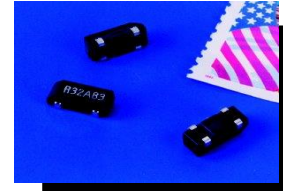
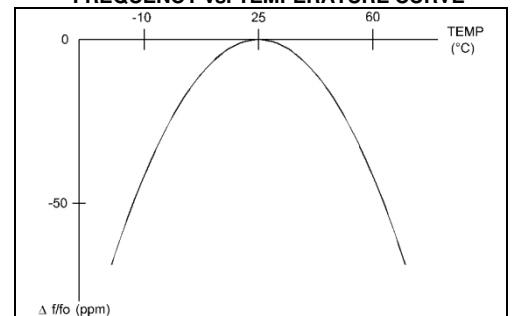


● SPECIFICATIONS

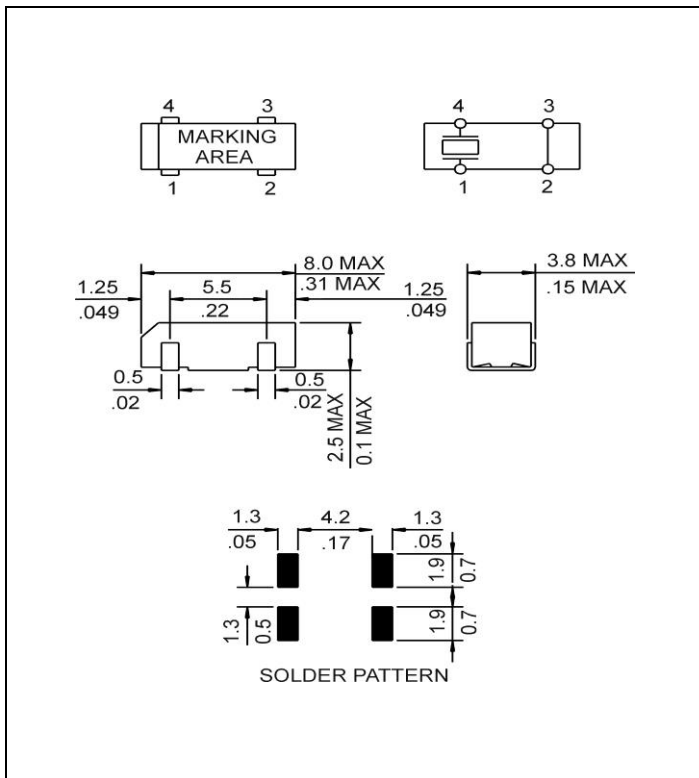
PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 KHz
FREQUENCY TOLERANCE AT 25°C	±15 PPM MAXIMUM
TURNOVER TEMPERATURE	+25°C ±5°C
PARABOLIC CURVATURE CONSTANT	(-0.034 ±0.006) PPM/°C <sup>2</sup>
OPERATING TEMPERATURE RANGE	-40°C TO +85°C
STORAGE TEMPERATURE RANGE	-55°C TO +125°C
AGING (FIRST YEAR)	±3 PPM MAXIMUM
LOAD CAPACITANCE	12.5 pF
EQUIVALENT SERIES RESISTANCE	50K OHMS MAXIMUM
SHUNT CAPACITANCE	1.35 pF TYPICAL
MOTIONAL CAPACITANCE	0.003 pF TYPICAL
CAPACITANCE RATIO	450 TYPICAL
DRIVE LEVEL	1 μW MAXIMUM
INSULATION RESISTANCE	500 MOHM MINIMUM



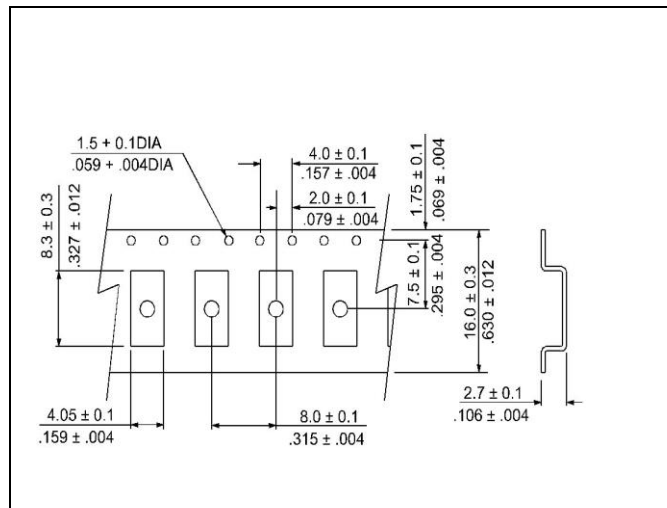
● FREQUENCY vs. TEMPERATURE CURVE



● MECHANICAL SPECIFICATION



● CARRIER TAPE DIMENSIONS



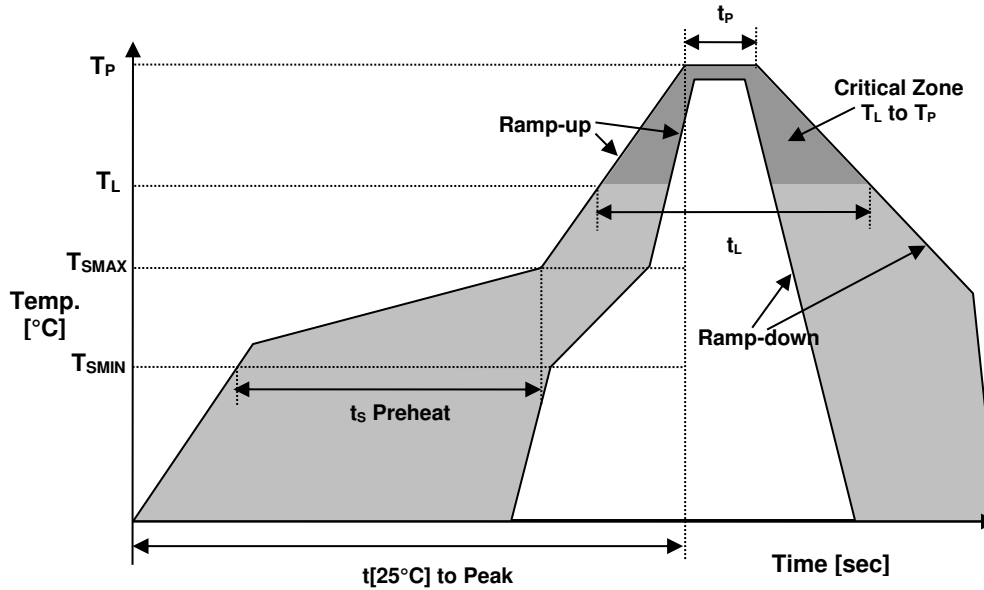
NOTE: REFER TO EIA-481 FOR DIMENSIONS

● PACKAGING

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

IN ACCORDANCE WITH EIA-481

● 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 sec.
Temperature	$T_L$	217°C
Peak Temperature	$T_P$	260°C
Ramp-up rate	$R_{UP}$	3°C/sec max.
Ramp-down rate	$R_{DOWN}$	6°C/sec max.
Time within 5°C of Peak Temperature	$t_p$	10 sec.
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 sec.
Time	$t_L$	60-150 sec.

● ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	5/6 – EXEMPTION 7A
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Sn
UNIT WEIGHT (GRAMS)	0.14



## ● MARKING

x3FmyR

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
2011	1
2012	2
2013	3
2014	4
2015	5
2016	6
2017	7
2018	8
2019	9

## ● APPROVAL

Drawn By:	FP, 16 April 2014
Approved By:	FP, 16 April 2014
Revision:	A, Initial Release