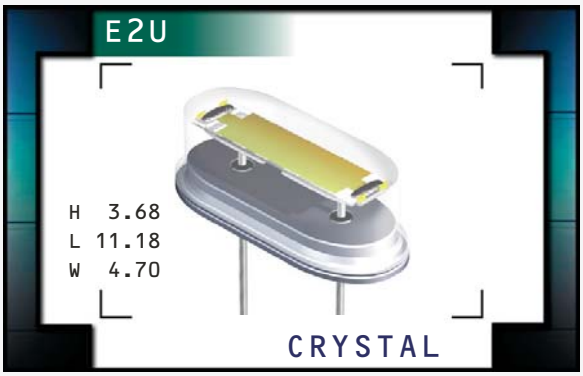
E2U Series

- RoHS Compliant (Pb-Free)
- HC-49/US package
- AT or BT cut available
- Resistance weld seal
- Tight tolerance/stability
- Tape and reel, insulator tab, and custom lead length options available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	3.579545MHz to 50.000MHz
Frequency Tolerance / Stability Over Operating Temperature Range	±50ppm / ±100ppm (Standard), ±30ppm / ±50ppm (AT cut only), ±15ppm / ±30ppm (AT cut only), ±15ppm / ±20ppm (AT cut only), or ±10ppm / ±15ppm (AT cut only)
Operating Temperature Range	0°C to 70°C, -20°C to 70°C (AT cut only), -40°C to 85°C (AT cut only), or -40°C to 125°C (AT cut only)
Aging (at 25°C)	±5ppm / year Maximum
Storage Temperature Range	-40°C to 125°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

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	24.576MHz 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	CATEGORY	SERIES	PACKAGE	CLASS	REV. DATE
ECLIPTEK CORP.	CRYSTAL	E2U	HC-49/US	CR42	08/05

PART NUMBERING GUIDE

E2U A A 18 - 20.000M - I2 TR

FREQUENCY TOLERANCE / STABILITY
A=±50ppm at 25°C, ±100ppm from 0°C to 70°C
B=±50ppm at 25°C, ±100ppm from -20°C to 70°C
C=±50ppm at 25°C, ±100ppm from -40°C to 85°C
D=±30ppm at 25°C, ±50ppm from 0°C to 70°C
E=±30ppm at 25°C, ±50ppm from -20°C to 70°C
F=±30ppm at 25°C, ±50ppm from -40°C to 85°C
G=±15ppm at 25°C, ±30ppm from 0°C to 70°C
H=±15ppm at 25°C, ±30ppm from -20°C to 70°C
J=±15ppm at 25°C, ±30ppm from -40°C to 85°C
K=±15ppm at 25°C, ±20ppm from 0°C to 70°C
L=±15ppm at 25°C, ±20ppm from -20°C to 70°C
M=±15ppm at 25°C, ±20ppm from -40°C to 85°C
N=±10ppm at 25°C, ±15ppm from 0°C to 70°C
P=±10ppm at 25°C, ±15ppm from -20°C to 70°C
T=±30ppm at 25°C, ±50ppm from -40°C to 125°C

MODE OF OPERATION / CRYSTAL CUT
A=Fundamental / AT
B=Third Overtone / AT
D=Fundamental / BT

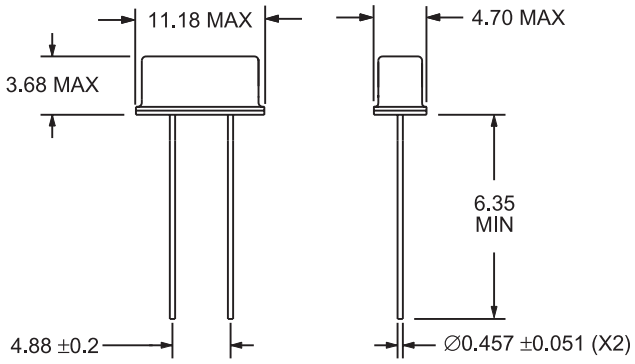
LOAD CAPACITANCE
S=Series
XX=XXpF (Custom)

FREQUENCY

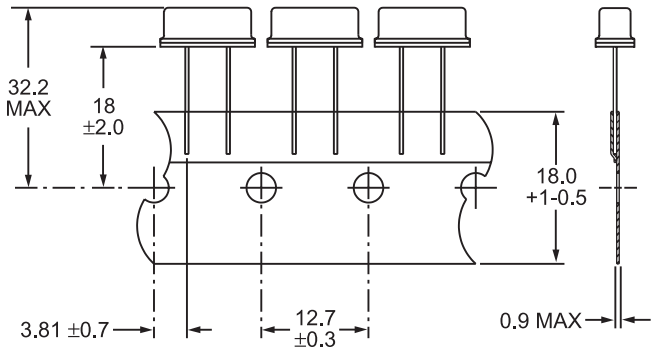
AVAILABLE OPTIONS
Blank=None (Std)
CX=Custom Lead Length
I2=Insulator Tab

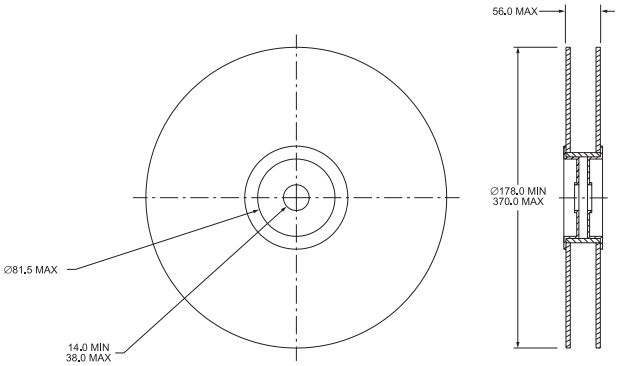
PACKAGING OPTIONS
Blank=Bulk, A=Tray, TR=Tape and Reel

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





1000 Pieces per Reel
Compliant to EIA-468B

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
Lead Integrity	MIL-STD-883, Method 2004
Lead Termination	Sn 2µm - 6µm
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

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

MANUFACTURER	CATEGORY	SERIES	PACKAGE	CLASS	REV. DATE
ECLIPTEK CORP.	CRYSTAL	E2U	HC-49/US	CR42	08/05