

SURFACE MOUNT MICROPROCESSOR CRYSTAL

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H13-24.000-18-1020-EXT-TR

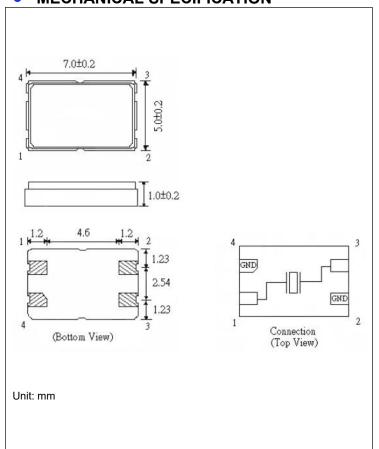
SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	24.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±10 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±20 ppm max
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±5 ppm per year max
LOAD CAPACITANCE	18 pF
EQUIVALENT SERIES RESISTANCE	40 Ω max
SHUNT CAPACITANCE	5 pF max
DRIVE LEVEL	300 μW max

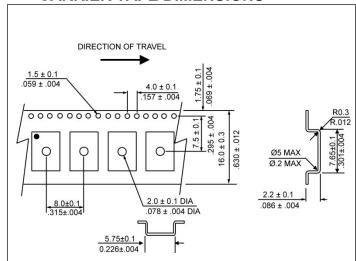


Photo is not actual pa

MECHANICAL SPECIFICATION



CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS

PACKAGING

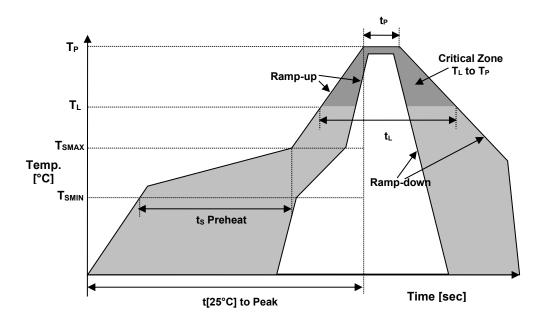
255 mm REEL DIAMETER 16 mm TAPE WIDTH, 8 mm PITCH QUANTITY: 1000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

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REFLOW PROFILE



Reflow profile				
Temperature Min Preheat	T _{SMIN}	150°C		
Temperature Max Preheat	T _{SMAX}	200°C		
Time (T _{SMIN} to T _{SMAX})	ts	60-180 sec.		
Temperature	TL	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





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MARKING

R24.000 xxBEyw

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	с	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	o	33	G	51	Y
16	p	34	Н	52	Z
17	q	35	I		
18	r	36	J		

APPROVAL

RALTRON	
DRAWN BY:	XLiu, January 31, 2019
APPROVED BY:	JIvens, January 31, 2019
REVISION:	A Initial Release

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