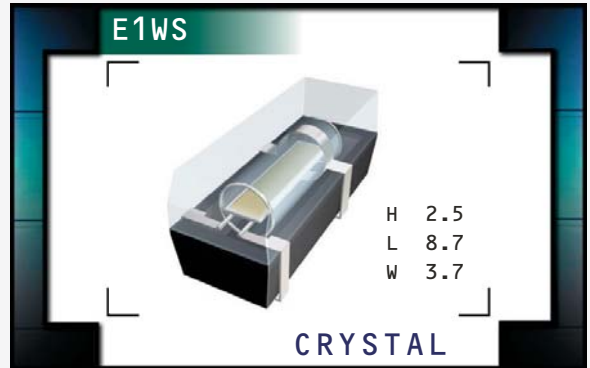


E1WS Series

- RoHS Compliant
- 32.768kHz watch crystal
- Miniature four pad surface mount package
- ± 20 ppm frequency tolerance
- 12.5pF load capacitance
- Tape and reel available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency	32.768kHz
Frequency Tolerance (at 25°C)	± 20 ppm
Frequency Stability	-0.042ppm / $(\Delta^{\circ}\text{C})^2$ Maximum, Parabolic; Turn Over Temperature at 25°C $\pm 5^{\circ}\text{C}$
Operating Temperature Range	-10°C to 60°C
Aging (at 25°C)	± 3 ppm / year Maximum
Storage Temperature Range	-40°C to 85°C
Shunt Capacitance	0.85pF Typical, 2pF Maximum
Motional Capacitance	2.0fF Typical
Equivalent Series Resistance	60,000 Ohms Maximum
Insulation Resistance	500 Megaohms Minimum at 100V _{dc}
Drive Level	1 μ Watt Maximum
Load Capacitance (C _L)	12.5pF

PART NUMBERING GUIDE

E1WSDA12 - 32.768K TR

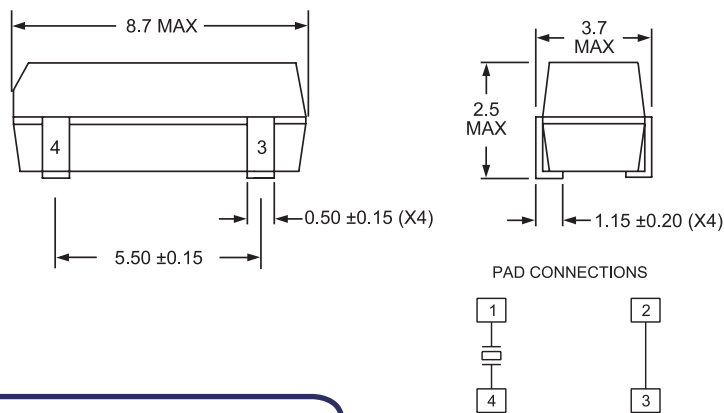
PACKAGE OPTIONS

Blank=Bulk, TR=Tape and Reel

NOTES

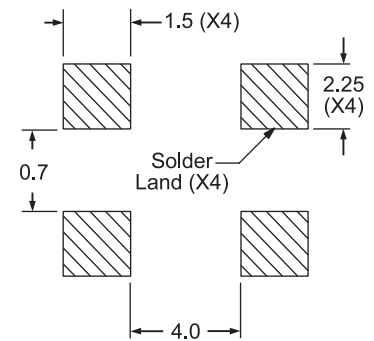
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



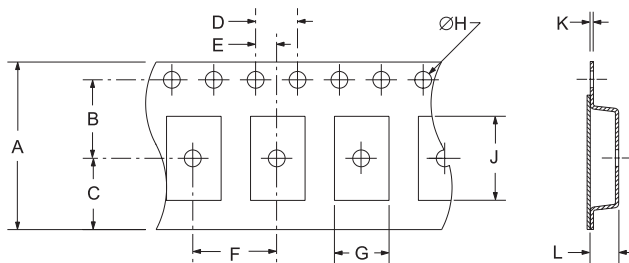
SUGGESTED SOLDER PAD LAYOUTS

ALL DIMENSIONS IN MILLIMETERS

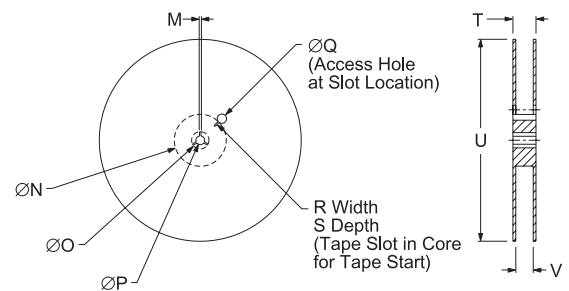


TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

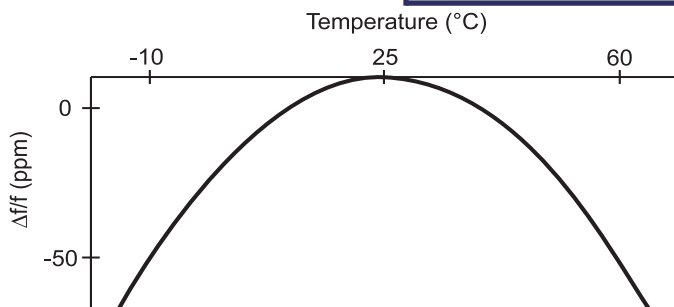


TAPE	A	B	C	D	E	
	16±.3	7.5±.1	6.75±.1	4±.2	2±.1	
	F	G	H	J	K	L
	8±.2	4.35±.1	1.5+-.2-.1	10.7±.2	.5±.05	3.7±.2



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	22.4 MAX	360 MAX	16.4+2-0	3,000

PARABOLIC TEMPERATURE CURVE



MARKING SPECIFICATIONS

Line 1: C2K XXXX
 Lot Identifier (4 or 5 Characters)
 Frequency Code

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
E1WS

PACKAGE
PLASTIC

CLASS
CR47

REV. DATE
05/05