



A Product Line of
Diodes Incorporated



SPECIFICATION FOR APPROVAL

CUSTOMER _____

NOMINAL FREQUENCY 32.768 KHz



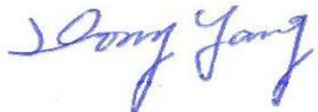
PRODUCT TYPE TYPE G8 3.2x1.5 SMD CRYSTAL

SPEC. NO. (P/N) G8327A047

CUSTOMER P/N _____

ISSUE DATE Apr.26,2019

VERSION A

APPROVED	PREPARED	QA
		

Diodes Incorporated

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*Pb-free

*RoHS Compliant

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ELECTRICAL SPECIFICATIONS

SRe Part Number : G8327A047

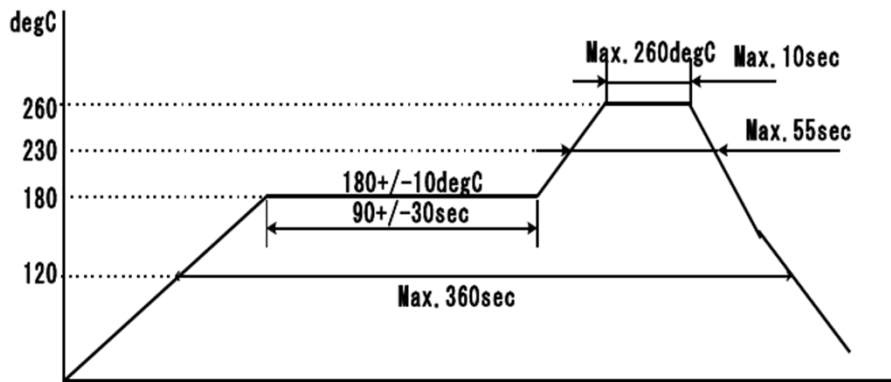
Parameters	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	32.768	KHz	
Frequency Tolerance	FT	± 20	ppm	at 25 °C ± 5 °C
Load Capacitance	CL	9	pF	
Drive Level	DL	0.1 / 0.5	μW	Typ. / Max.
Equivalent Series Resistance	ESR	70	KΩ	Max.
Temperature Coefficient	K	-0.03	ppm/°C ²	± 0.01ppm/°C ²
Operating Temperature Range	TR	-40 to +85	°C	
Shunt Capacitance	C0	0.95	pF	Typ.
Aging		± 3	ppm	Max. 1st year
Storage Temperature Range		-55 to 125	°C	
Insulation Resistance		500	MΩ	Min.

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RELIABILITY SPECIFICATIONS

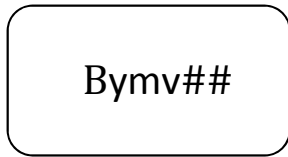
No.	Test Item	Conditions	Specification
1	Dry Heat	85°C*500h Other procedures conform to JIS C60068-2-2	Δf:within ±10ppm ΔCl:within ±20% or ±15kΩ
2	Damp Heat	65°C, 95%RH*500h Other procedures conform to JIS C60068-2-3.	Δf:within ±10ppm ΔCl:within ±20% or ±15kΩ
3	Cold	-40°C*500h Other procedures conform to JIS C60068-2-1.	Δf:within ± 5ppm ΔCl:within ±20% or ±15kΩ
4	Thermal Shock	-40°C*30min, 100°C*30min, 5 cycles Other procedures conform to JIS C60068-2-1.	Δf:within ±5ppm ΔCl:within ±20% or ±15kΩ
5	Vibration	10 to 500Hz 1.5mm or 10G 1.5min X,Y,Z each directions 2h, Total 6h Other procedures conform to JIS C60068-2-6.	Δf:within ±5ppm ΔCl:within ±20% or ±15kΩ
6	Shock	75cm*3 times Other procedures conform to JIS C60068-2-31	Δf:within ±5ppm ΔCl:within ±20% or ±15kΩ
7	Strength	Weight 9.8N on the center of sample with R 0.5 bar 10 seconds.	No visible damage
8	Resistance to Soldering Heat	Reflow condition 	Δf:within ±10ppm ΔCl:within ±20% or ±15kΩ
9	Solderability	230±5°C*5±0.5sec	At least 90%, covered by fresh solder.
10	Leakage Test	Helium leakage detector	1×10 ⁻² μPa · m ³ /s

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Marking



B
CL Code

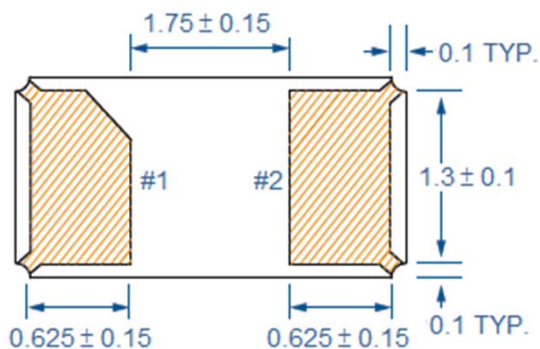
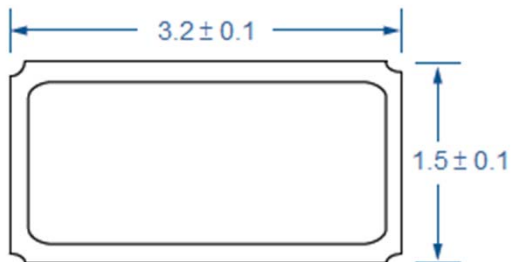
y
Year Code

m
Month Code

v
Factory Code

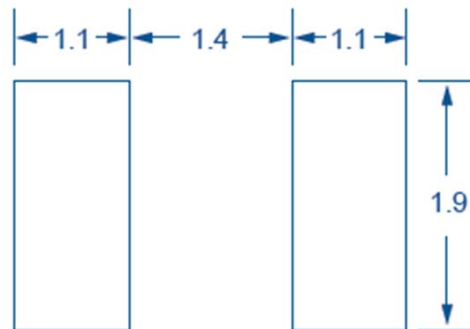
Internal Use Code

Dimensions (Units: mm)

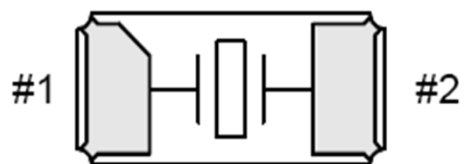


Bottom View

Recommended Land Pattern



Internal connection



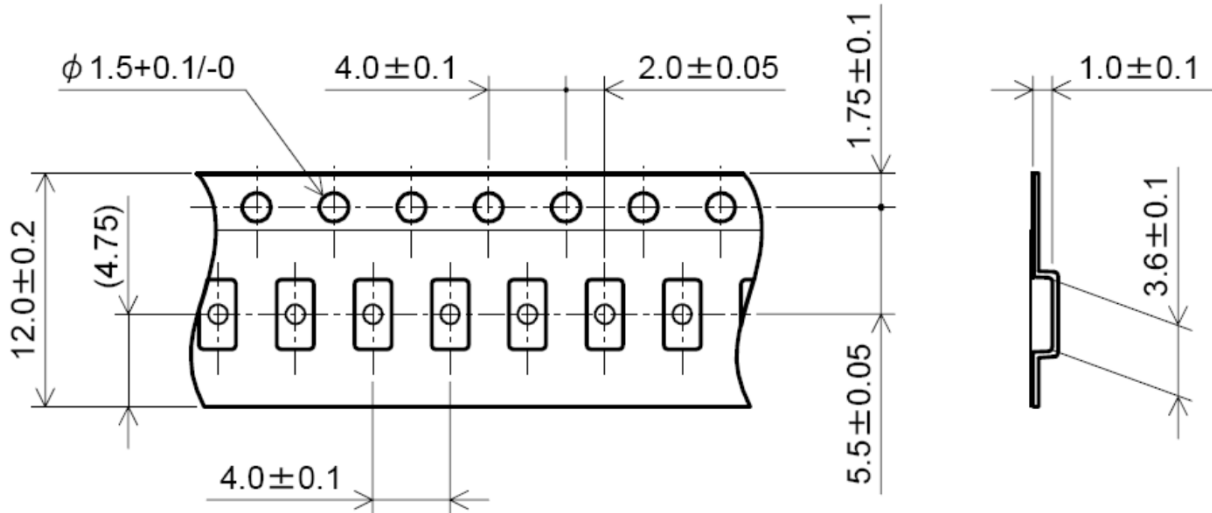
Bottom View

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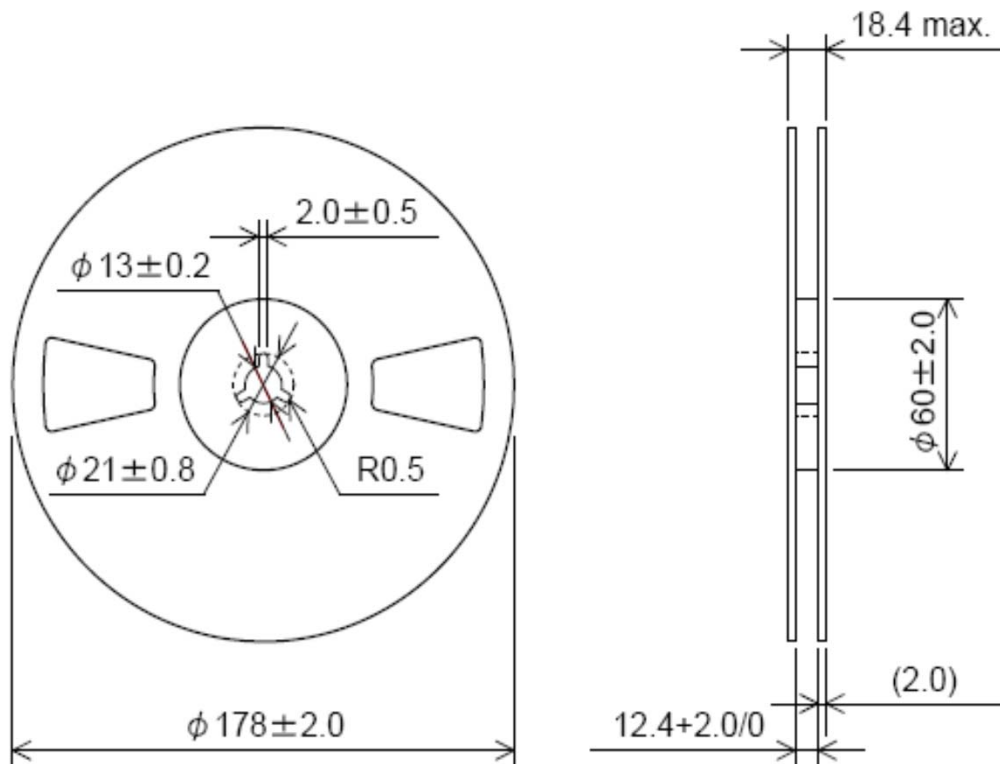
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TAPING (Units: mm)



REEL (Units: mm)



Quantity : 3000pcs / Reel