ShinDengen

D45JCT120V

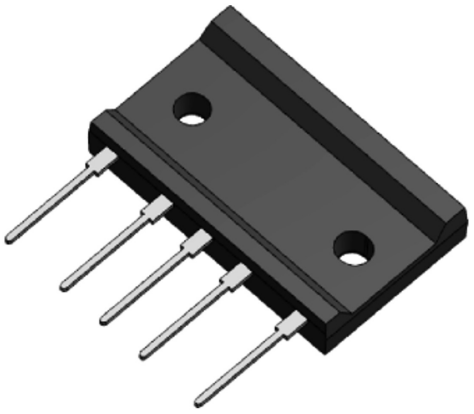
Bridge Diodes
1200V, 45A

Feature

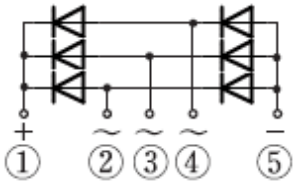
- Compact SIP
- UL E142422
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): JC(5pin)



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-40 to 150	°C
Junction temperature	Tj		-40 to 150	°C
Repetitive peak reverse voltage	V_{RRM}		1200	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, With heatsink, Tc=99°C	45	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	4.6	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, per diode, Tj=25°C	450	A
Surge forward current	I_{FSM1}	tp=1ms, sine wave, Non-repetitive, peak value, per diode, Tj=25°C	1423	A
Current squared time	I^2t	1ms≦t＜10ms, Tj=25°C, per diode	1013	A^2s
Dielectric strength	Vdis	Terminals to case, AC 1 minute, Except top (opposite side of the terminal side) of the mold case	2.5	kV
Mounting torque	TOR	(Recommended torque : 1.2N･m)	1.5	N･m

※ ：See the original Specifications

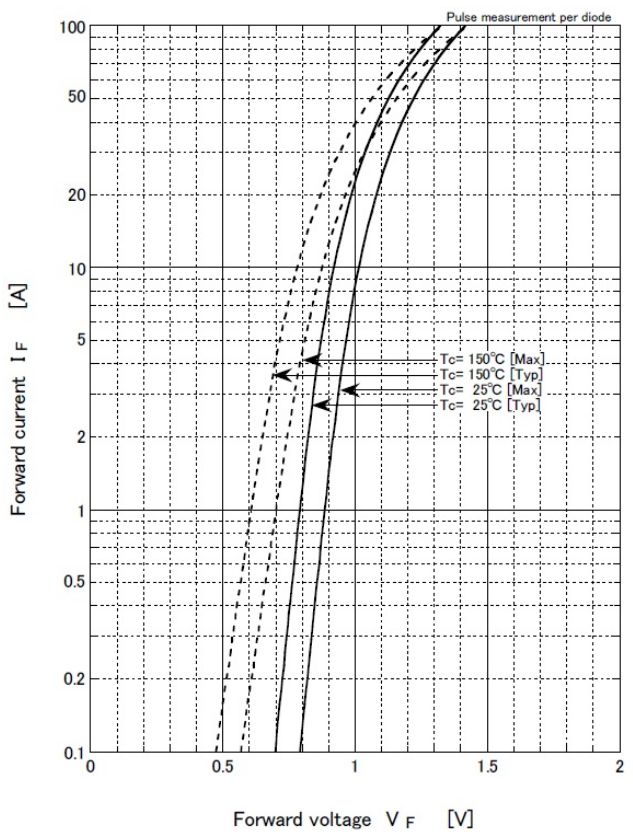
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement, per diode			1.05	V
Reverse current	I_R	VR=1200V, Pulse measurement, per diode			10	μA
Thermal resistance	Rth(j-c)	Junction to case ,With heatsink			0.5	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			16	°C/W

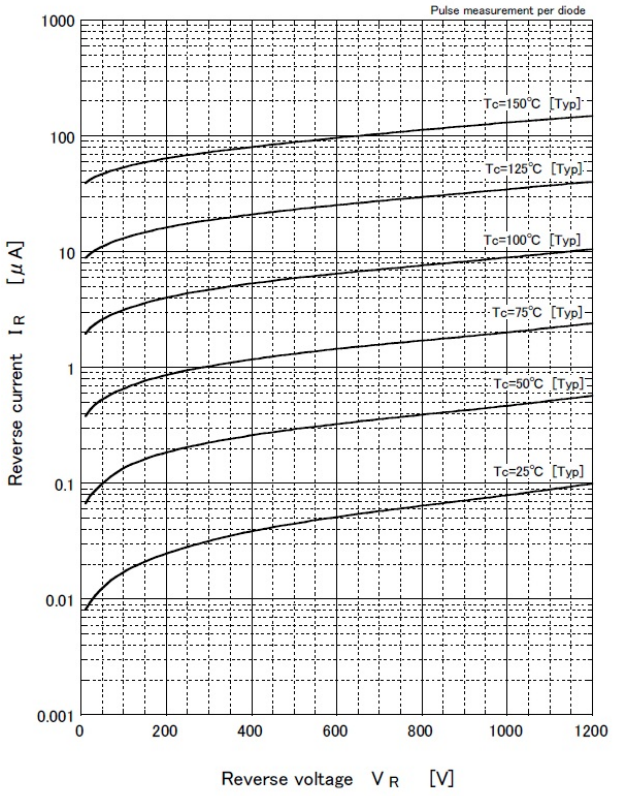
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

Forward voltage

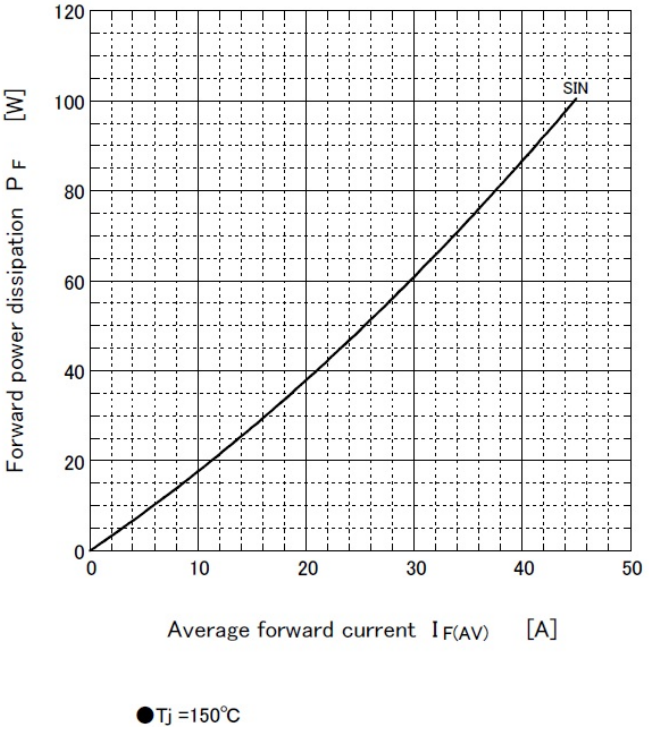


Reverse current



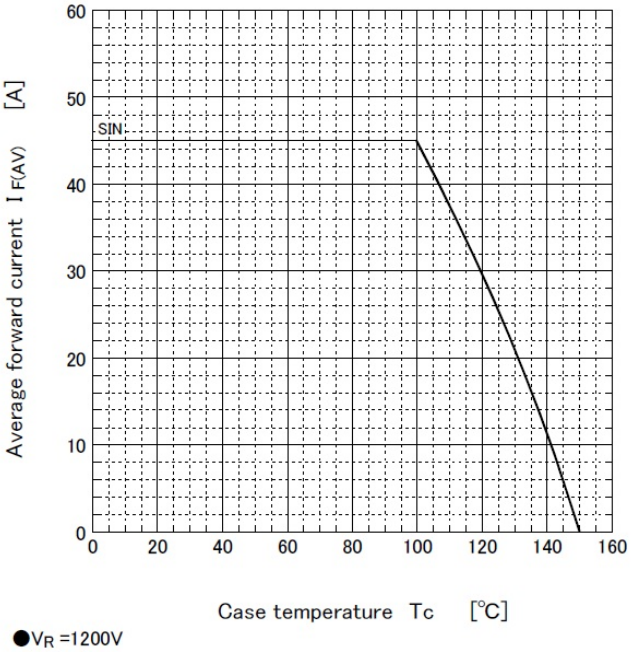
Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

Forward power dissipation



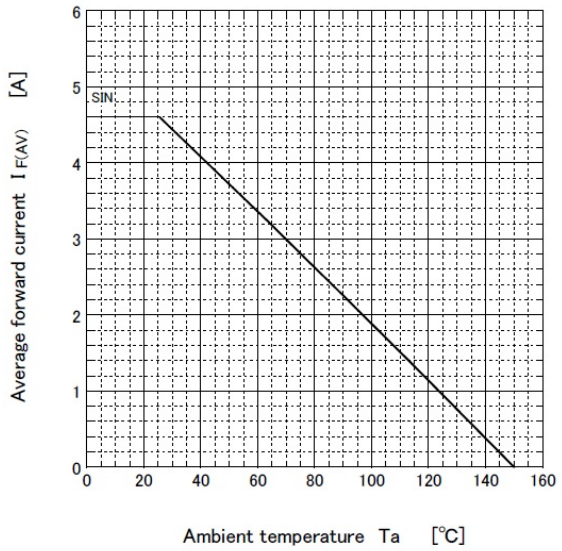
●Tj =150℃

Derating curve



●V_R =1200V
R-load
With heatsink

Derating curve

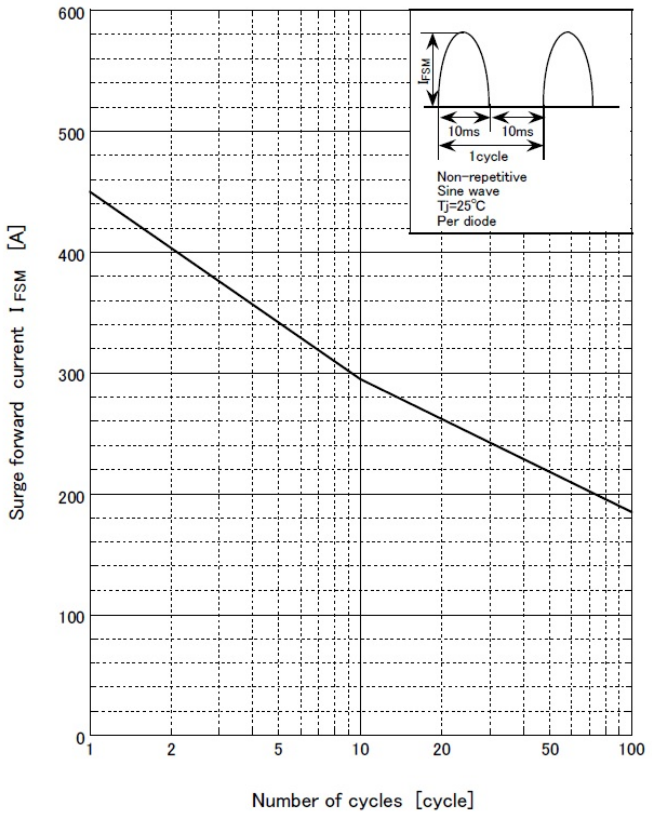


●V_R = 1200V
R-load
Free in air

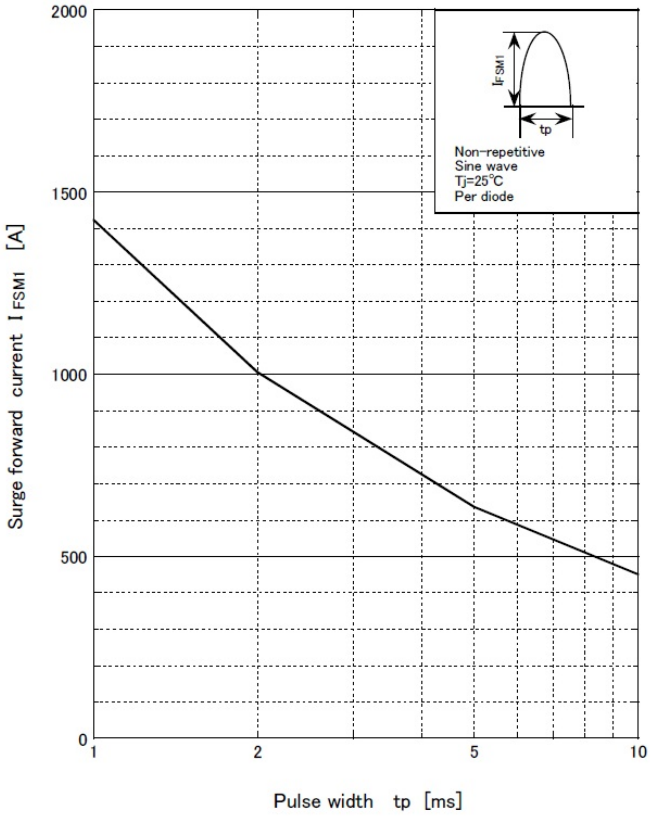
●Substrate detail

Type	Glass-epoxy
Size	150mm×90mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	1383mm²

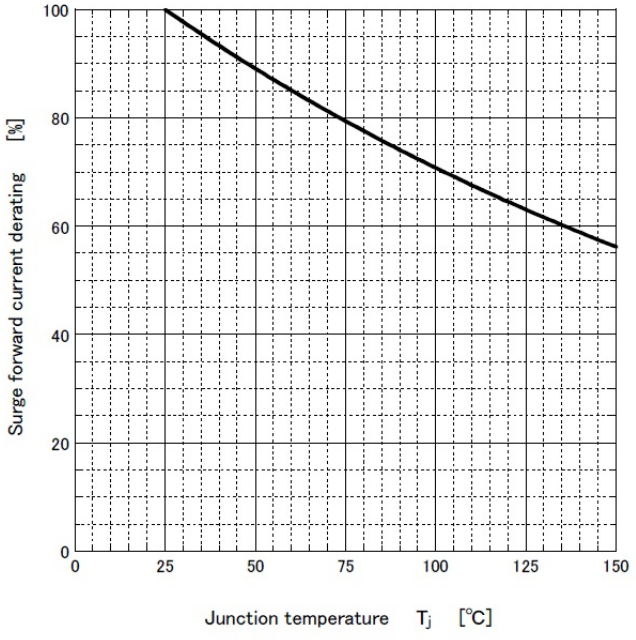
Surge forward current capability

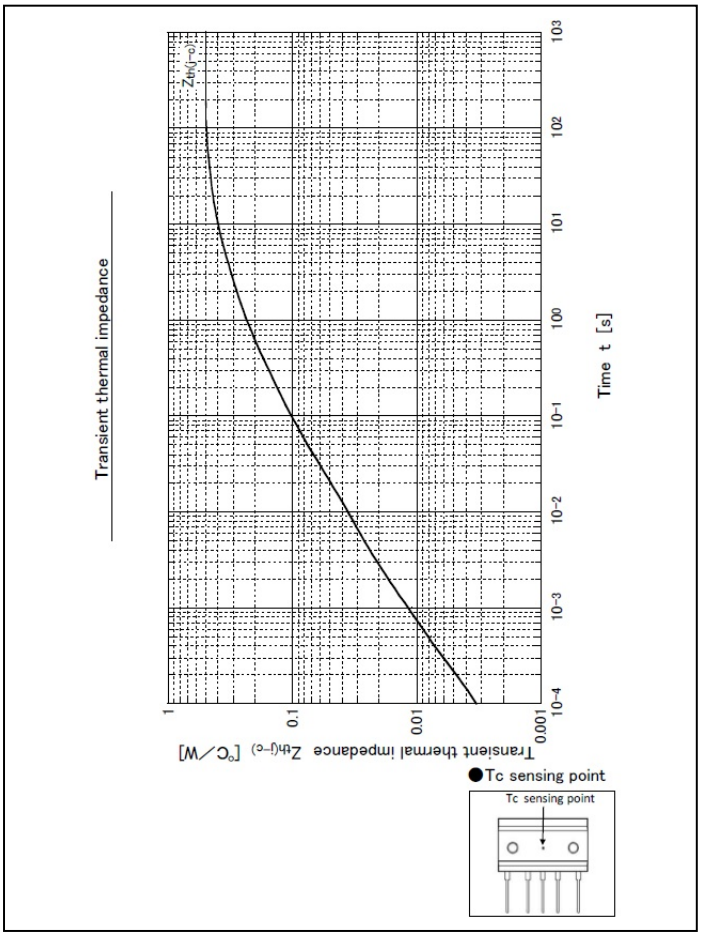


Surge forward current capability



Surge forward current derating vs Junction temperature



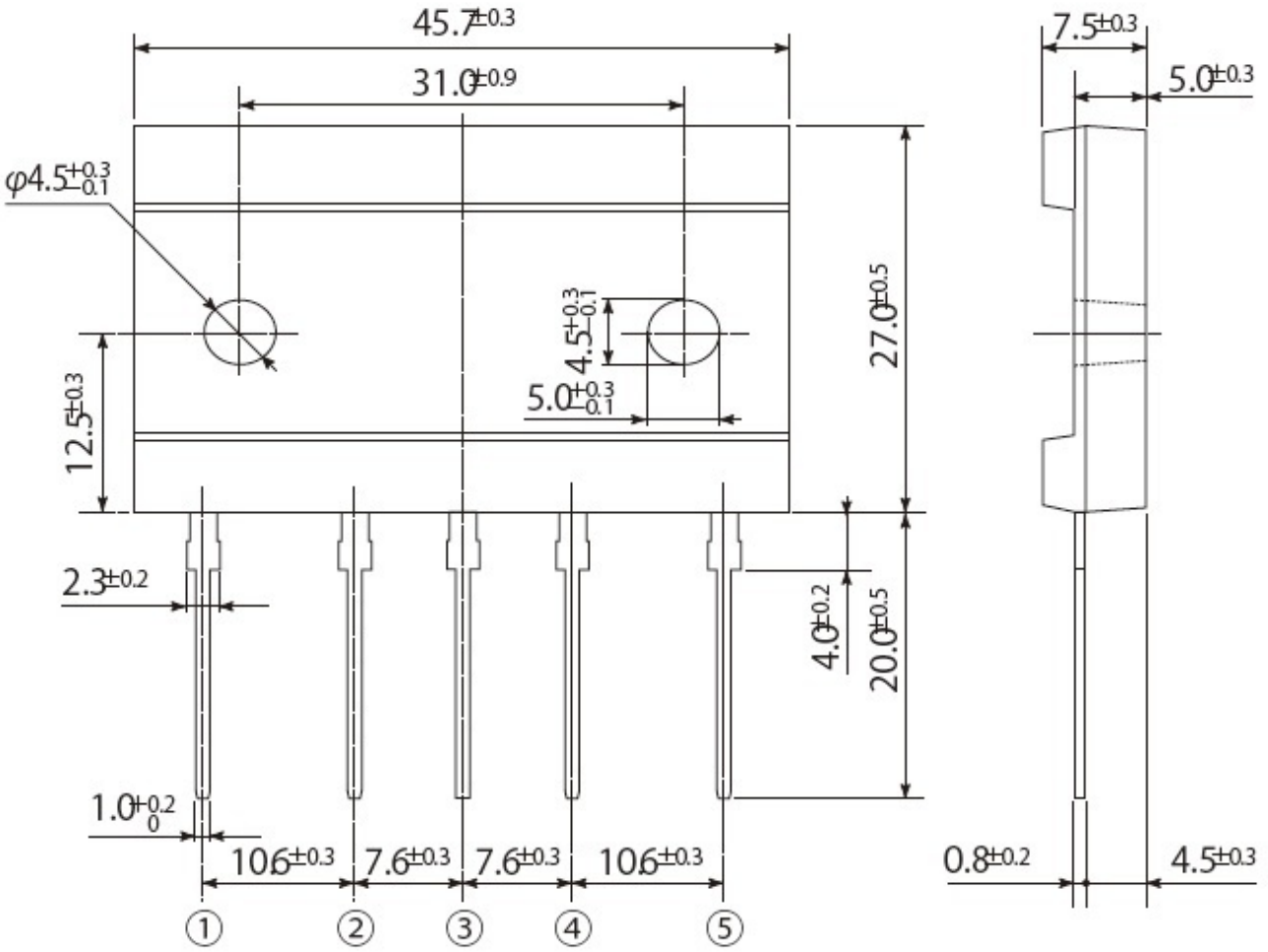

Transient thermal impedance
Transient thermal impedance Zth(j-c) [°C/W]
1
0.1
0.01
0.001
10-4
10-3
10-2
10-1
100
101
102
103
Time t [s]
Tc sensing point
Tc sensing point

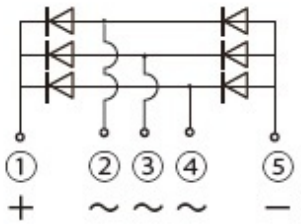
Outline Dimensions

unit:mm

D8

JEDEC Code	–
JEITA Code	–
House Name	TSB(5pin),JC(5pin)





- The content specified herein is subject to change for improvement without notice.
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U182-1(2026.09)

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