

• SPECIFICATIONS

PARAMETER	VALUE
NOMINAL FREQUENCY	32.768 kHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±20 ppm max
TURNOVER TEMPERATURE	+25 ± 5°C
TEMPERATURE COEFFICIENT	-0.04 ppm / °C ² max
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE RANGE	-55°C to +125°C
AGING	±3 ppm first year max
LOAD CAPACITANCE	9 pF
EQUIVALENT SERIES RESISTANCE	70 kΩ max
SHUNT CAPACITANCE	1.1 pF typ
DRIVE LEVEL	0.5 μW max
REFLOW CONDITIONS	260°C for 10 sec max
INSULATION RESISTANCE	500 MΩ min @ DC 100V

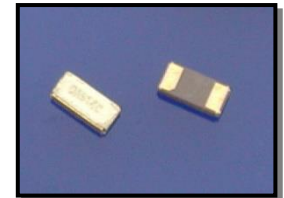
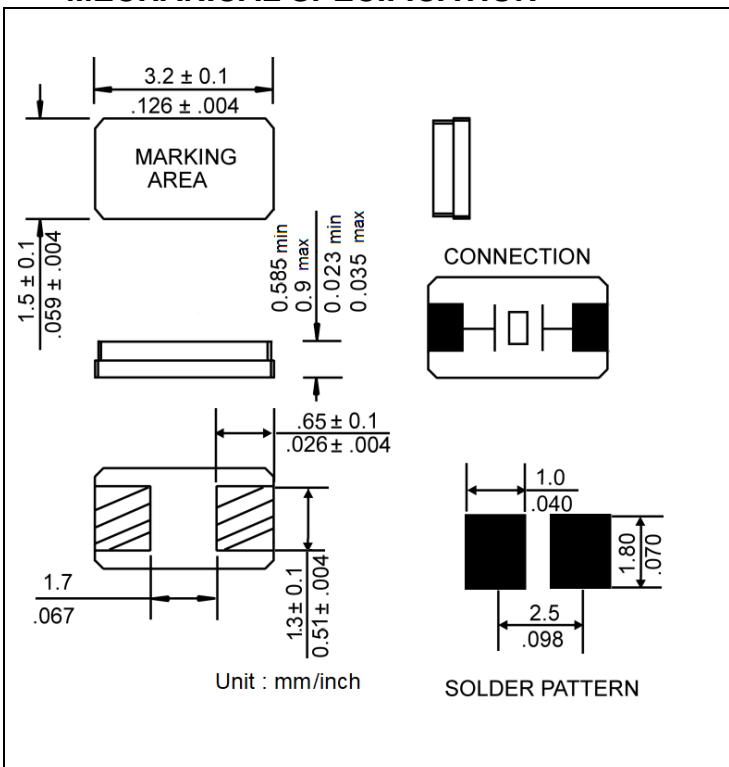
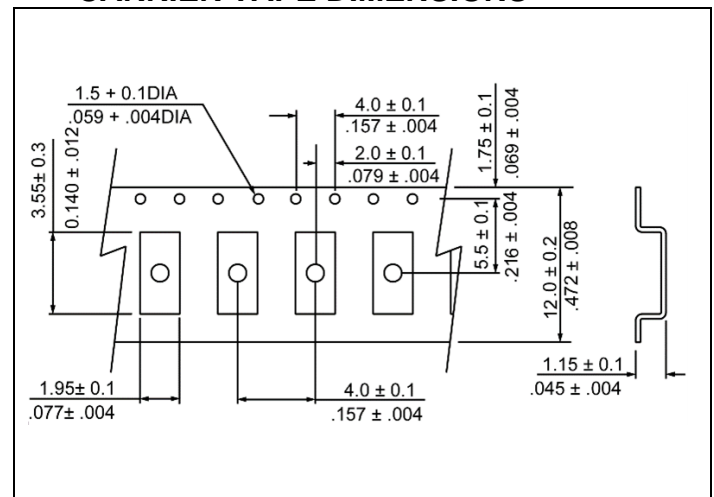


Photo not actual part

• MECHANICAL SPECIFICATION



• CARRIER TAPE DIMENSIONS



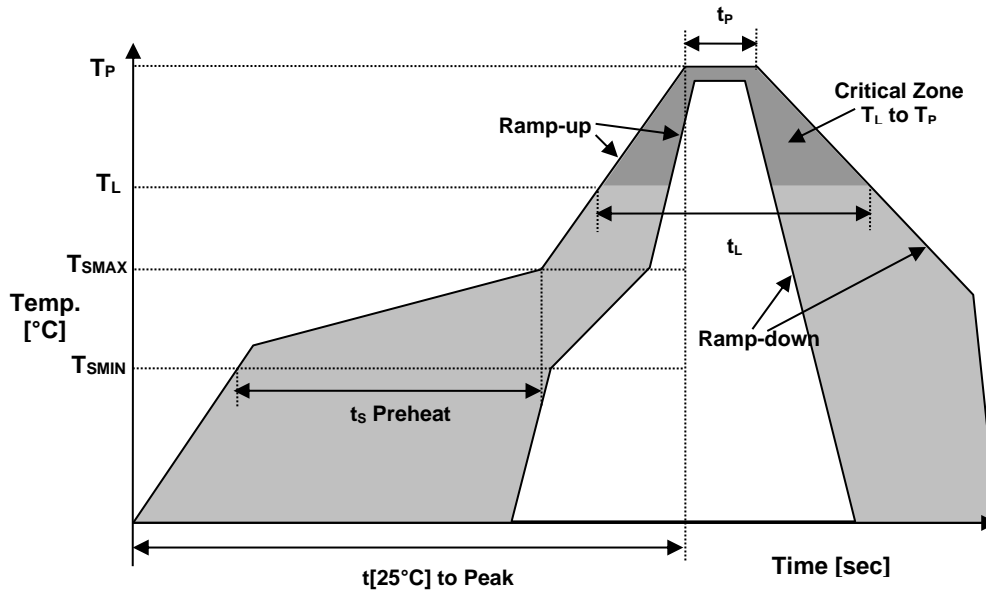
NOTE: REFER TO EIA-481 FOR DIMENSIONS

• PACKAGING

180 mm REEL DIAMETER
 12 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	Compliant
REACH SVHC	Compliant
HALOGEN-FREE	Compliant
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au



• MARKING

Xywwx

X – Internal Production ID code (J, R, T, Y, M, R, N)
y – Year code
ww – Week code
x – 1 or 2 digits as Lot code

ymxxx

y – Year code
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z
xxx – Lot code

XLzymb

X – Internal Production ID code (J, R, T, Y, M, R, N)
L – Load capacitance code (A: 12.5pF B: 9pF C: 7pF Z: others)
z – Lot code
y – Year code
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z
d – Day code

XzymF_{xx}^{xx}

X – Internal Production ID code (J, R, T, Y, M, R, N)
z – Frequency code
y – Year code
m – Month code, Jan ~ Sep: 1 ~ 9, Oct: X Nov: Y Dec: Z
_{xx} – Lot code



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● APPROVAL

Drawn By:	KJackson, Sept. 15, 2014
Approved By:	KJackson, Sept. 15, 2014
Revision:	A, Initial Release B: CP, February 05,2016; Corrected Tape Width to12mm; Peak Temperature 260°C C: KJ 5/15/17 Updated to current spec levels D, Updated to current spec levels by XLiu, August 20, 2019 E, Updated to current spec levels by XLiu, May 21, 2020 F, AR January 07, 2021 Updated the Carrier Tape Dimensions

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