

#### SURFACE MOUNT MICROPROCESSOR CRYSTAL

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#### H120B-24.000-18-3030-TR

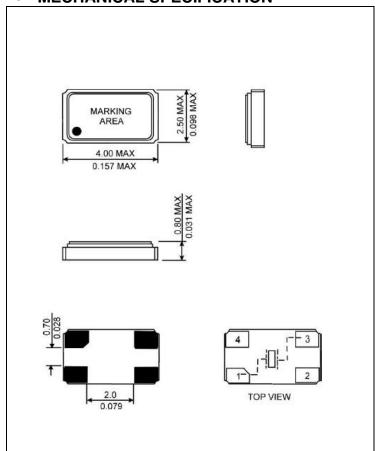
### SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	24.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±30 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±30 ppm max
OPERATING TEMPERATURE RANGE	-20°C to +70°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±2 ppm per year max
LOAD CAPACITANCE	18 pF
EQUIVALENT SERIES RESISTANCE	$60~\Omega$ max
SHUNT CAPACITANCE	7 pF max
DRIVE LEVEL	100 μW typ, 300 μW max

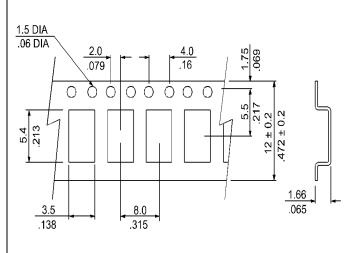


Photo is not actual part

# MECHANICAL SPECIFICATION



### CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS

# PACKAGING

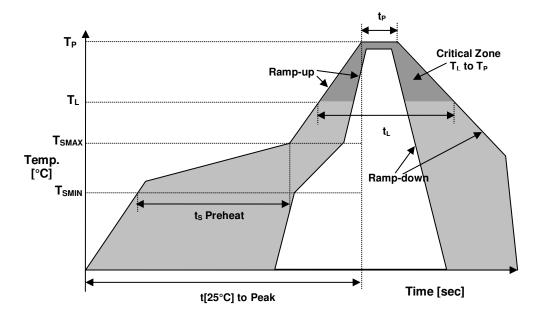
178 mm REEL DIAMETER 12 mm TAPE WIDTH, 8 mm PITCH QUANTITY: 1000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481



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### REFLOW PROFILE



Reflow profile				
Temperature Min Preheat	T <sub>SMIN</sub>	150°C		
Temperature Max Preheat	T <sub>SMAX</sub>	200°C		
Time (T <sub>SMIN</sub> to T <sub>SMAX</sub> )	t <sub>S</sub>	60-180 sec.		
Temperature	TL	217°C		
Peak Temperature	$T_P$	260°C		
Ramp-up rate	R <sub>UP</sub>	3°C/sec max.		
Ramp-down rate	R <sub>DOWN</sub>	6°C/sec max.		
Time within 5°C of Peak Temperature	t <sub>P</sub>	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	Au





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#### H120B-24.000-18-3030-TR

#### MARKING

R24.000 xBFyw

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	

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	у	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	О	33	G	51	Y
16	р	34	Н	52	Z
17	q	35	I		
18	r	36	J		

#### APPROVAL

RALTRON		
DRAWN BY:	A, Initial Release, September 9, 2010	
APPROVED BY:	A, Initial Release, September 9, 2010	
REVISION:	B, Updated to current spec levels by	
	XLiu, May 7, 2020	

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