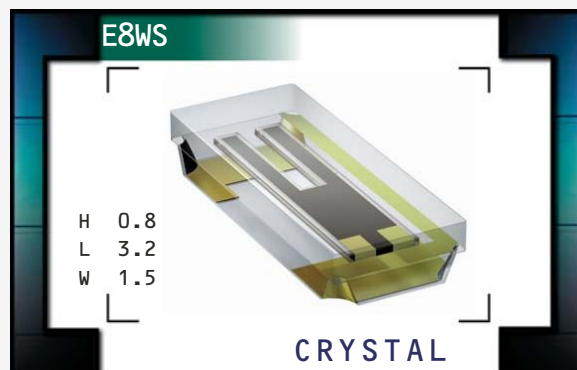


E8WS Series

- RoHS Compliant
- 32.768kHz watch crystal
- Miniature two pad surface mount package
- ± 20 ppm frequency tolerance
- 9.0pF or 12.5pF load capacitance
- Tape and reel available



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ECLIPTEK
CORPORATION



NOTES

ELECTRICAL SPECIFICATIONS

Frequency	32.768kHz
Frequency Tolerance (at 25°C)	± 20 ppm
Frequency Stability	-0.04ppm / $(\Delta^\circ\text{C})^2$ Maximum, Parabolic; Turn Over Temperature at 25°C $\pm 5^\circ\text{C}$
Operating Temperature Range	-40°C to 85°C
Aging (at 25°C)	± 3 ppm / year Maximum
Storage Temperature Range	-55°C to 125°C
Shunt Capacitance	1.0pF Typical, 2pF Maximum
Motional Capacitance	3.4fF Typical
Equivalent Series Resistance	70,000 Ohms Maximum
Insulation Resistance	500 Megaohms Minimum at 100V _{DC}
Drive Level	0.5μWatt Maximum
Load Capacitance (C _L)	12.5pF or 9.0pF

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
E8WS

PACKAGE
CERAMIC

CLASS
CR57

REV. DATE
08/07

PART NUMBERING GUIDE

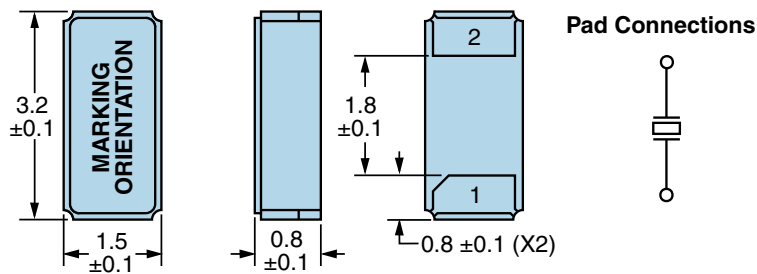
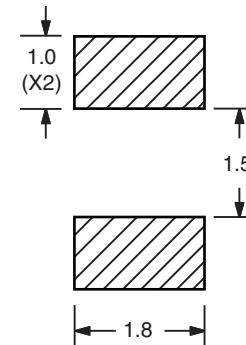
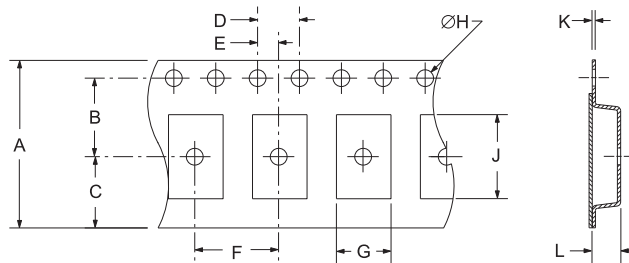
E8WSDC 12 - 32.768K TR**LOAD CAPACITANCE**

09=9pF

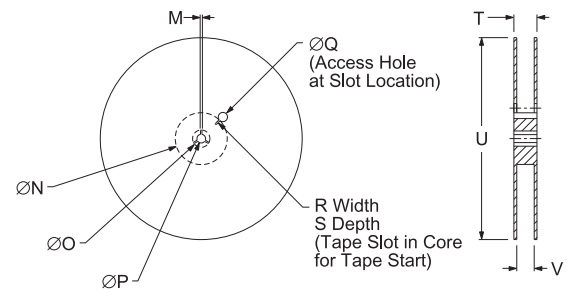
12=12.5pF

PACKAGE OPTIONS

Blank=Bulk, TR=Tape and Reel

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS**SUGGESTED SOLDER PAD LAYOUTS**
ALL DIMENSIONS IN MILLIMETERS**TAPE AND REEL DIMENSIONS**
ALL DIMENSIONS IN MILLIMETERS

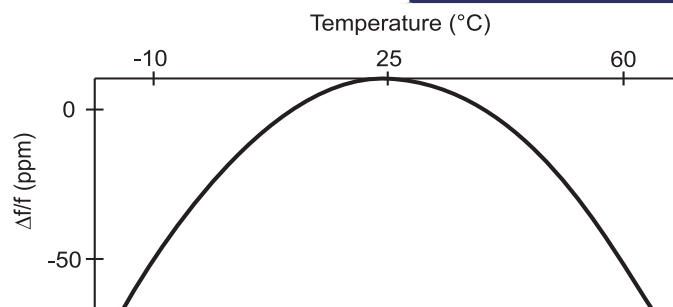
TAPE	A	B	C	D	E
	12±.3	5.5±.1	4.75±.1	4±.2	2±.1
F	G	H	J	K	L
4±.1	A0*	1.5±.1	B0*	0.6 MAX	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.5	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0	3,000

PARABOLIC TEMPERATURE CURVE

*Compliant to EIA481A

**MARKING SPECIFICATIONS**

Line 1: XXXXX

Ecliptek Manufacturing Code

ENVIRONMENTAL/MECHANICAL SPECIFICATIONSCharacteristicFine Leak Test
Gross Leak Test
Mechanical ShockSpecificationMIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-883, Method 2002, Condition BCharacteristicResistance to Soldering Heat
Solderability
VibrationSpecificationMIL-STD-202, Method 210
MIL-STD-883, Method 2003
MIL-STD-883, Method 2007, Condition AMANUFACTURER
ECLIPTEK CORP.CATEGORY
CRYSTALSERIES
E8WSPACKAGE
CERAMICCLASS
CR57REV. DATE
08/07