



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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The ultra-miniature ECX-34RR is a very compact SMD Tuning Fork Crystal with a Typical ESR of 20K  $\Omega$ . The 3.2 x 1.5 x 0.9 mm ceramic package is ideal for today's SMD manufacturing environment.

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- Low Profile
- 20K Typ ESR
- 3.2 x 1.5 mm Footprint
- Extended Temp. Range
- RoHS Compliant

PARAMETERS	CONDITIONS	ECX-34RR			UNITS
		MIN	TYP	MAX	
Frequency	Fo		32.768		KHz
Frequency Tolerance	@ +25°C			± 20 *	ppm
Load Capacitance	Specify in P/N		12.5		pF
Equivalent Series Resistance	R1		20K	40K	$\Omega$
Drive Level	DL		0.1	0.5	$\mu$ W
Quality Factor	Q	20K	30K		
Turnover Temperature		+20	+25	+30	°C
Temperature Coefficient		-0.028	-0.034	-0.040	ppm/°C <sup>2</sup>
Shunt Capacitance	Co		1.3	1.6	pF
Motional Capacitance	C1		3.8		fF
Aging (First Year)	@ +25°C ±3°C			±3	ppm
Operating Temperature	Topr	-40		+85	°C
Storage Temperature	Tstg	-40		+85	°C
Insulation Resistance	@ 100V DC	500M			$\Omega$

## DIMENSIONS (mm)

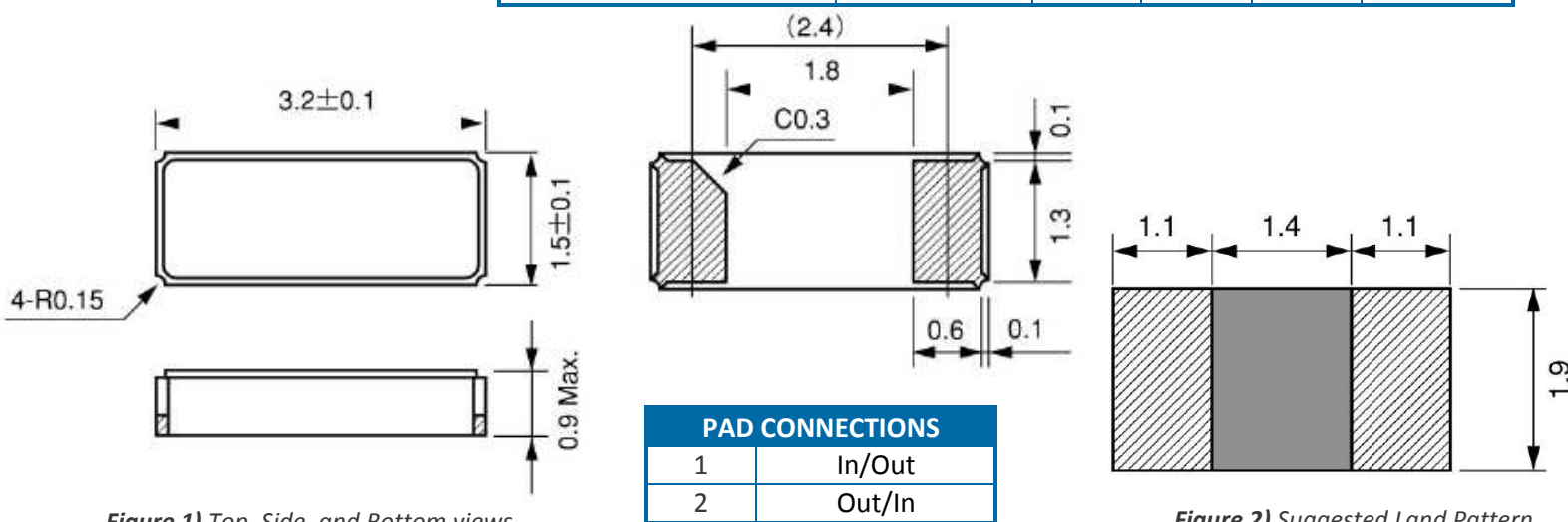


Figure 1) Top, Side, and Bottom views

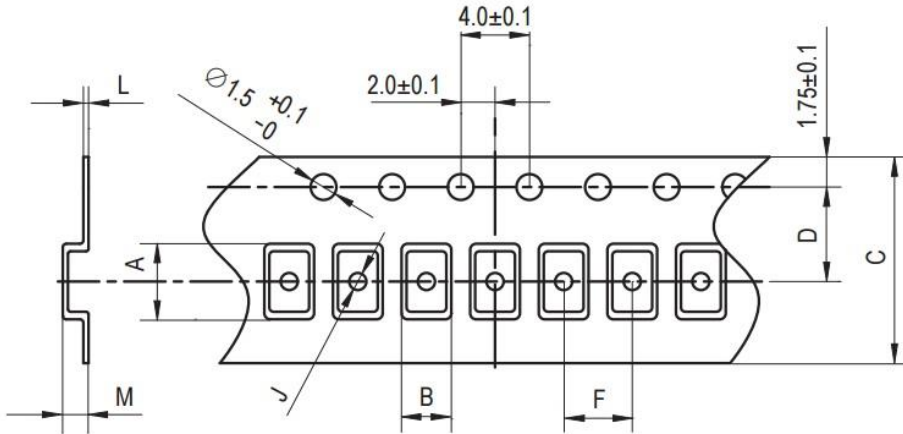
Figure 2) Suggested Land Pattern

## PART NUMBERING GUIDE: Example ECS-.327-12.5-34RR-TR

ECS - FREQUENCY ABBREVIATION	LOAD CAPACITANCE	PACKAGE	CUSTOM OPTIONS Tolerance	PACKAGING
ECS	.327 = 32.768 KHz 12.5 = 12.5 pF 9 = 9 pF 6 = 6 pF	-34RR = ECX-34RR	Blank = ±20 ppm * C = ± 10 ppm	TR = Tape & Reel 3K/Reel

\*Contact ECS for availability

**POCKET TAPE DIMENSIONS (mm)**



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
3.4	1.7	12.0	5.5	4.0	1.0	0.3	1.2	180	3000pcs

**SOLDER PROFILE**

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

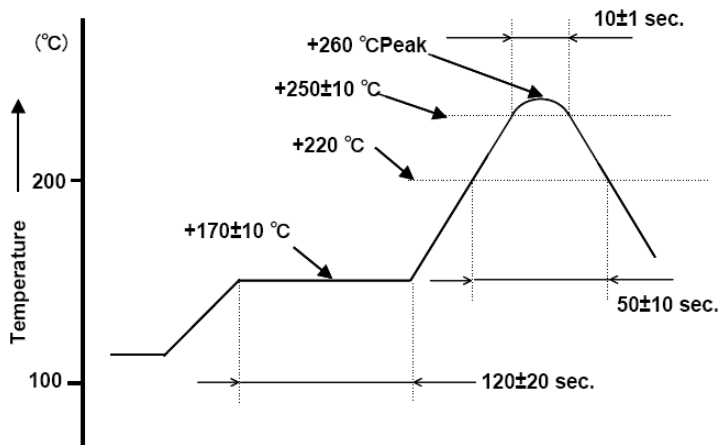


Figure 1) Suggested Reflow Profile