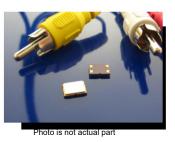


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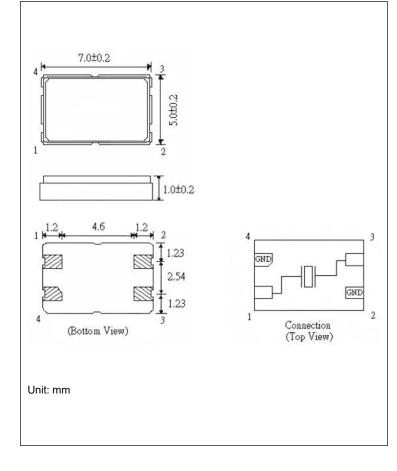
### H13-24.000-18-1020-EXT-TR

# • SPECIFICATIONS

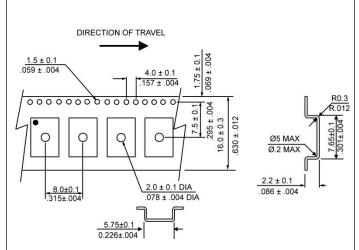
PARAMETER	VALUE
NOMINAL FREQUENCY	24.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±10 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±20 ppm max
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±5 ppm per year max
LOAD CAPACITANCE	18 pF
EQUIVALENT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



# 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

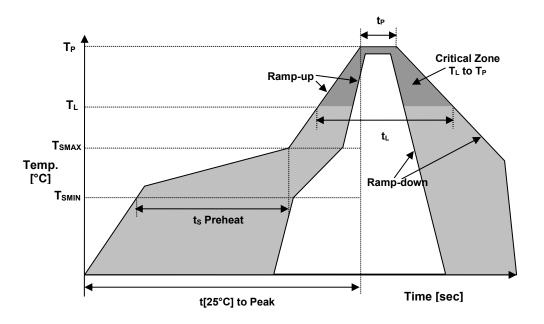


#### SURFACE MOUNT MICROPROCESSOR CRYSTAL

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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> )	ts	60-180 sec.		
Temperature	TL	217°C		
Peak Temperature	T <sub>P</sub>	260°C		
Ramp-up rate	RUP	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	t.	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





#### SURFACE MOUNT MICROPROCESSOR CRYSTAL

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#### H13-24.000-18-1020-EXT-TR

#### 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	а	19	s	37	K
2	b	20	t	38	L
3	с	21	u	39	М
4	d	22	v	40	Ν
5	е	23	w	41	0
6	f	24	х	42	Р
7	g	25	у	43	Q
8	ĥ	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	Ι		
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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