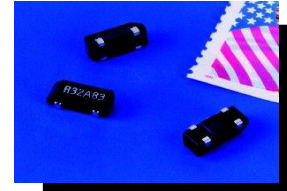
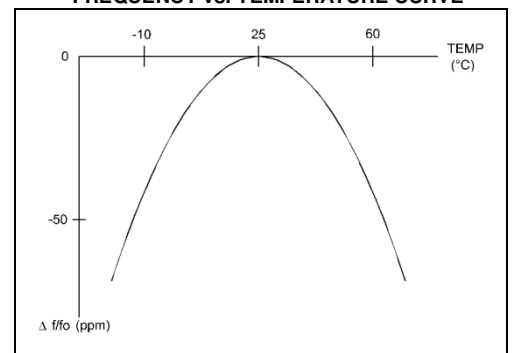


● SPECIFICATIONS

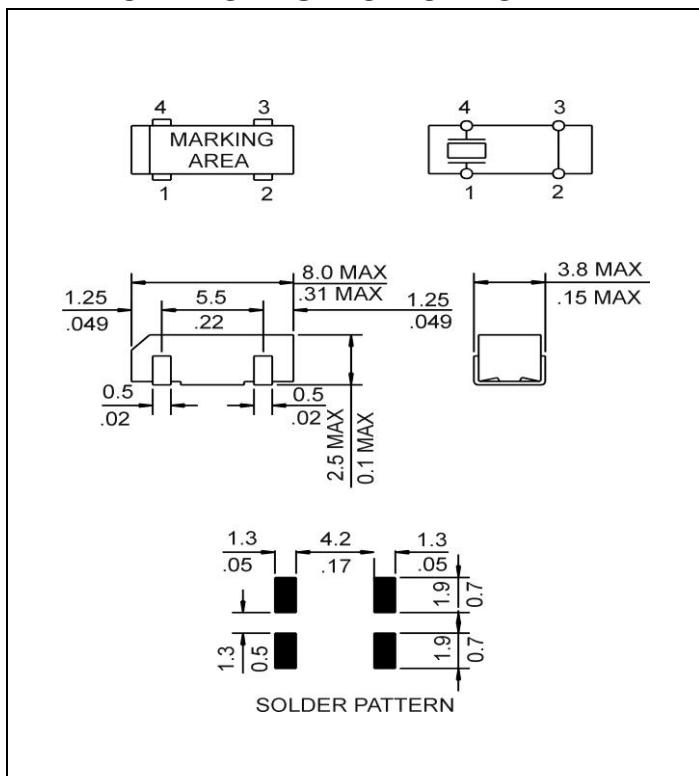
PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
TURNOVER TEMPERATURE	+25°C ±5°C
PARABOLIC CURVATURE CONSTANT	(-0.034 ±0.006) ppm/°C <sup>2</sup>
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
AGING	±5 ppm first year max
LOAD CAPACITANCE	6 pF
EQUIVALENT SERIES RESISTANCE	35 kΩ max
SHUNT CAPACITANCE	1.5 pF min
MOTIONAL CAPACITANCE	3 fF typ
CAPACITANCE RATIO	450 typ
DRIVE LEVEL	1 μW max
INSULATION RESISTANCE	500 MΩ min
REFLOW CONDITIONS	260°C for 10 sec max



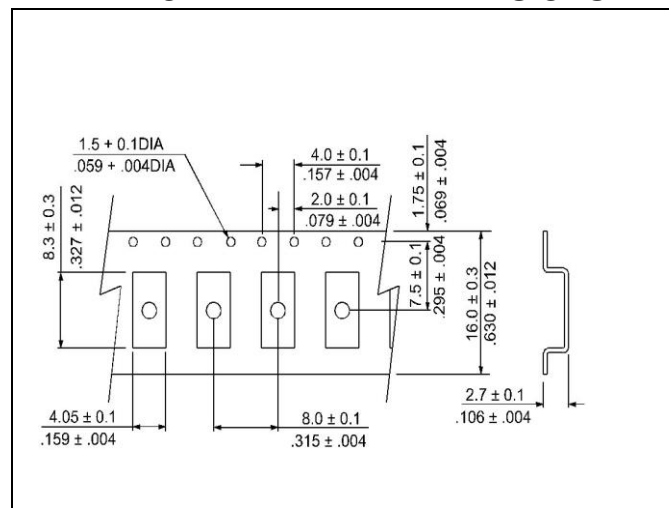
● FREQUENCY vs. TEMPERATURE CURVE



● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS



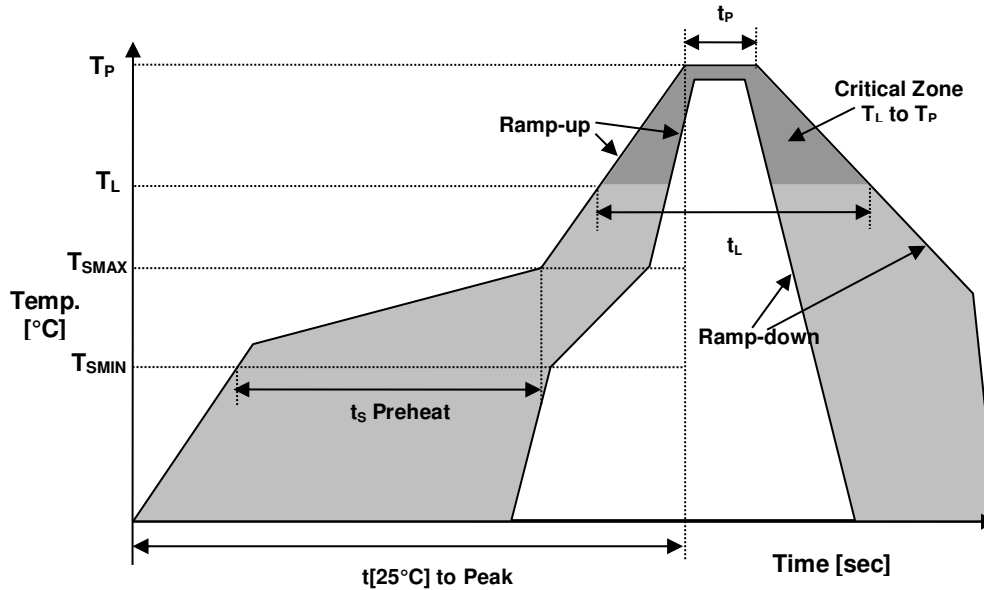
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

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

IN ACCORDANCE WITH EIA-481

● REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	$T_{SMIN}$	150°C
Temperature Max Preheat	$T_{SMAX}$	200°C
Time ( $T_{SMIN}$ to $T_{SMAX}$ )	$t_s$	60-180 s
Temperature	$T_L$	217°C
Peak Temperature	$T_P$	260°C
Ramp-up rate	$R_{UP}$	3°C/s max.
Ramp-down rate	$R_{DOWN}$	6°C/s max.
Time within 5°C of Peak Temperature	$t_p$	10 s
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 s
Time	$t_L$	60-150 s

● ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Sn



## MARKING

x3QmyR

x – Internal Production ID code  
m – Month code  
y – Year code

MONTH CODE	
MONTH	CODE
JANUARY	A
FEBRUARY	B
MARCH	C
APRIL	D
MAY	E
JUNE	F
JULY	G
AUGUST	H
SEPTEMBER	J
OCTOBER	K
NOVEMBER	L
DECEMBER	M

YEAR CODE	
Year	Code
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5
2026	6
2027	7
2028	8
2029	9

## APPROVAL

Drawn By:	FP, 12/02/11
Approved By:	FP, 12/02/11
Revision:	A, Initial Release B, Updated to current spec levels by XLiu, April 20, 2020

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