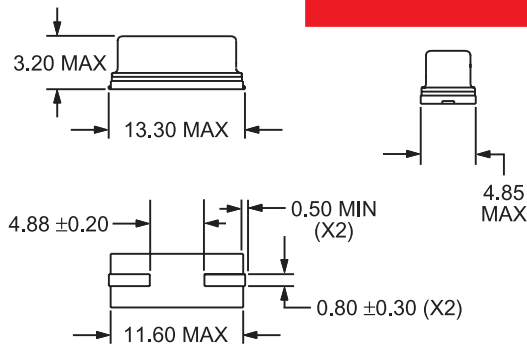
MODE OF OPERATION / CRYSTAL CUT

Blank=Fundamental / AT,
 B=Fundamental / BT
 T=Third Overtone / AT

OBSOLETE

MECHANICAL DIMENSIONS

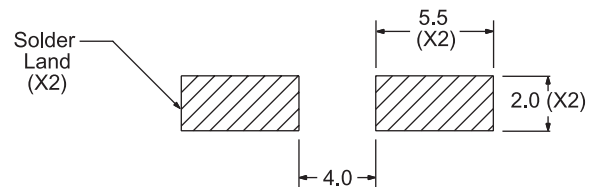
ALL DIMENSIONS IN MILLIMETERS



Coplanarity: 0.36mm Maximum

ACCEPTED SOLDER PAD LAYOUT

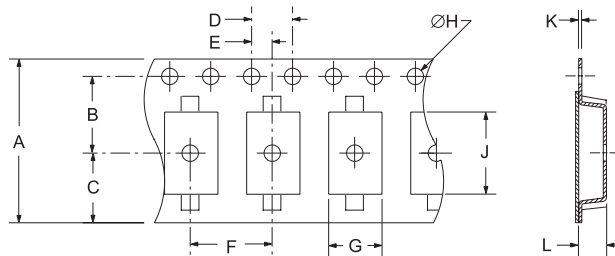
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.2

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



| TAPE | A | B | C | D | E |
|-------|-------|---------|---------|-------|------|
| | 24±.3 | 11.5±.1 | 0.75±.1 | 4±.2 | 2±.1 |
| F | G | H | J | K | L |
| 12±.2 | B0* | 1.5+.1 | A0* | .4±.1 | K0* |

| REEL | M | N | O | P | Q |
|---------|--------|----------|----------|----------|----------|
| | 5 MIN | 50 MIN | 20.2 MIN | 13±.2 | 40 MIN |
| R | S | T | U | V | QTY/REEL |
| 2.5 MIN | 10 MIN | 30.4 MAX | 360 MAX | 24.4+2-0 | 1,000 |

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

PARAMETER

Fine Leak Test
 Gross Leak Test
 Mechanical Shock
 Vibration
 Solderability
 Temperature Cycling
 Resistance to Soldering Heat
 Resistance to Solvents

SPECIFICATION

MIL-STD-883, Method 1014, Condition A
 MIL-STD-883, Method 1014, Condition C
 MIL-STD-202, Method 213, Condition C
 MIL-STD-883, Method 2007, Condition A
 MIL-STD-883, Method 2002
 MIL-STD-883, Method 1010
 MIL-STD-883, Method 210
 MIL-STD-883, Method 215

MARKING SPECIFICATIONS

*Compliant to EIA-481A

Line 1: E XX.XXX M

M or Blank (No Marking)
 Frequency in MHz
 (5 Digits Maximum + Decimal)

MANUFACTURER
 ECLIPTEK CORP.

CATEGORY
 CRYSTAL

SERIES
 EC1SM

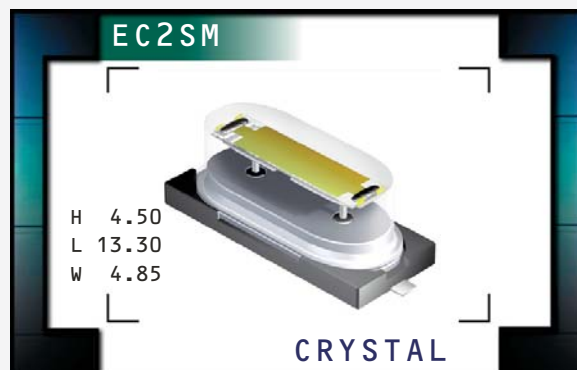
PACKAGE
 HC-49/UP Short

CLASS
 CR21

REV. DATE
 03/06

EC2SM Series

- HC-49/UP package
- AT or BT cut available
- Resistance weld seal
- Tight tolerance/stability
- Tape and reel available



OBSOLETE

ELECTRICAL SPECIFICATIONS

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MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
EC2SM

PACKAGE
HC-49/UP

CLASS
CR03

REV. DATE
03/06

PART NUMBERING GUIDE

EC2SM A - T - 20 - 30.000M TR

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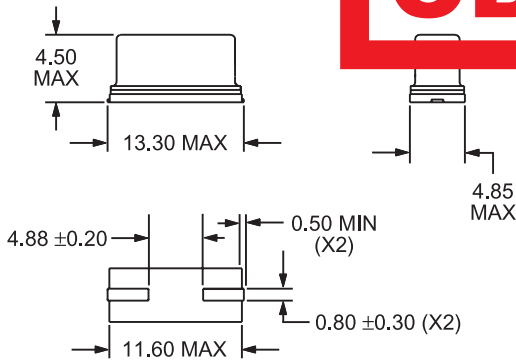
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OBSOLETE

MECHANICAL DIMENSIONS

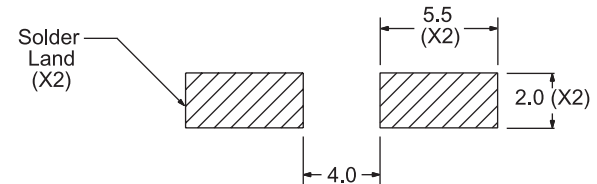
ALL DIMENSIONS IN MILLIMETERS



Coplanarity: 0.36mm Maximum

SUGGESTED SOLDER PATTERN

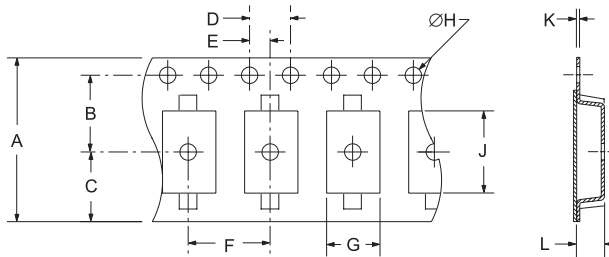
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ALL DIMENSIONS IN MILLIMETERS



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Line 1: E XX.XXX M

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