

S1ZB60-7072

Bridge Diodes

600V, 0.8A

Feature

- Small SMD (There is also DIP)
- High Reliability
- Pb free terminal
- RoHS:Yes

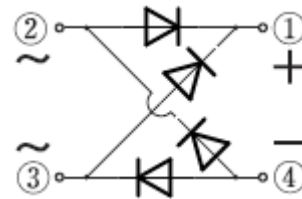
OUTLINE

Package (House Name): 1Z

Package (JEDEC Code): TO-269AA



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-40 to 150	°C
Junction temperature	Tj		-40 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		600	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Tl=117°C	0.8	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	0.8	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.5	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C	30	A
Current squared time	I ² t	1ms ≤ tp < 10ms, Tj=25°C, per diode	4.5	A ² s

※ : See the original Specifications

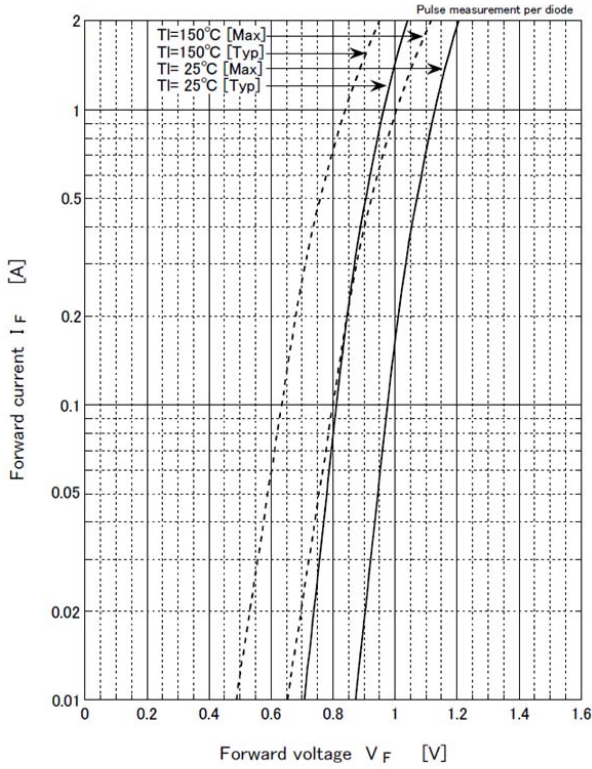
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	$I_F=0.4A$, Pulse measurement, per diode			1.05	V
Reverse current	I_R	$V_R=600V$, Pulse measurement, per diode			10	μA
Thermal resistance	$R_{th(j-l)}$	Junction to lead			20	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate *			76	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate *			134	$^{\circ}C/W$

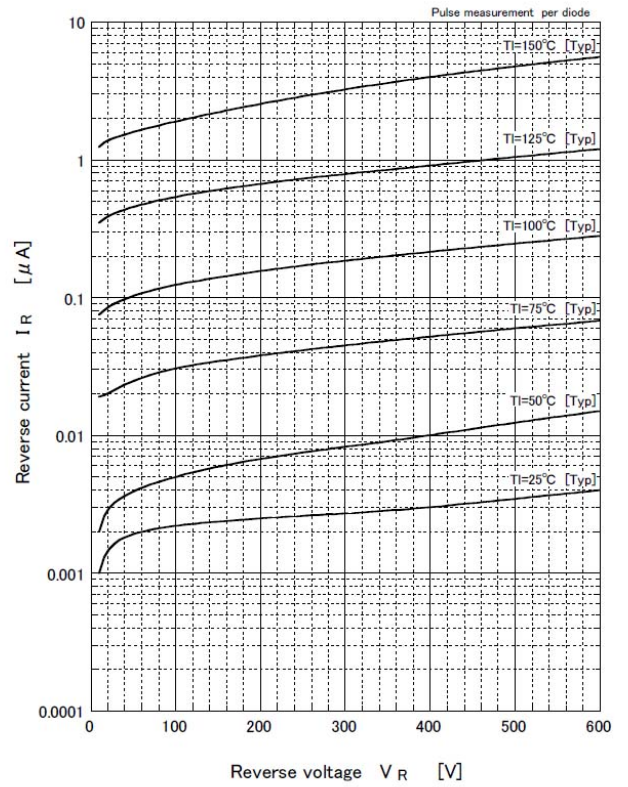
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

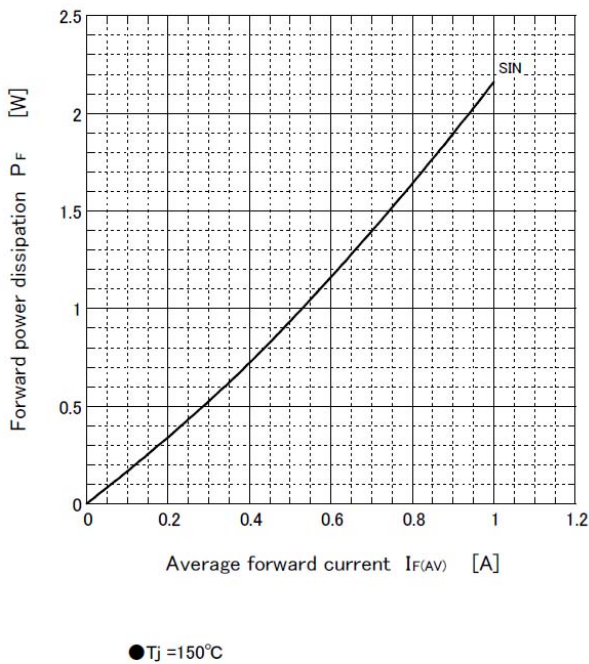
Forward voltage



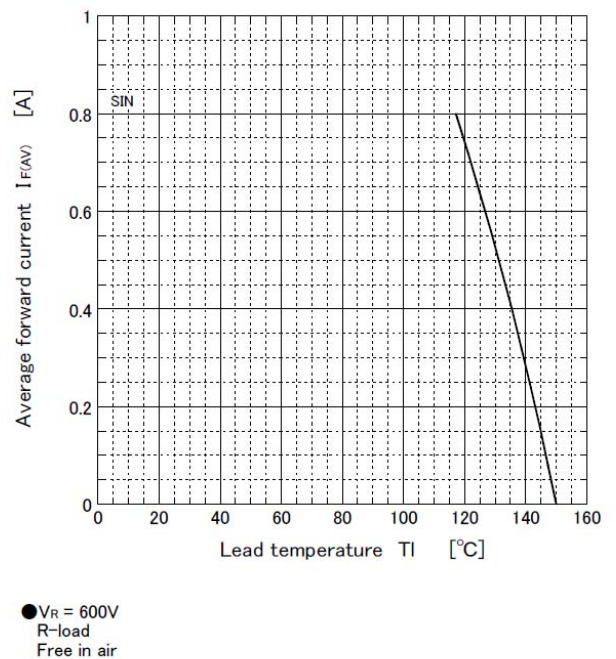
Reverse current



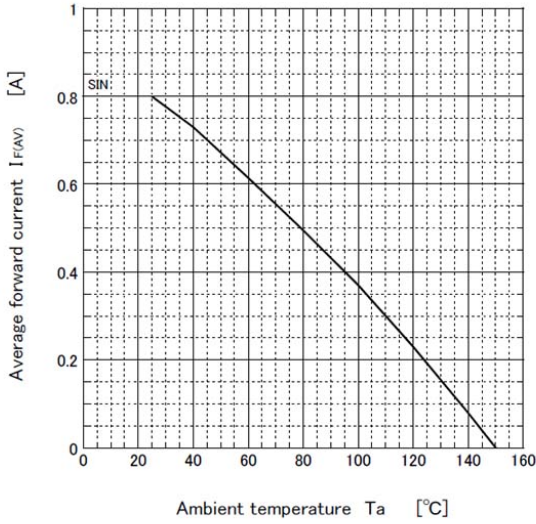
Forward power dissipation



Derating curve



Derating curve

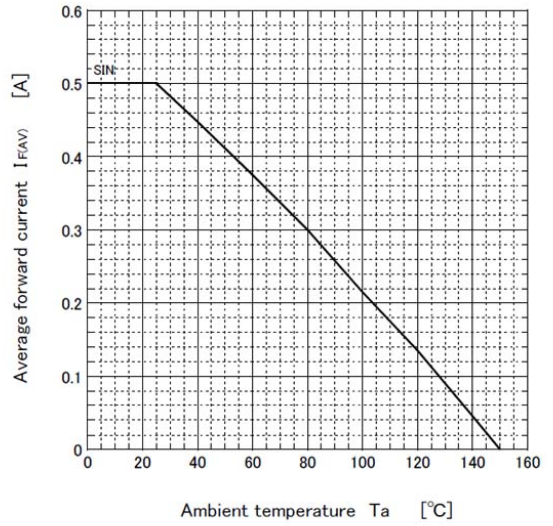


● $V_R = 600V$
R-load
Free in air

● Substrate detail

Type	Alumina
Size	1inch ²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	33mm ²

Derating curve

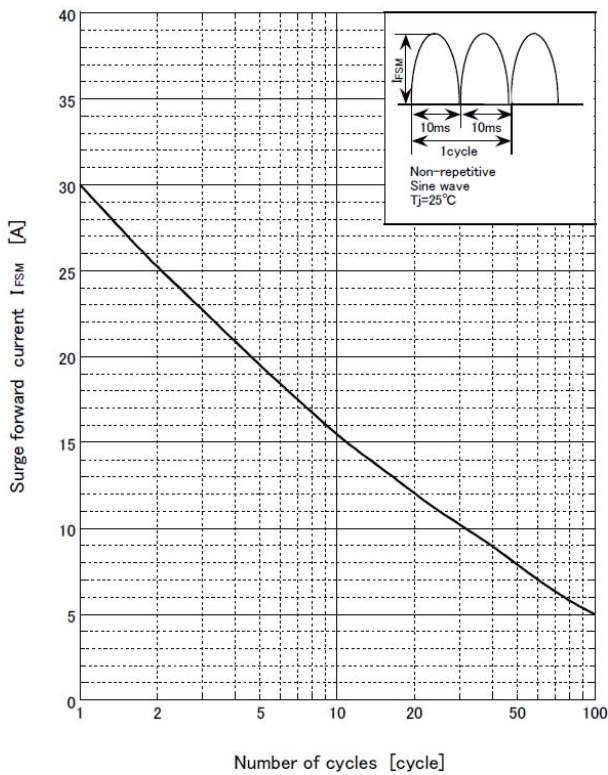


● $V_R = 600V$
R-load
Free in air

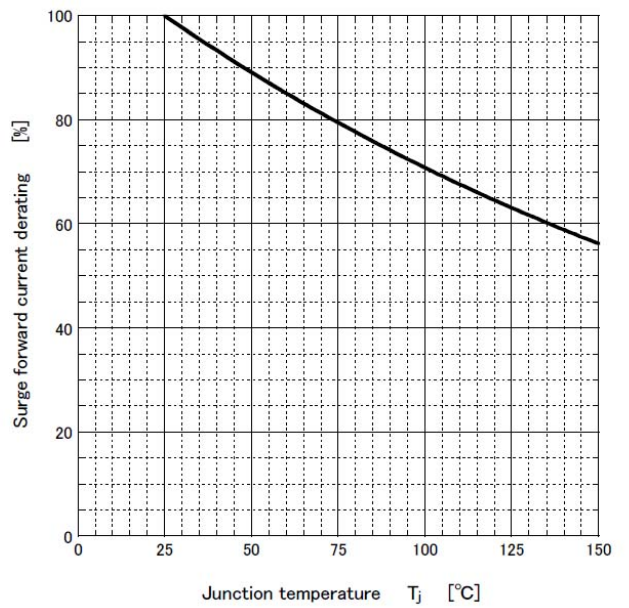
● Substrate detail

Type	Glass-epoxy
Size	1inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	33mm ²

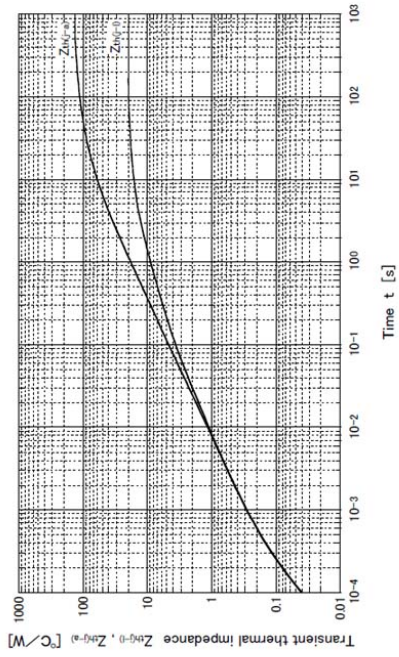
Surge forward current capability



Surge forward current derating vs Junction temperature



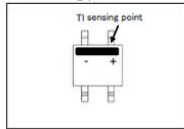
Transient thermal impedance



● Substrate detail

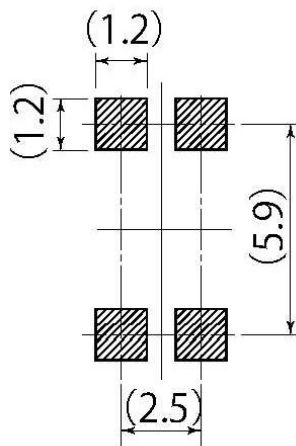
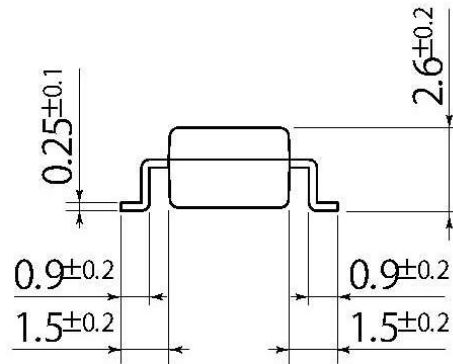
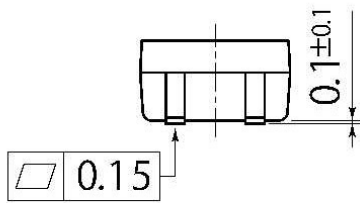
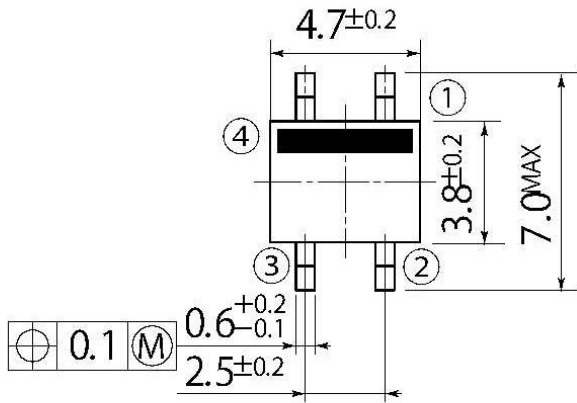
Type	Glass-epoxy
Size	1inch ²
Thickness	1mm
Conductor thickness	35μm
Pattern area	33mm ²

● TI sensing point



C2

JEDEC Code	TO-269AA
JEITA Code	-
House Name	1Z(SMD)



Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

Notes

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