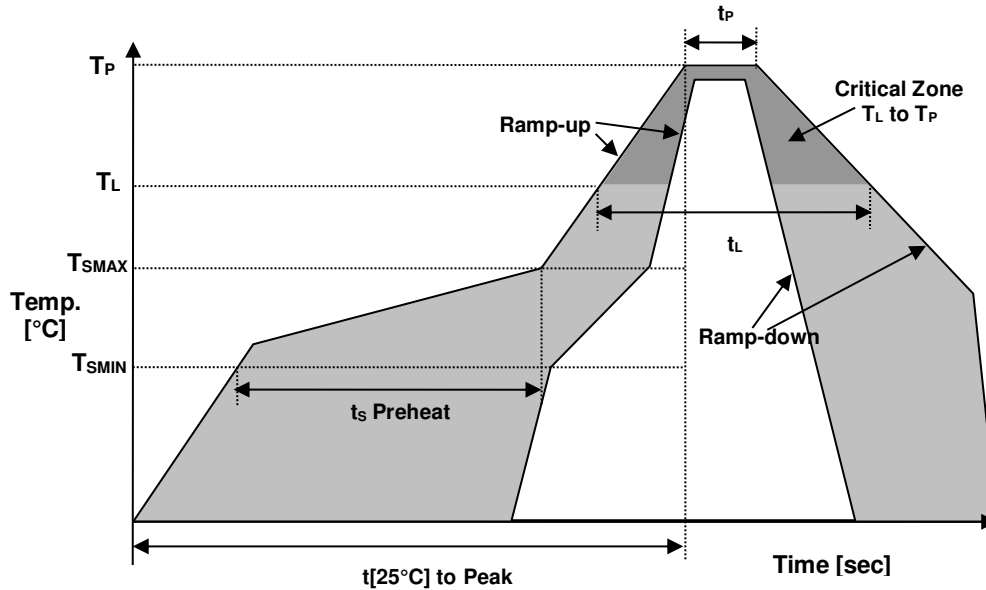




● REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	$T_{SMIN}$	125°C
Temperature Max Preheat	$T_{SMAX}$	150°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**

R08.00  
xxNyw

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

YEAR CODE	
Year	Code
2011	1
2012	2
2013	3
2014	4
2015	5
2016	6
2017	7
2018	8
2019	9

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:	KJackson, August 1, 2017
APPROVED BY:	JIvens, August 1, 2017
REVISION:	A, Initial Release

The process of manufacturing H130BA 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.