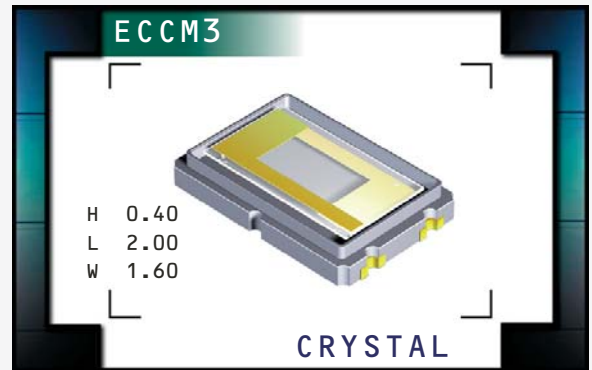


ECCM3 Series



ECLIPTEK[®]
CORPORATION

- Quartz Crystal Resonators
- 4 Pad Ceramic SMD Package
- Seam Sealed
- AT Cut
- Fundamental Mode
- Tight Tolerance/Stability
- Frequencies to 48.000MHz Available
- RoHS Compliant (Pb-Free)



NOTES

ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	24.000, 25.000, 26.000, 27.000, 30.000, 32.000, 34.400, 38.400, 40.000, 44.000, and 48.000MHz
Frequency Tolerance / Stability	
Over Operating Temperature Range	±10ppm / ±10ppm or ±10ppm / ±15ppm
Operating Temperature Range	-10°C to +60°C or -30°C to +85°C
Load Capacitance (C_L)	8pF Parallel Resonant 12pF Parallel Resonant
Shunt Capacitance	5pF Maximum
Mode of Operation	Fundamental
Crystal Cut	AT-Cut
Aging (at 25°C)	±3ppm / year Maximum
Drive Level	100 µWatts Maximum
Storage Temperature Range	-40°C to 90°C
Insulation Resistance	500 Megaohms Minimum at 100V _{DC}
Spurious Response	-3dB Minimum; F ₀ to F ₀ +5000ppm
Equivalent Series Resistance	120 Ohms Maximum from 24.000MHz to 25.999999MHz 100 Ohms Maximum from 26.000MHz to 29.999999MHz 80 Ohms Maximum from 30.000MHz to 35.999999MHz 50 Ohms Maximum from 36.000MHz to 48.000MHz

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
CRYSTAL

SERIES
ECCM3

PACKAGE
CERAMIC

CLASS
CR59

REV. DATE
01/10

PART NUMBERING GUIDE

ECCM3 Q A 12 - 24.000M TR

FREQUENCY TOLERANCE/STABILITY

Q=±10ppm at 25°C, ±15ppm over -30°C to +85°C
R=±10ppm at 25°C, ±10ppm over -10°C to +60°C

MODE OF OPERATION

A=Fundamental

PACKAGING OPTIONS

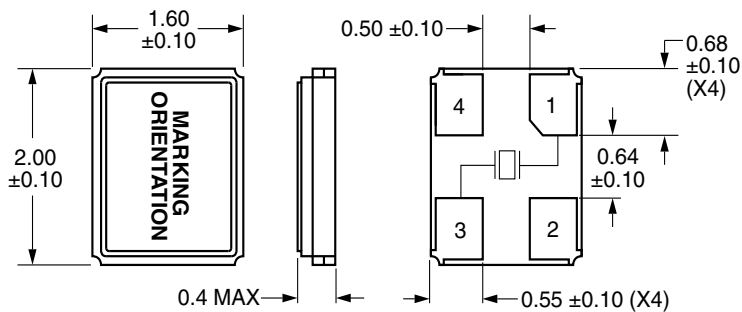
Blank=Bulk, TR=Tape and Reel

FREQUENCY

LOAD CAPACITANCE

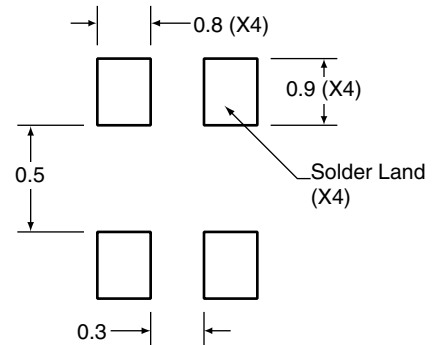
08=8pF Parallel Resonant
12=12pF Parallel Resonant

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



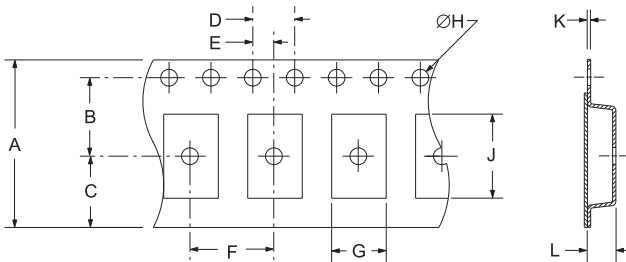
Pad 1: Input/Output
Pad 2: Cover/Ground
Pad 3: Input/Output
Pad 4: Cover/Ground

SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS

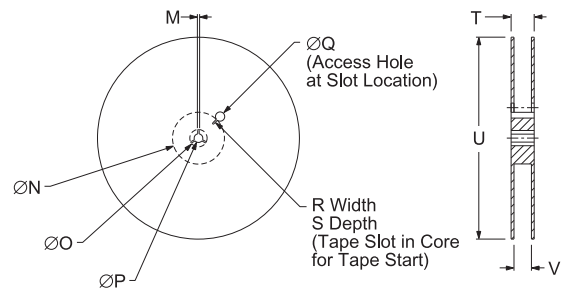


All Tolerances are ±0.1

TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	8±.2	3.5±.1	2.75±.1	4±.1	2±.1
F	G	H	J	K	L
4±.1	1.85±1.0	1.55±.05	2.25±.1	.25±.05	.65±1.0



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	14.4 MAX	180 MAX	8.4+1.5-0	1,000

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Flammability	UL94-V0
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

*Compliant to EIA-481A

Line 1: **XX.X**
Frequency in MHz
(3 Digits Maximum + Decimal)

Line 2: **XXX**
Ecliptek Manufacturing Identifier

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