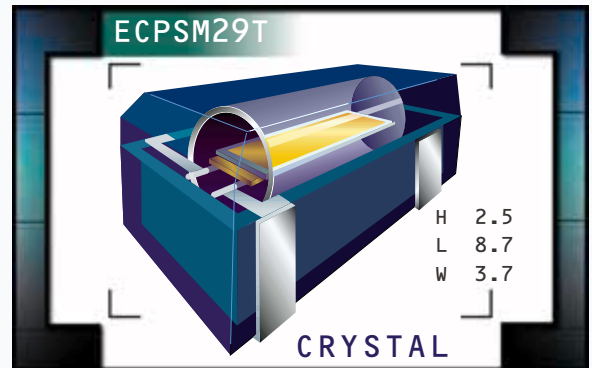


ECPSM29T Series

- 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

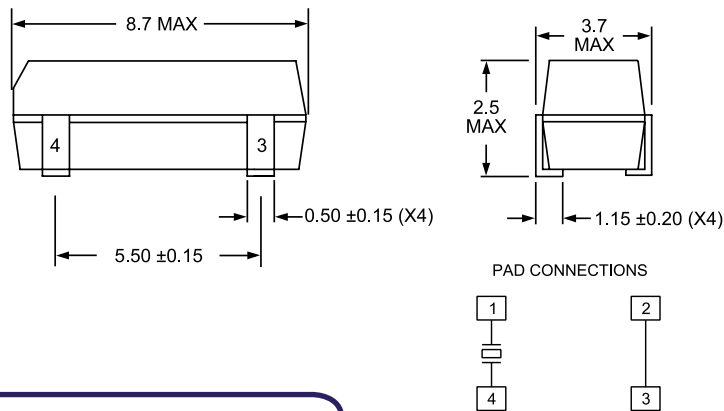
ECPSM29T - 32.768K TR

PACKAGE OPTIONS

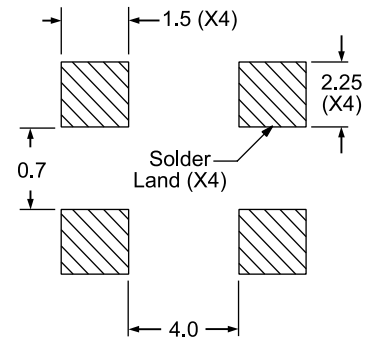
Blank=Bulk, TR=Tape and Reel

NOTES

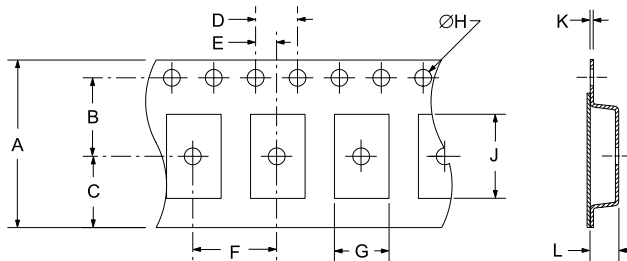
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



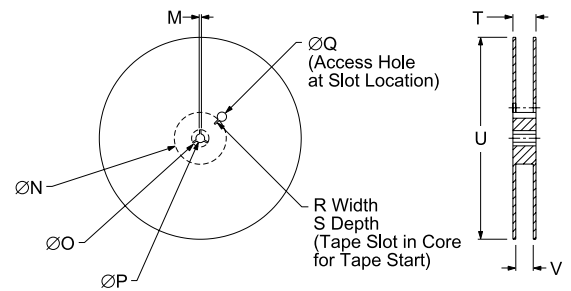
SUGGESTED SOLDER PAD LAYOUTS ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS

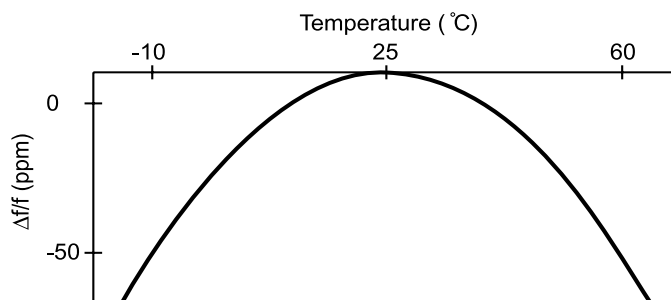


TAPE	A	B	C	D	E
	16±.3	7.5±.1	6.75±.1	4±.2	2±.1
F	G	H	J	K	L
8±.2	4.35±.1	1.5+-.2-.1	10.7±.2	.5±.05	3.7±.2



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	2,000

PARABOLIC TEMPERATURE CURVE



MARKING SPECIFICATIONS

Line 1: 32K XXXX
Lot Identifier (4 or 5 Characters)

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
ECPSM29T

PACKAGE
PLASTIC

CLASS
CR14

REV. DATE
06/00