

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.

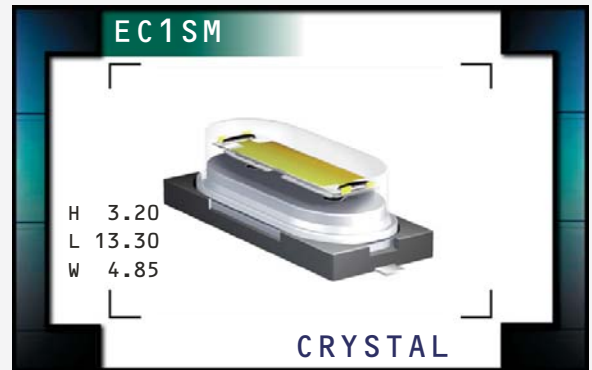
Best Regards,



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



NOTES

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

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

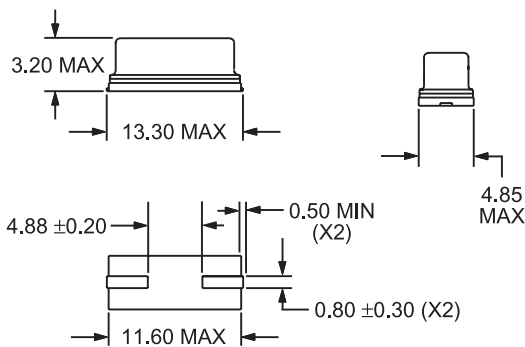
Blank=18pF (Standard), S=Series
 XX=XXpF (Custom)

MODE OF OPERATION / CRYSTAL CUT

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

MECHANICAL DIMENSIONS

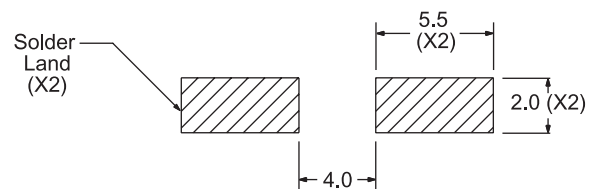
ALL DIMENSIONS IN MILLIMETERS



Coplanarity: 0.36mm Maximum

SUGGESTED SOLDER PAD LAYOUT

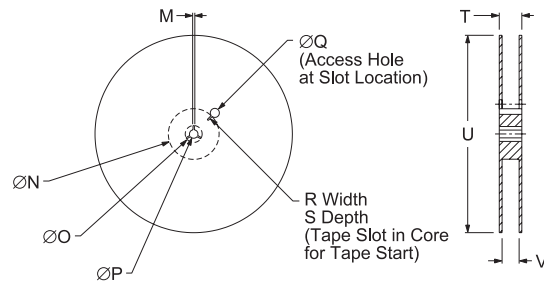
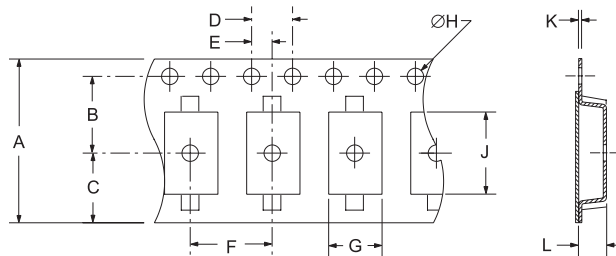
ALL DIMENSIONS IN MILLIMETERS



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

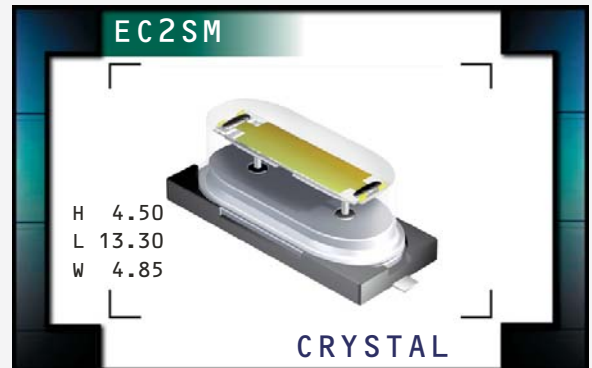
PACKAGE
 HC-49/UP Short

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



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	3.579545MHz to 50.000MHz
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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 - 30.000 TR

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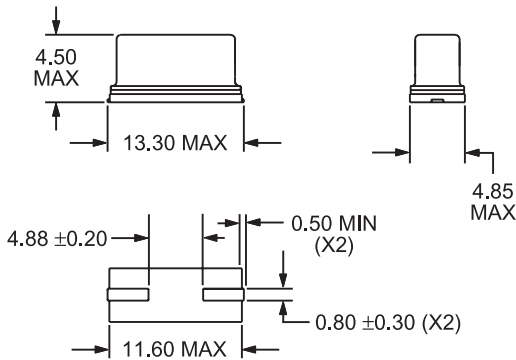
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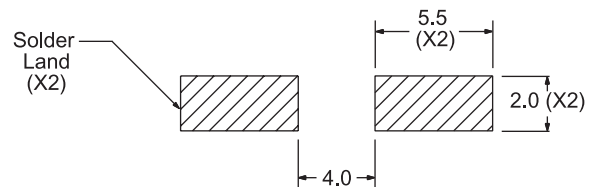
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Coplanarity: 0.36mm Maximum

SUGGESTED SOLDER PAD LAYOUT

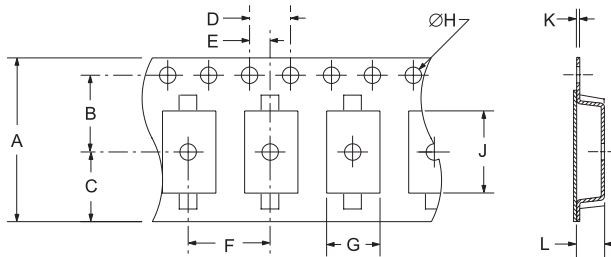
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TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



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 MIL-STD-883, Method 1010
 MIL-STD-883, Method 210
 MIL-STD-883, Method 215

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Line 1: E XX.XXX M

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MANUFACTURER
 ECLIPTEK CORP.

CATEGORY
 CRYSTAL

SERIES
 EC2SM

PACKAGE
 HC-49/UP

CLASS
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REV. DATE
 03/06