

## SURFACE MOUNT MICROPROCESSOR CRYSTAL

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### H10S-20.000-18-1010-TR

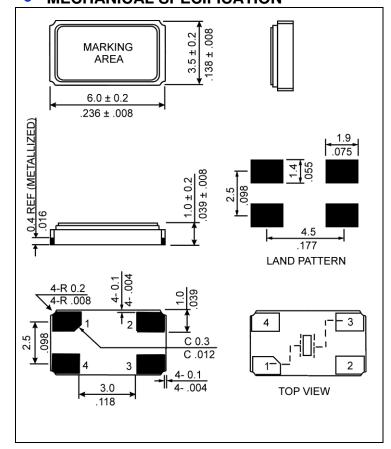
# SPECIFICATIONS

PARAMETER	VALUE	
NOMINAL FREQUENCY	20.000 MHz	
MODE OF OSCILLATION	Fundamental	
FREQUENCY TOLERANCE AT 25°C	±10 ppm max	
FREQUENCY STABILITY OVER TEMPERATURE	±10 ppm max	
OPERATING TEMPERATURE RANGE	-10°C to +60°C	
STORAGE TEMPERATURE RANGE	-40°C tp +85°C	
AGING	±2 ppm per year max	
LOAD CAPACITANCE	18 pF	
EQUIVALENT SERIES RESISTANCE	$50~\Omega$ max	
SHUNT CAPACITANCE	7 pF max	
DRIVE LEVEL	100 μW max	

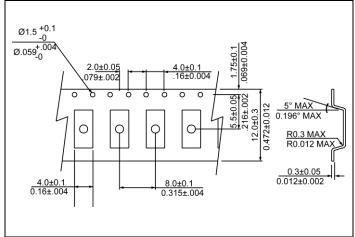


Photo is not actual part

# MECHANICAL SPECIFICATION



# CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS

### PACKAGING

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

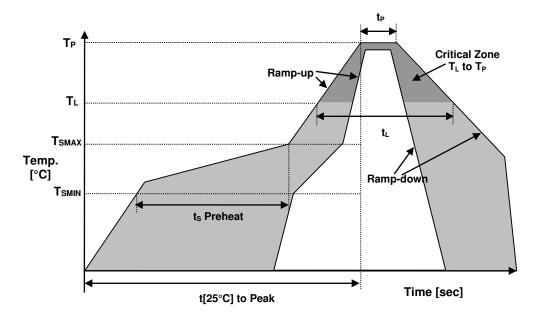
IN ACCORDANCE WITH EIA-481

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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> )	ts	60-180 sec.		
Temperature	$T_L$	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∟	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

R20.00 xxBFyw

x – Internal Production ID code

y – Year code

w - Week code

YEAR CODE		
Year	Code	
2011	1	
2012	2	
2013	3	
2014	4	
2015	5	
2016	6	
2017	7	
2018	8	
2019	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	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	p	34	Н	52	Z
17	q	35	I		
18	r	36	J		

#### APPROVAL

RALTRON		
DRAWN BY:	KJackson, February 23, 2017	
APPROVED BY:	JIvens, February 23, 2017	
REVISION:	A Initial Release	

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