Product EOL Announcement

The Product EOL Announcement signifies that a product series has entered the final phase of the Ecliptek Product Life Cycle, and serves as advance notice of product termination per the Ecliptek End of Life (EOL) policy.

Ecliptek Corporation announces End of Life initiation for the following product series with the intent of discontinuing its availability.

EOL Series	Description
EC3SM	4.0mm Epoxy Base SMD Crystal

EOL Timeline

The last date Ecliptek will accept orders (Stage 2) and the last date orders may be scheduled for shipment (Stage 3) are listed in the table below.

Stage 1 EOL Announce Date	Stage 2 Last Date to Order	Stage 3 Last Date to Ship
5-April-2011	31-December-2011	31-March-2012

Alternative Products

In order to fulfill your requirements beyond this product's discontinuation, we invite you to evaluate the recommended alternative Ecliptek product series referenced below. Please click on the link to view the data sheet.

Alternative Series	Description
E1S	RoHS Compliant (Pb-free) Resistance Welded Short HC-49/UP SMD Crystal

Automated EOL Notification

Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized Parts List on our website and we'll email you when EOL is announced.

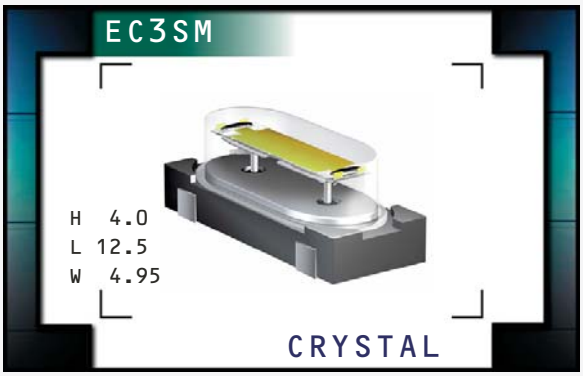
Please do not hesitate to contact us if you have any questions or need further assistance.

Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com

All product warranties for discontinued products will be honored in full according to Ecliptek Terms and Conditions of Sale.

EC3SM Series

- Four pad surface mount short package
- AT-Cut
- Resistance weld seal
- Tight tolerance/stability
- Interchangeable with plastic surface mount crystals
- Tape and reel available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	3.579545MHz to 30.000MHz
Frequency Tolerance / Stability Over Operating Temperature Range	±50ppm / ±100ppm (Standard), ±30ppm / ±50ppm, ±15ppm / ±30ppm, or ±15ppm / ±20ppm
Operating Temperature Range	0°C to 70°C (Standard), -20°C to 70°C or -40°C to 85°C
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)	10pF, 12pF, 13pF, 14pF, 15pF, 16pF, 18pF, 20pF, 22pF, 24pF, 27pF, 30pF, 32pF, 33pF Parallel Resonant, 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	10.000MHz to 14.999MHz	70 Max	Fundamental / AT
5.000MHz to 5.999MHz	150 Max	Fundamental / AT	15.000MHz to 15.999MHz	60 Max	Fundamental / AT
6.000MHz to 7.999MHz	120 Max	Fundamental / AT	16.000MHz to 23.999MHz	50 Max	Fundamental / AT
8.000MHz to 8.999MHz	90 Max	Fundamental / AT	24.000MHz to 30.000MHz	40 Max	Fundamental / AT
9.000MHz to 9.999MHz	80 Max	Fundamental / AT			

MANUFACTURER	CATEGORY	SERIES	PACKAGE	CLASS	REV. DATE
ECLIPTEK CORP.	CRYSTAL	EC3SM	EPOXY BASE SHORT	CR32	04/11

PART NUMBERING GUIDE

EC3SM _ - 20 - 28.375M TR

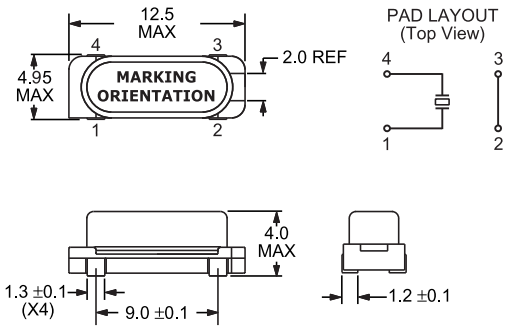
FREQUENCY TOLERANCE / STABILITY
Blank=±50ppm at 25°C, ±100ppm from 0°C to 70°C
A=±50ppm at 25°C, ±100ppm from -20°C to 70°C
B=±50ppm at 25°C, ±100ppm from -40°C to 85°C
C=±30ppm at 25°C, ±50ppm from 0°C to 70°C
D=±30ppm at 25°C, ±50ppm from -20°C to 70°C
E=±30ppm at 25°C, ±50ppm from -40°C to 85°C
F=±15ppm at 25°C, ±30ppm from 0°C to 70°C
G=±15ppm at 25°C, ±30ppm from -20°C to 70°C
J=±15ppm at 25°C, ±20ppm from 0°C to 70°C

PACKAGING OPTIONS
Blank=Bulk, TR=Tape and Reel

FREQUENCY

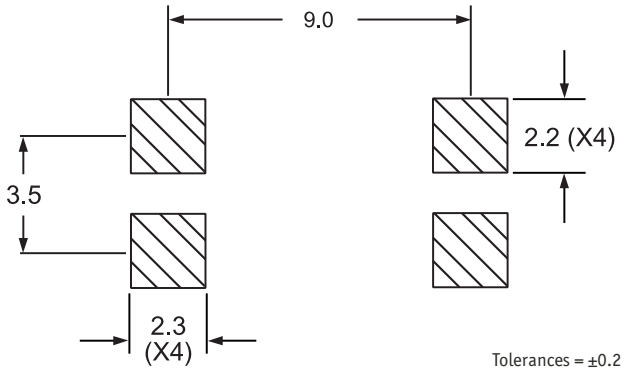
LOAD CAPACITANCE
Blank=18pF Parallel Resonant
10=10pF Parallel Resonant, 12=12pF Parallel Resonant,
13=13pF Parallel Resonant, 14=14pF Parallel Resonant,
15=15pF Parallel Resonant, 16=16pF Parallel Resonant,
20=20pF Parallel Resonant, 22=22pF Parallel Resonant,
24=24pF Parallel Resonant, 27=27pF Parallel Resonant,
30=30pF Parallel Resonant, 32=32pF Parallel Resonant,
33=33pF Parallel Resonant, S=Series Resonant

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



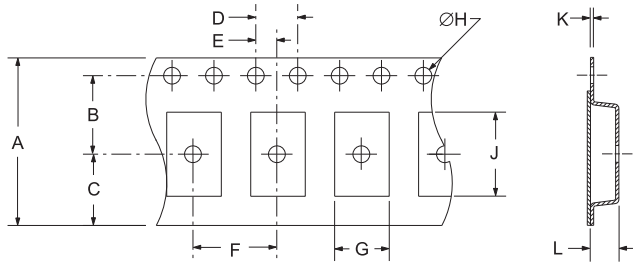
Coplanarity: 0.152 Maximum

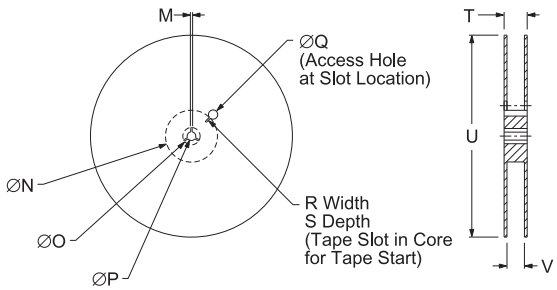
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.2

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





TAPE	A	B	C	D	E
	24±.3	11.5±.1	10.75±.1	4±.1	2±.1
F	G	H	J	K	L
12±.1	5.4±.1	1.5 +.1	12.5±.1	.4±.05	4.2±.1

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	30.4 MAX	360 MAX	24.4+2-2	1,000

*Compliant to EIA-481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

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

MARKING SPECIFICATIONS

Line 1: E XX.XXX
Frequency in MHz
(5 Digits Maximum + Decimal)

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ECLIPTEK CORP.	CRYSTAL	EC3SM	EPOXY BASE SHORT	CR32	04/11