



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!



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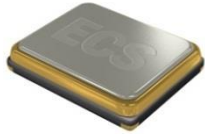
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The sub miniature ECS-2520Q is a miniature AEC-Q200 Qualified SMD HCMOS Oscillator. The 2.5 x 2.0 x 0.9 mm ceramic package is ideal for Automotive, Industrial and IOT applications.

ECX-2520 SMD HCMOS TCXO



- Low Profile
- 2.5 x 2.0 mm Footprint
- Extended Temp Range
- RoHS Compliant

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-2520Q			UNITS
		MIN	TYP	MAX	
Frequency Range		0.750		60.000	MHz
* Frequency Stability	-40 ~ +125°C (BS Opt)			±50	ppm
	-40 ~ +105°C (DP Opt)			±30	ppm
Power Supply	V _{dd} ±5%	+1.8, +2.5, +3.0, +3.3			V DC
Output	HCMOS		15		pF
Output voltage Level	V _{OL} :10%V _{dd} max./V _{OH} :90%V _{dd} min.V DC				
Rise & Fall time	10%V _{dd} – 90%V _{dd}			10	ns
Duty Cycle	@ ½ V _{dd}			45/55	%
Operating Temp*		-40		+125	°C
Storage Temp		-55		+125	°C

* Frequency Stability includes initial tolerance, temperature, supply voltage & load change reflow frequency shift, and aging.

DIMENSIONS (mm)

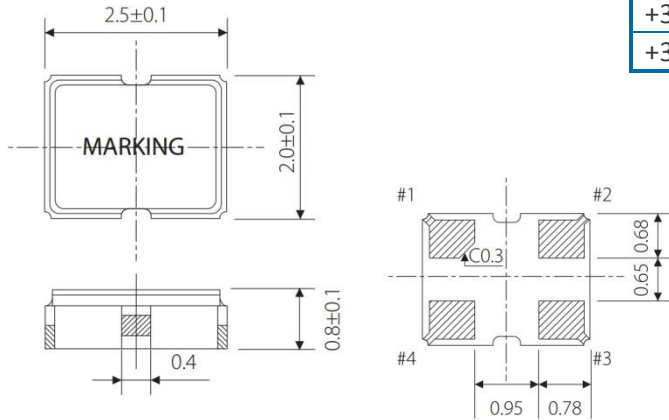


Figure 1) Top, Side, and Bottom views

CURRENT CONSUMPTION

mA Max

FREQ.	~ 19 MHz	~ 39.9 MHz	~ 50 MHz	~ 60 MHz
+1.8V	2.5	3.0	3.5	4.0
+2.5V	4.5	5.5	6.5	7.0
+3.0V	5.5	6.5	7.5	8.0
+3.3V	6.0	7.0	8.0	8.5

PAD CONNECTIONS

1	Tri-state
2	Gnd
3	Output
4	V _{dd}

Tri State Function

Pin 1	Output
High or NC	Active
Low	High Impedance

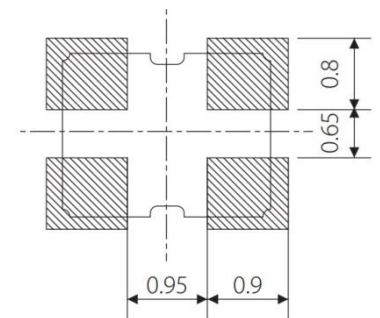


Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-2520Q-33-270-BS-TR

ECS - SERIES	Voltage	FREQUENCY ABBREVIATION	STABILITY	* TEMP RANGE	PACKAGING
2520Q 2.5 x 2.0 mm AEC-Q200 Oscillator	18 = +1.8V 25 = +2.5V 28 = +2.8V 33 = +3.3V	270 = 27.000 MHz See Developed Frequencies Pg.2	A = ±100 ppm B = ±50 ppm D = ±30 ppm	P = -40 ~ +105°C S = -40 ~ +125°C	TR = Tape & Reel 1K/Reel

FREQUENCY ABBREVIATIONS

FREQUENCY MHz	CODE
27.000	270
48.000	480

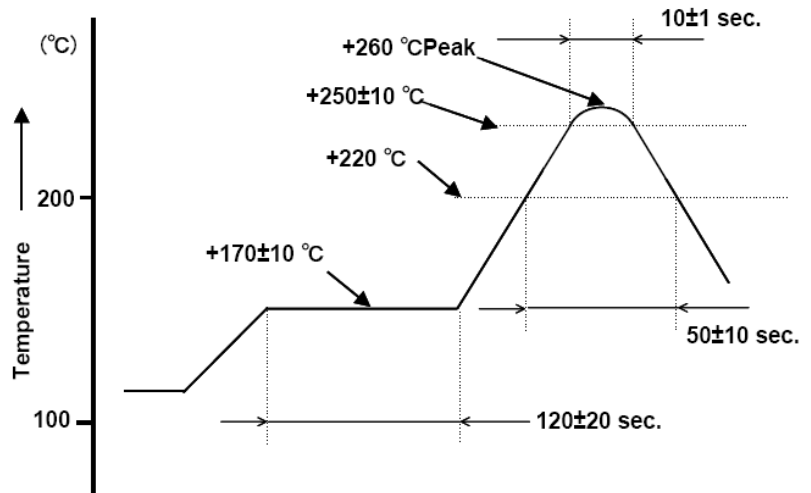
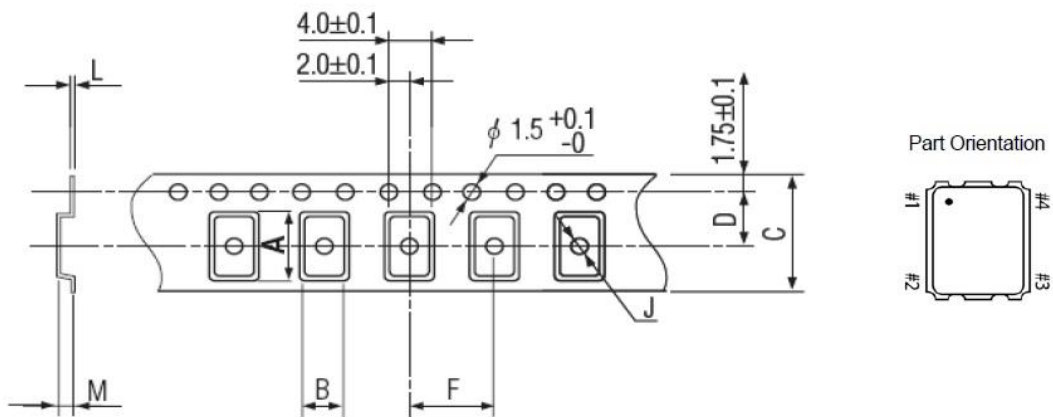


Figure 1) Suggested Reflow Profile

SOLDER PROFILE
Peak solder Temp +260°C Max 10 sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.8	2.3	8.0	3.5	4.0	1.0	0.25	1.1	180	1000pcs