



A Product Line of
Diodes Incorporated



SPECIFICATION FOR APPROVAL

CUSTOMER _____

NOMINAL FREQUENCY _____ 32.768 KHz

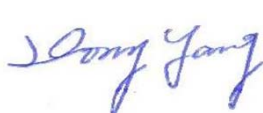
PRODUCT TYPE _____ **TYPE G9 SMD CRYSTAL**

SPEC. NO. (P/N) _____ G9327A013

CUSTOMER P/N _____

ISSUE DATE _____ Apr.22,2019

VERSION _____ A

APPROVED	PREPARED	QA
		

Diodes Incorporated

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*Pb-free
*RoHS Compliant
*HF-Halogen Free
*REACH Compliant

TYPE G9 SMD CRYSTAL

G9327A013

VER. A 22-Apr-19

VERSION HISTORY

Version No.	Version Date	Description	Notes
A	Apr.22,2019	Initial Release	

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ELECTRICAL SPECIFICATIONS

SRe Part Number : G9327A013

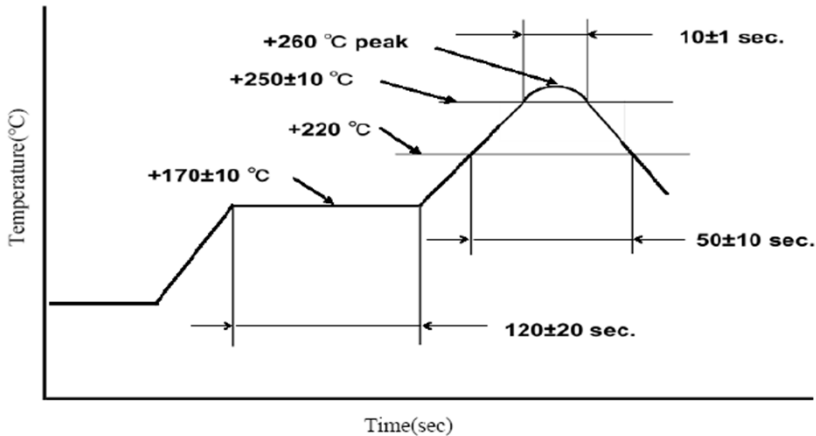
Parameters	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	32.768	KHz	
Frequency Tolerance	FT	± 20	ppm	at 25 °C ± 5 °C
Load Capacitance	CL	9	pF	
Drive Level	DL	0.1 / 0.5	μW	Typ. / Max.
Equivalent Series Resistance	ESR	90	KΩ	Max.
Shunt Capacitance	C0	1.3	pF	Typ.
Temperature Coefficient	K	-0.03	ppm/°C ²	± 0.01ppm/°C ²
Operating Temperature Range	TR	-40 to +85	°C	
Storage Temperature Range		-55 to +125	°C	
Aging		± 3	ppm	Max 1st year
Insulation Resistance		500	MΩ	Min.

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RELIABILITY SPECIFICATIONS

No.	Test Item	Conditions	Specification
1	Dry Heat	85°C*500h Other procedures conform to JIS C60068-2-2	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
2	Damp Heat	85°C, 85%RH*500h Other procedures conform to JIS C60068-2-3.	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
3	Cold	-40°C*500h Other procedures conform to JIS C60068-2-1.	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
4	Thermal Shock	-25°C*30min, 80°C*30min, 20 cycles Other procedures conform to JIS C60068-2-1.	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
5	Vibration	Amplitude 1.5mm, 10 to 60Hz, 2~3min X,Y,Z each directions 2h, Total 6h Other procedures conform to JIS C60068-2-6.	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
6	Shock	75cm*3 times Other procedures conform to JIS C 60068-2-31	Δf : within ± 10 ppm ΔCl : within $\pm 15k\Omega$
7	Resistance to Soldering Heat	Reflow condition 	Δf : within ± 10 ppm ΔCl : within $\pm 20k\Omega$
8	Solderability	245±5°C*5sec	At least 90%, covered by fresh solder.

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Marking

B y m v ##

B
CL Code

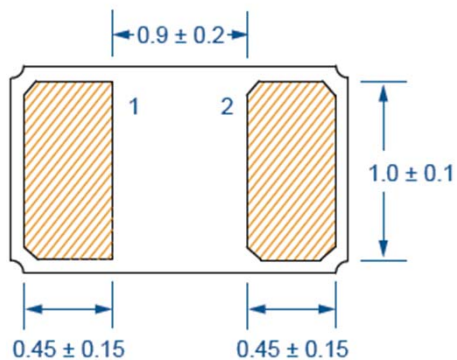
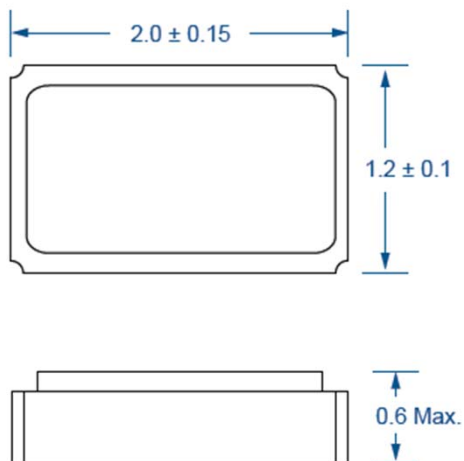
y
Year Code

m
Month Code

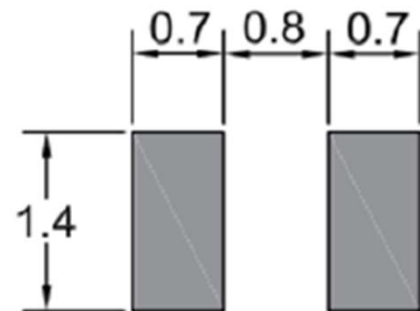
v
Factory Code

Internal Use Code

Dimensions (Units: mm)



Recommended Land Pattern



Internal connection

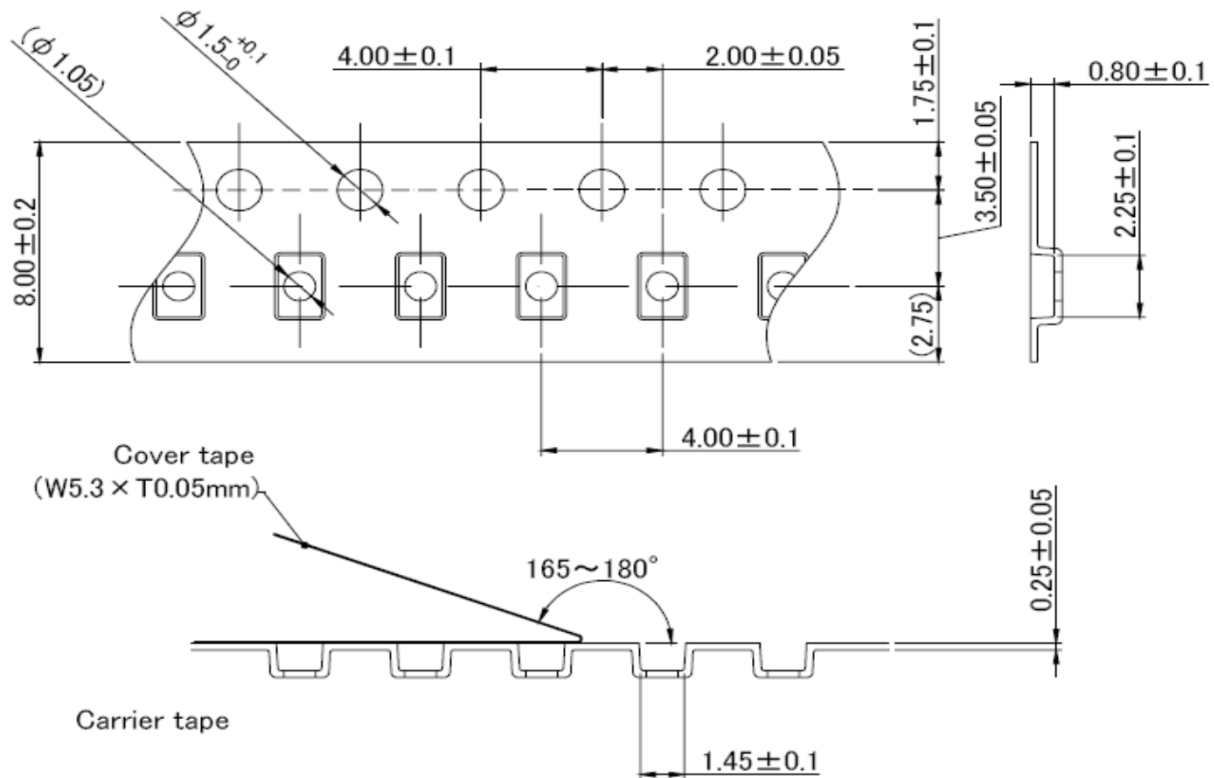


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TAPING



REEL

