

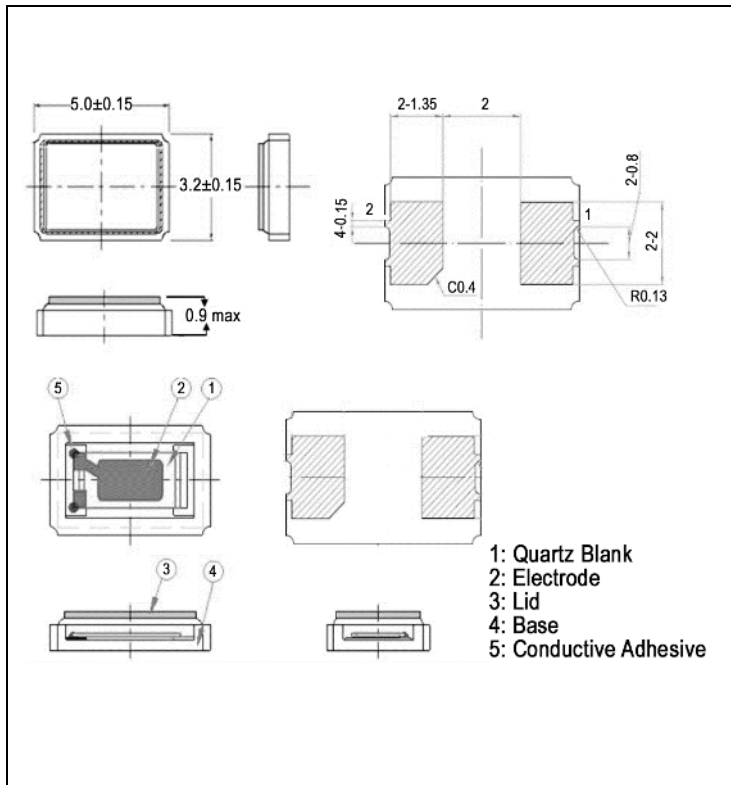
● **SPECIFICATIONS**

PARAMETER	VALUE
NOMINAL FREQUENCY	8.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±50 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±150 ppm max
OPERATING TEMPERATURE RANGE	-40°C to +150°C
STORAGE TEMPERATURE RANGE	-40°C to +150°C
AGING	±2 ppm per year max
LOAD CAPACITANCE	8 pF
EQUIVALENT SERIES RESISTANCE	100 Ω max
SHUNT CAPACITANCE	5 pF max
DRIVE LEVEL	500 μW max



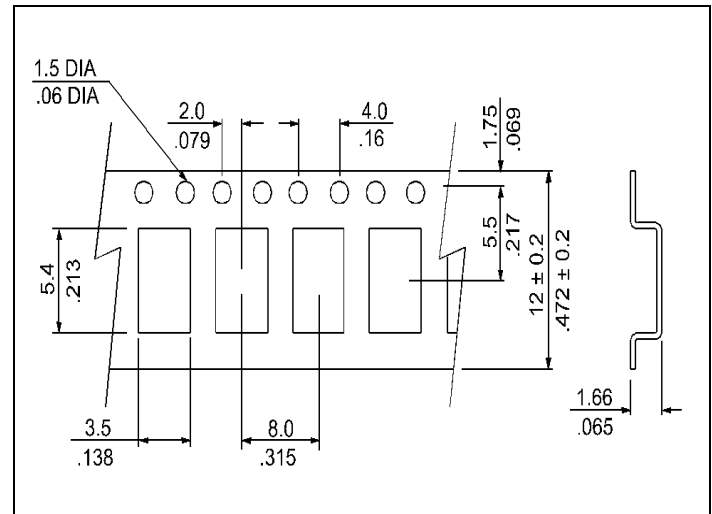
Photo is not actual part

● **MECHANICAL SPECIFICATION**



AEC-Q200 Qualified.

● **CARRIER TAPE DIMENSIONS**



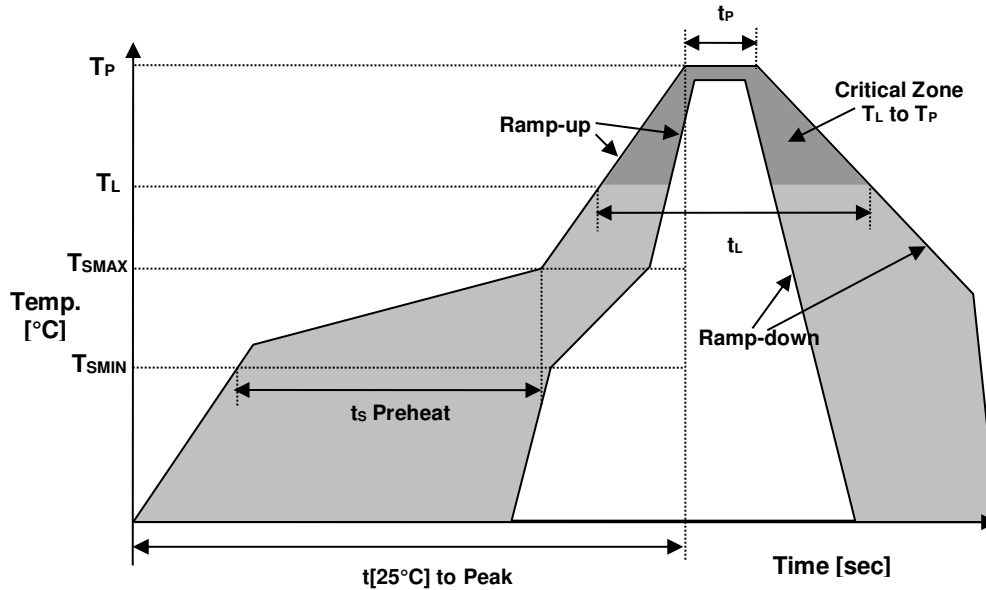
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● **PACKAGING**

178 mm REEL DIAMETER
12 mm TAPE WIDTH, 8 mm PITCH
QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

● REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_s	60-180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max.
Ramp-down rate	R_{DOWN}	6°C/sec max.
Time within 5°C of Peak Temperature	t_p	10 sec.
Time $t[25°C]$ to Peak Temperature	$t[25°C]$ to Peak	480 sec.
Time	t_L	60-150 sec.

● ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au



● **MARKING**

R8.000
xx8Byw

x – Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	Code
2015	5
2016	6
2017	7
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5

ALPHA WEEK CODE TABLE					
Week	Code	Week	Code	Week	Code
1	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

● **APPROVAL**

RALTRON	
DRAWN BY:	XLiu, October 7, 2019
APPROVED BY:	Jivens, October 7, 2019
REVISION:	A, Initial Release

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The process of manufacturing H130SA series of Automotive Grade Surface Mount Microprocessor Crystals is performed by using **Advanced Product Quality Planning (APQP)**. This technique defines and establishes the following actions:

- Product design activities communicating special characteristics to the process design activity, prior to design release, linking the DFMEA to PFMEA.
- Plan, acquire and install appropriate process equipment and tooling based on design tolerances provided by the customer. – CPPD (Collaborative Product Process Design)
- Assembly personnel communicating suggestions on better ways to assemble a product prior to the completion of the design of the product. – DFA/M (Design for Assembly and Manufacturing)
- Manufacturing or Process Engineering establishing adequate Quality Controls for features of a product or parameters of a process, which still risk potential failure. – Control Plan Methodology
- Performing Stability and Capability studies on special characteristics to understand the variation present and predict future performance. – SPC (Statistical Process Control and Process Capability)

Request for **Production Part Approval Process (PPAP)** documentation must be requested at time of order placement. Requests for part approval will be supported in official PPAP format and with documented results as requested at time of order placement. Actual measurements are taken of the parts produced and are used to complete the various test sheets of PPAP.

● NOTICE

If you intend to use our product referenced above in an automotive application that may result in loss of life or assets, please do not fail to advise us of your intention beforehand. The use of the listed part in those applications is not covered by warranty, and we will not be held accountable for any liability claims. We reserve the right to not supply parts in those circumstances.