

#### AS-20.000-20-SMD-TR

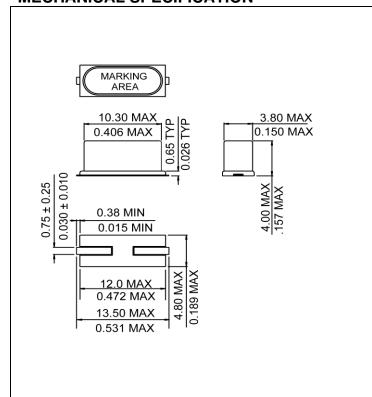
## **SPECIFICATIONS**

PARAMETER	VALUE
NOMINAL FREQUENCY	20.000 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	-40°C to +90°C
AGING	±5 ppm first year max
LOAD CAPACITANCE	20 pF
EQUIVALENT SERIES RESISTANCE	40 $\Omega$ max
SHUNT CAPACITANCE	5 pF max
DRIVE LEVEL	500 μ <b>W</b> max
REFLOW CONDITIONS	260°C for 10 sec max

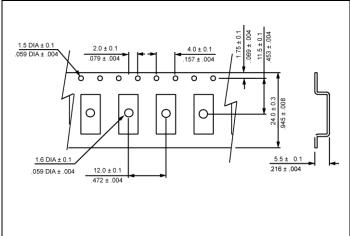


Photo is not actual par

## **MECHANICAL SPECIFICATION**



# **CARRIER TAPE DIMENSIONS**



**NOTE: REFER TO EIA-481 FOR DIMENSIONS** 

#### PACKAGING

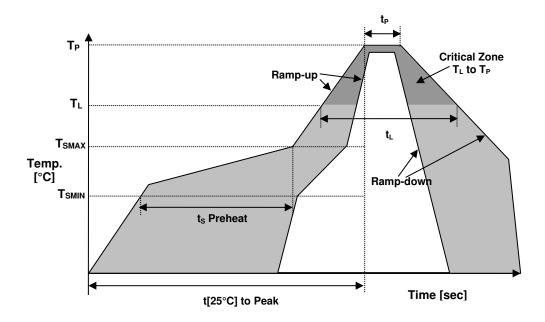
178 mm REEL DIAMETER 24 mm TAPE WIDTH, 4 mm PITCH QUANTITY: 1000 PIECES PER REEL

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	$T_{SMAX}$	200°C		
Time (T <sub>SMIN</sub> to T <sub>SMAX</sub> )	t <sub>S</sub>	60-180 sec.		
Temperature	T∟	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	t <sub>L</sub>	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





# LOW PROFILE MICROPROCESSOR CRYSTAL

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#### MARKING

R200xxAyw

x – 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	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	р	34	Н	52	Z
17	q	35	I		
18	r	36	J		

## APPROVAL

DRAWN BY:	KJackson, July 16, 2014
APPROVED BY:	KJackson, July 16, 2014
REVISION:	A, Initial Release
	B, Updated to current spec
	levels KJ 7/27/21

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