

HC-49/U A-TYPE CRYSTAL

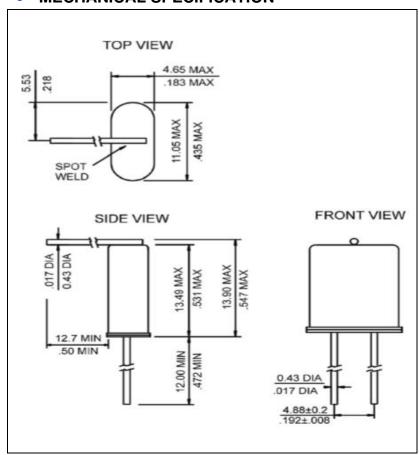
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A-4.000-30-3RD

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 first year max
LOAD CAPACITANCE	30 pF
EQUIVALENT SERIES RESISTANCE	80 Ω max
SHUNT CAPACITANCE	7 pF max
DRIVE LEVEL	100 μW typ, 1000 μW max
REFLOW CONDITIONS	260°C for 10 sec max

MECHANICAL SPECIFICATION





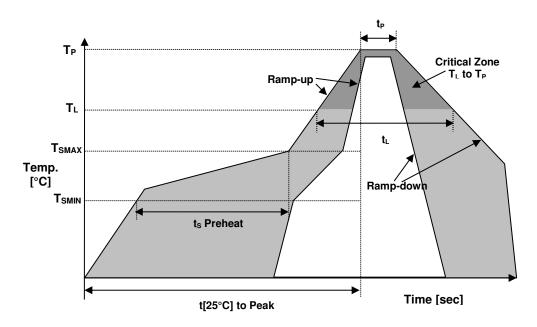


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REFLOW PROFILE



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	tL	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	Sn





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MARKING

4.000 30pF Ryyxxww

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	О
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	В	46	T
11	k	29	C	47	U
12	1	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	Н	52	Z
17	q	35	I		
18	r	36	J		

APPROVAL

DRAWN BY:	A, Initial Release, November 21, 2013
APPROVED BY:	A, Initial Release, November 21, 2013
REVISION:	B, Updated to current spec levels by
	YLi, May 7, 2020

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