









ECS Inc. offers a wide selection of SMD tuning forks resonating at 32.768 kHz. They are ideal for IoT, wearables, drug delivery devices, hearing aids and many other applications that require small form factor and low current usage. ECS offers the industry's smallest ECX-1210 (2 pad) and the ECX-1210B (4 pad) are standard in a 1.2 x 1.0 mm package.

ECS SMD tuning fork crystals are offered with frequency stability of  $\pm 20$  ppm, load capacitance ranges are available from 4pF ~ 12.5pF. Very low Equivalent series resistance (ESR). Temperature ranges are standard -40 ~ +85°C with options out to -40 ~ +125°C.

Image	Model	Package	Load Cap	ESR	Stability	Temperature Range
	<a href="#">ECX-1210</a> (2 Pad)	1.2 x 1.0 mm	12.5 pF 9 pF 7 pF	90 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C
	<a href="#">ECX-1210B</a> (4 Pad)	1.2 x 1.0 mm	12.5 pF 9 pF 7 pF 6 pF	80 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C -40 ~ +105°C*
	<a href="#">ECX-16</a> (2 Pad)	1.6 x 1.0 mm	12.5 pF 9 pF 7 pF 5 pF	90 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C
	<a href="#">ECX-12</a> (2 Pad)	2.0 x 1.2 mm	12.5 pF 9 pF 7 pF 6 pF	90 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C
	<a href="#">ECX-12RR</a> (2 Pad)	2.0 x 1.2 mm	12.5 pF 9 pF 6 pF	35 k $\Omega$	$\pm 20$ ppm	-40 ~ +85°C
	<a href="#">ECX-31B</a> (2 Pad)	3.2 x 1.5 mm	12.5 pF 9 pF 7 pF 6 pF	70 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C
	<a href="#">ECX-34RR</a> (2 Pad)	3.2 x 1.5 mm	12.5 pF 9 pF 6 pF	20 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C
	<a href="#">ECX-34S</a> (2 Pad)	3.2 x 1.5 mm	12.5 pF 6 pF	70 k $\Omega$	$\pm 20$ ppm	-40 ~ +125°C
	<a href="#">ECX-34G</a> (3 Pad)	3.2 x 1.5 mm	12.5 pF 6 pF	70 k $\Omega$	$\pm 20$ ppm $\pm 10$ ppm*	-40 ~ +85°C

\* Available Option

## Technical Resources:

- [Video Learning](#)
- [ECS Website](#)
- [Technical Guides](#)
- [2020 ECS Catalog](#)