ECLIPTEK® CORPORATION

Marketing Bulletin

DATE: June 23rd, 2006

TO: All Sales Personnel

FROM: Mark Stoner

RE: Product Termination

To all concerned parties,

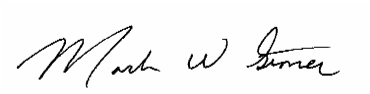
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective July 1st, 2006:

Series	Description	Recommended Replacement
EC3SM1	Four pad SMD Crystal	EC3SM
EC4SM1	Four pad SMD Crystal	EC4SM

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 31st, 2006, with delivery to conclude by December 31st 2006.

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

Best Regards,



Mark W. Stoner
Vice President of Marketing
Ecliptek Corporation

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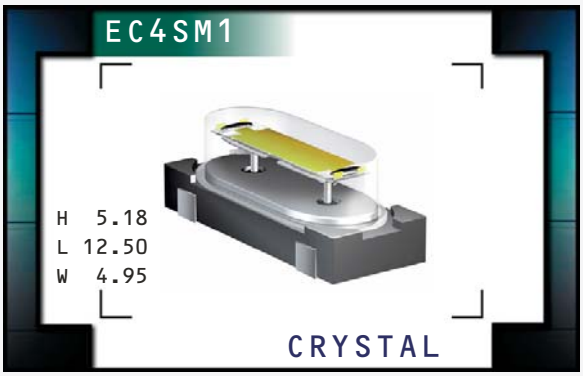
EC4SM1 Series

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



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	7.3728MHz, 20.000MHz, 30.000MHz, and 33.333MHz
Frequency Tolerance / Stability Over Operating Temperature Range	±50ppm / ±100ppm (Standard), ±30ppm / ±50ppm (AT cut only), ±15ppm / ±30ppm (AT cut only), or ±15ppm / ±20ppm (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 $C_L \geq 10pF$, or Series Resonant

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

Nominal Frequency	ESR (Ω)	Mode / Cut	Nominal Frequency	ESR (Ω)	Mode / Cut
7.3728MHz	120 Max	Fundamental / AT	30.000MHz	40 Max	Fundamental / AT
20.000MHz	50 Max	Fundamental / AT	33.333MHz	40 Max	Fundamental / BT

MANUFACTURER	CATEGORY	SERIES	PACKAGE	CLASS	REV. DATE
ECLIPTEK CORP.	CRYSTAL	EC4SM1	EPOXY BASE	CR35	06/06

PART NUMBERING GUIDE

EC4SM1 _ - B - 20 - 33.333M 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

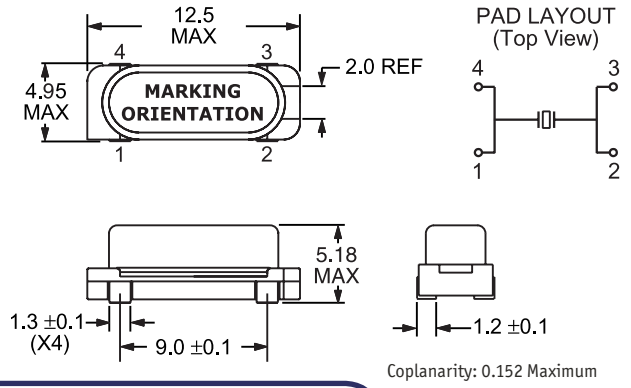
PACKAGING OPTIONS
Blank=Bulk, TR=Tape and Reel

FREQUENCY

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

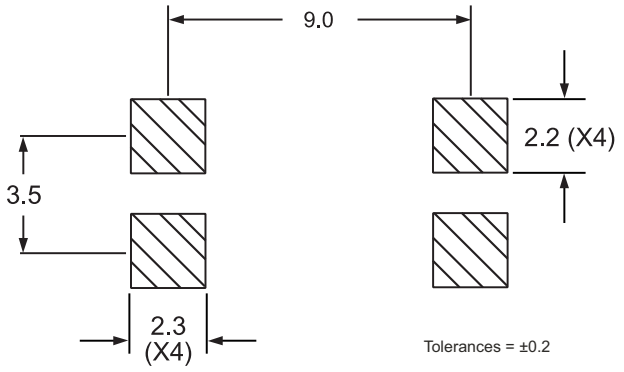
MODE OF OPERATION / CRYSTAL CUT
Blank=Fundamental / AT
B=Fundamental / BT

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



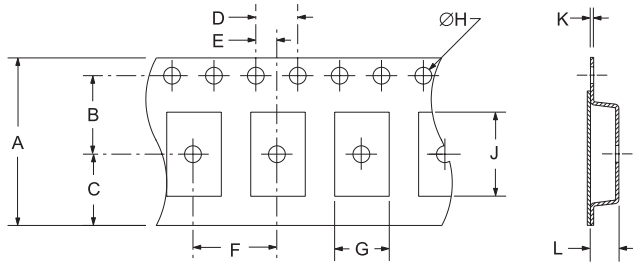
Coplanarity: 0.152 Maximum

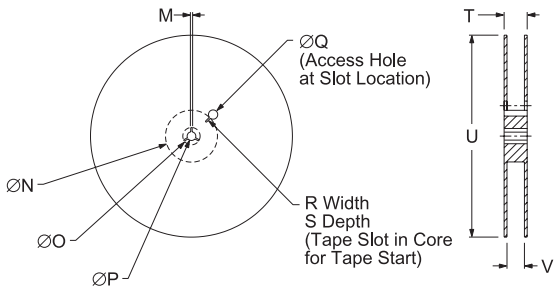
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



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	5.35 ±0.2

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+2-0	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	EC4SM1	EPOXY BASE	CR35	06/06