

#### LOW PROFILE MICROPROCESSOR CRYSTAL Page 1 of 3

### AS-4.000-18 Rev B

# SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	4.000 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 per year max
LOAD CAPACITANCE	18 pF
EQUIVALENT SERIES RESISTANCE	130 Ω max
SHUNT CAPACITANCE	5 pF max
DRIVE LEVEL	500 uW max
REFLOW CONDITIONS	260°C for 10 sec max

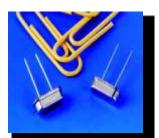
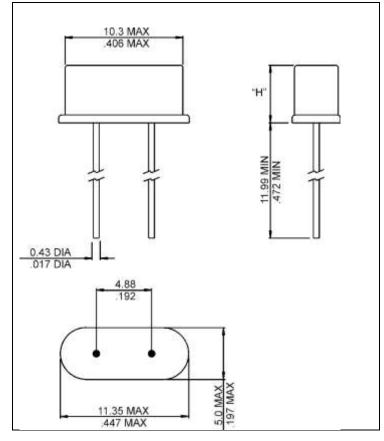


Photo is not actual part

# MECHANICAL SPECIFICATION

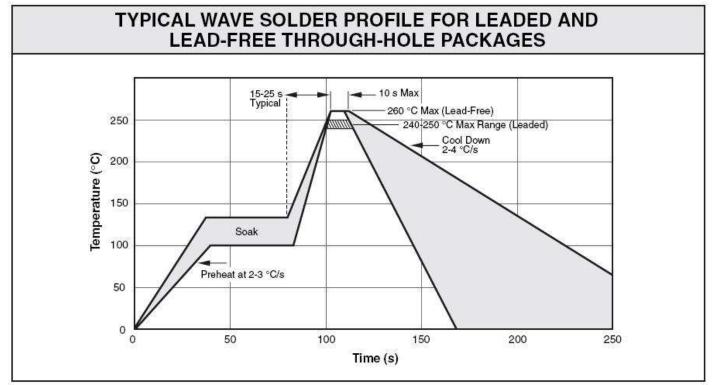






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### WAVE SOLDER PROFILE



Wave Solder profile				
Profile Feature	SnPb eutectic	Pb-Free		
Average ramp-up rate	~200°C/second	~200°C/second		
Heating Rate during preheat	typical 1-2°/second max 4°/second	typical 1-2°/second max 4°/second		
Final preheat temperature, Ts	~130°C	~130°C		
Peak temperature, T <sub>P</sub>	235°C	260°C		
Time within +0°C / -5°C of actual temperature, $t_P$	10 seconds	10 seconds		
Ramp-down rate	5°C/second max.	5°C/second max.		

NOTE: This document should serve as recommendation only. Other parameters may also affect soldering, this profile does not guarantee absolute success. Soldering profile should be determined by the equipment manufacturer and customers' process engineer.

# ENVIRONMENTAL

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





#### AS-4.000-18 Rev B

### MARKING

R040xxyw

- 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	а	19	s	37	K
2	b	20	t	38	L
3	с	21	u	39	М
4	d	22	v	40	Ν
5	e	23	w	41	0
6	f	24	х	42	Р
7	g	25	у	43	Q
8	h	26	z	44	R
9	i	27	А	45	S
10	j	28	В	46	Т
11	k	29	С	47	U
12	1	30	D	48	V
13	m	31	Е	49	W
14	n	32	F	50	Х
15	0	33	G	51	Y
16	р	34	Н	52	Z
17	q	35	I		
18	r	36	J		

### APPROVAL

DRAWN BY:	KJackson, February 19, 2018
APPROVED BY:	Jivens, February 19, 2018
REVISION:	A, Initial Release
	B. Updated solder profile to current
	spec levels AG 10/25/2018

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