

#### SURFACE MOUNT CRYSTAL

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### R2520-12.000-12-2030-EXT-TR-NS1

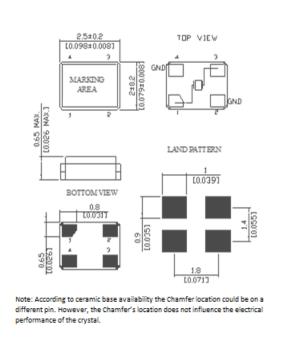
# **SPECIFICATIONS**

PARAMETER	VALUE
NOMINAL FREQUENCY	12.000 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
FREQUENCY STABILITY OVER TEMPERATURE	±30 ppm max
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±2 ppm first per year max
LOAD CAPACITANCE	12 pF
EQUIVALENT SERIES RESISTANCE	150 Ω max 🗢
SHUNT CAPACITANCE	3.5 pF max
DRIVE LEVEL	100 µW max
REFLOW CONDITIONS	260°C for 10 sec max

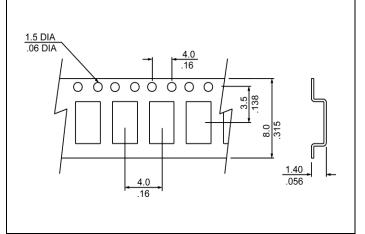


Photo is not actual part

## **MECHANICAL SPECIFICATION**



## **CARRIER TAPE DIMENSIONS**



NOTE: REFER TO EIA-481 FOR DIMENSIONS

#### PACKAGING

178 mm REEL DIAMETER 8 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

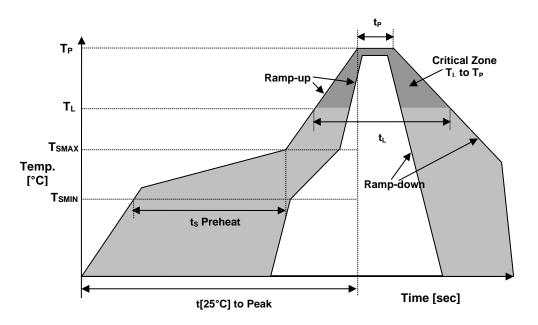


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# **REFLOW PROFILE**



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> )	ts	60-180 sec.	
Temperature	TL	217°C	
Peak Temperature	T <sub>P</sub>	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	tP	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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### MARKING

R12.000 xxKDyw

- xx Internal Production ID code
- y Year code
- w-Week code

YEAR CODE		
Year	Code	
2019	9	
2020	0	
2021	1	
2022	2	
2023	3	
2024	4	
2025	5	
2026	6	
2027	7	
2029	8	
2029	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	Ι		
18	r	36	J		

## APPROVAL

DRAWN BY	KJ, March 21, 2024
APPROVED BY	JI, March 21, 2024
REVISION	A, Initial Release

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