

● SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	12.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±30 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±50 ppm max
OPERATING TEMPERATURE RANGE	-20°C to +70°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
AGING	±5 ppm first year max
LOAD CAPACITANCE	20 pF
EQUIVALENT SERIES RESISTANCE	50 Ω max
SHUNT CAPACITANCE	7 pF max
DRIVE LEVEL	500 μW max
REFLOW CONDITIONS	260°C for 10 sec max

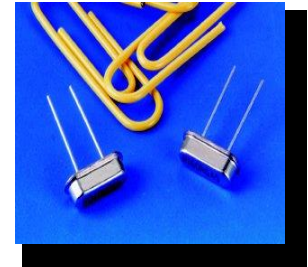
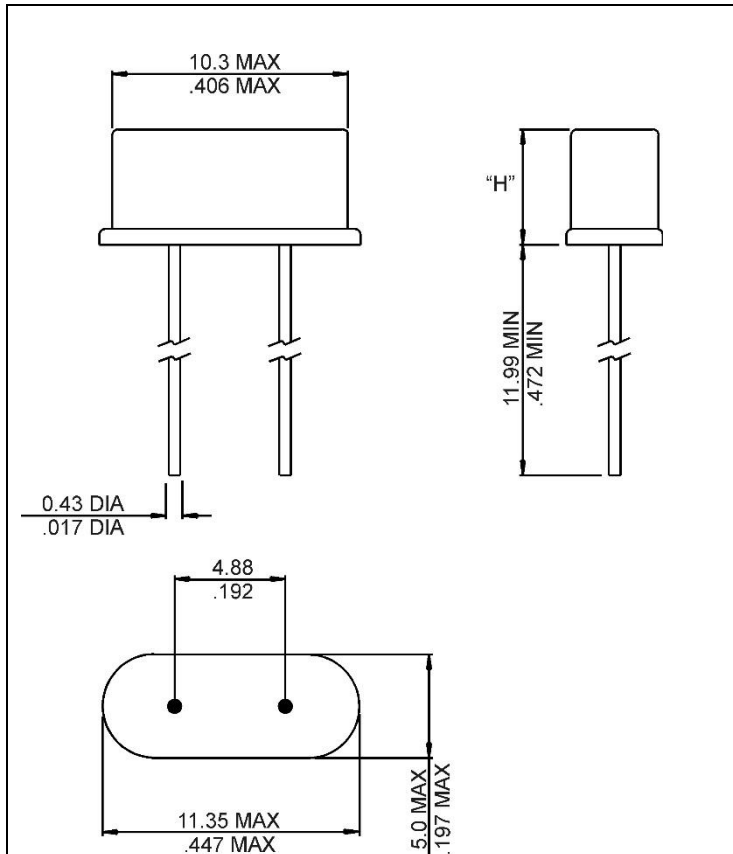


Photo is not actual part

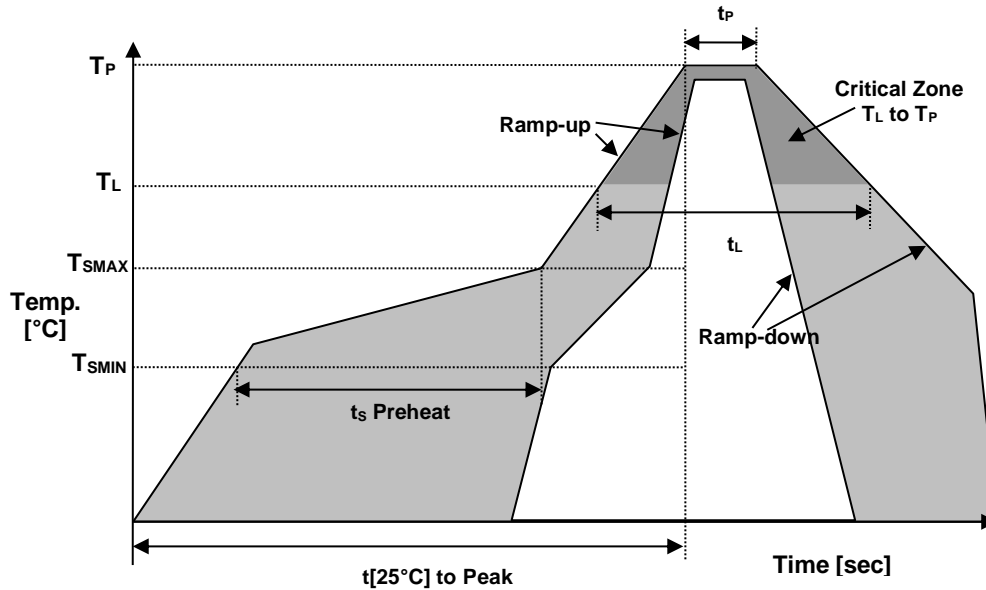
● MECHANICAL SPECIFICATION



H=3.5 mm



● 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
RoHS2	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Sn





A RAMI TECHNOLOGY Company

MARKING

R120xxAyw

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

YEAR CODE table with columns Year and Code, mapping years 2019-2029 to codes 9-0-9.

ALPHA WEEK CODE TABLE with columns Week and Code, mapping weeks 1-18 to codes a-r and weeks 19-36 to codes s-j.

APPROVAL

Approval table with rows for DRAWN BY, APPROVED BY, and REVISION, detailing dates and revision descriptions.

Raltron Electronics / RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet.

Copyright © 2016, Raltron Electronics / RAMI Technology USA, LLC. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Raltron Electronics / RAMI Technology USA, LLC.



A **RAMI TECHNOLOGY** Company

**LOW PROFILE  
MICROPROCESSOR CRYSTAL**

Page 4 of 4

**AS-12.000-20**