ShinDengen

D45JCT120V

Bridge Diodes
1200V, 45A

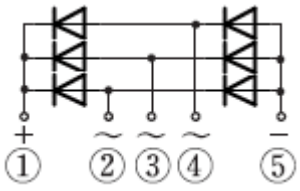
Feature

- 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, Without heatsink, 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

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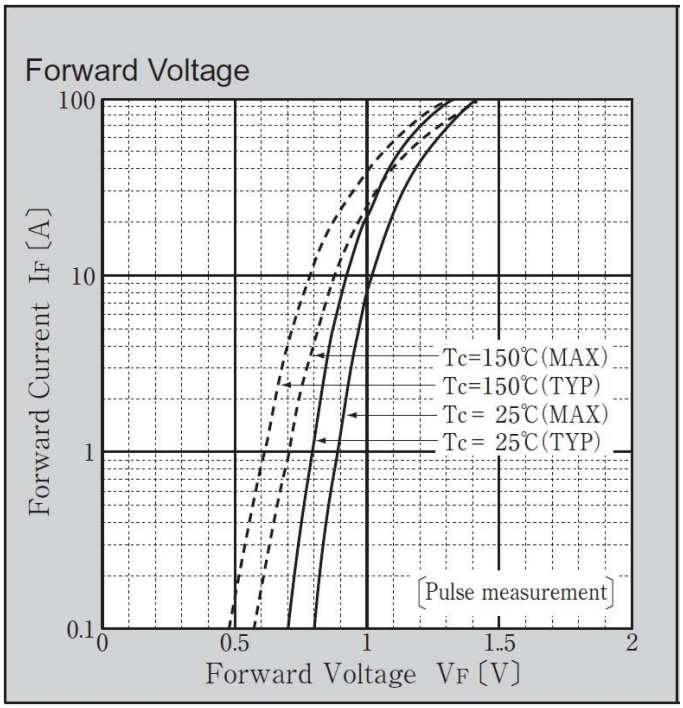
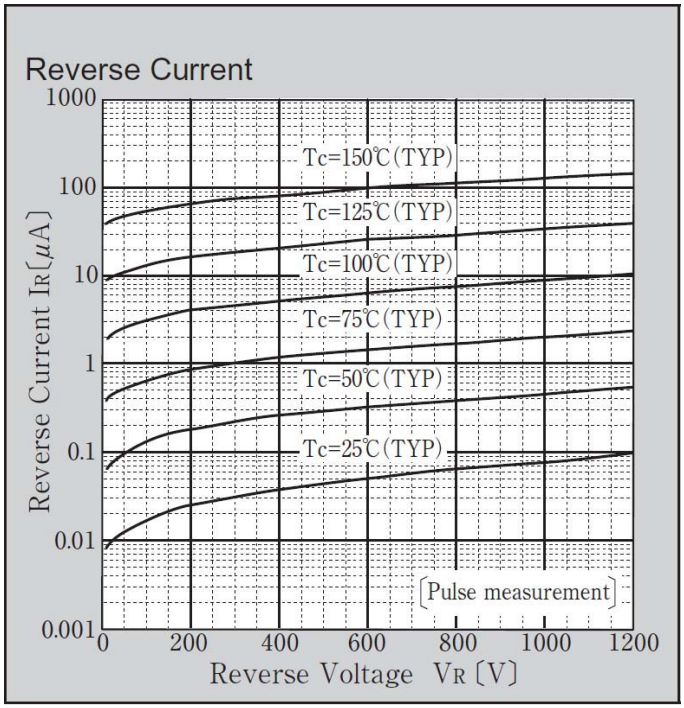
Electrical Characteristics (unless otherwise specified : Tc=25°C)

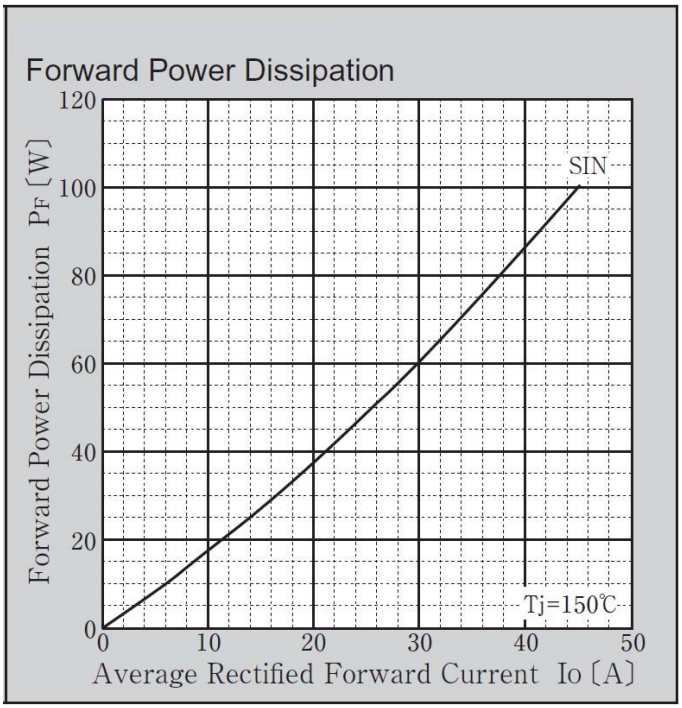
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement, per diode			1.05	V
Reverse current	I_R	VR=1200V, Pulse measurement, per diode			10	μA
Thermal resistance	Rth(j-c)	Junction to case ,With heatsink			0.5	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient,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

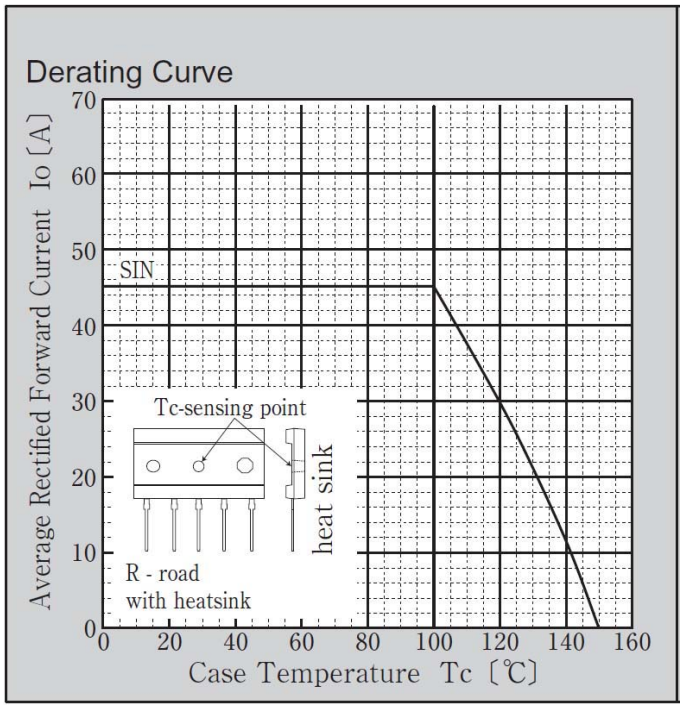
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

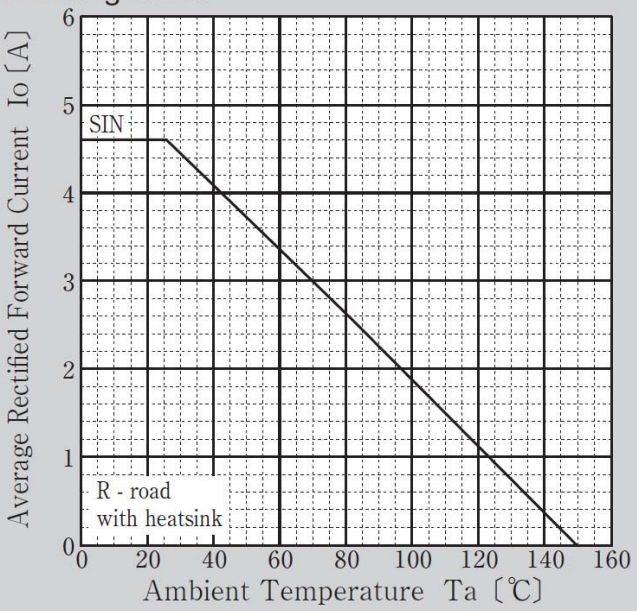




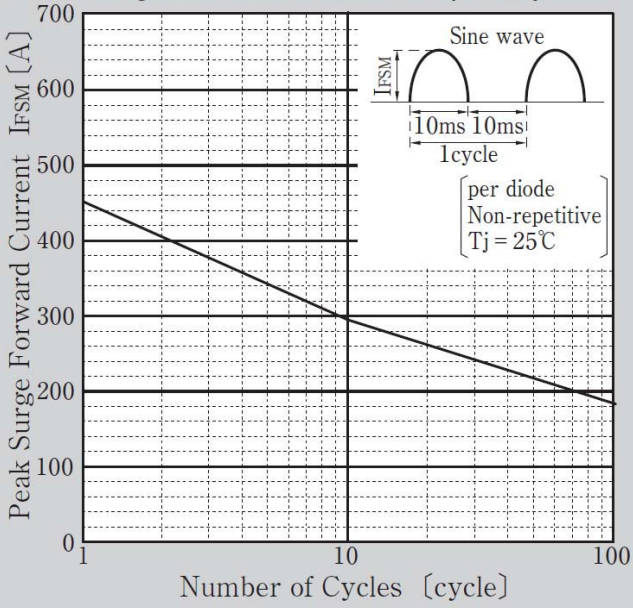




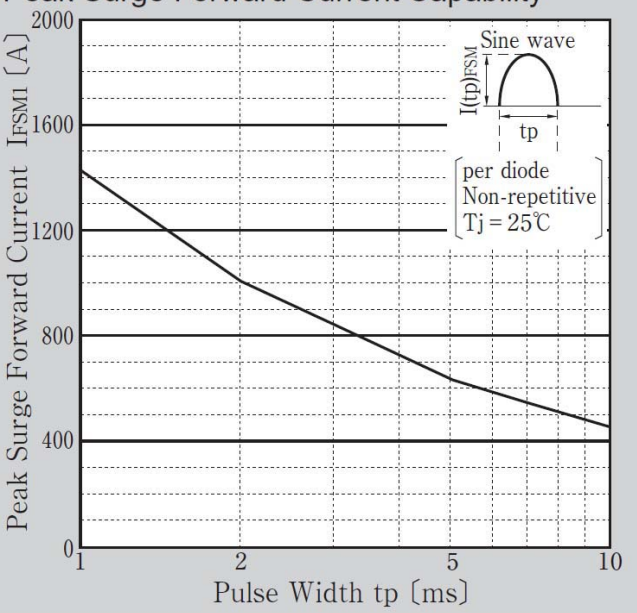
Derating Curve



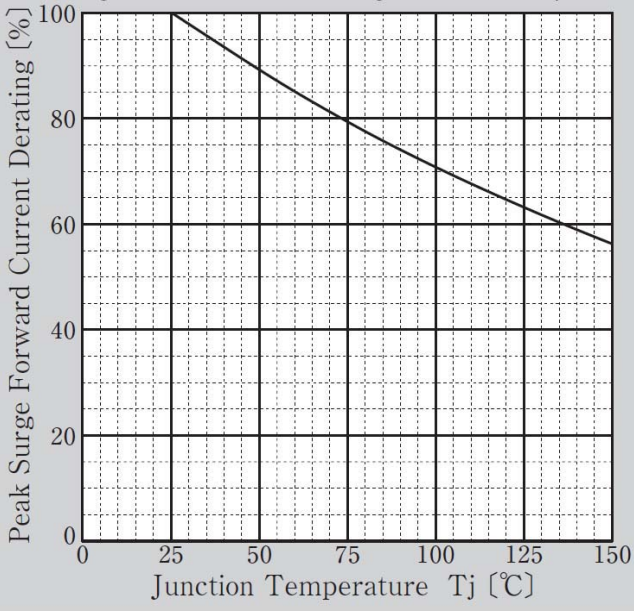
Peak Surge Forward Current Capability

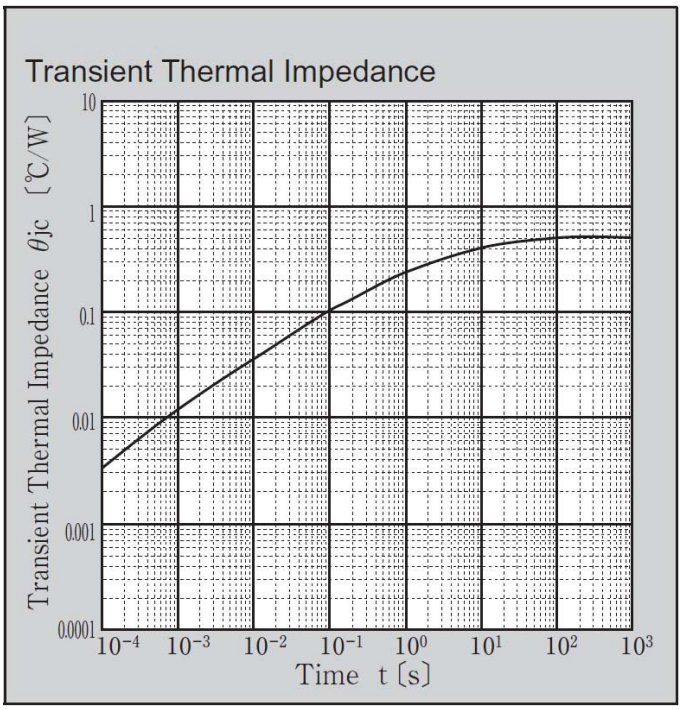


Peak Surge Forward Current Capability



Peak Surge Forward Current Derating vs Junction Temperature




Transient Thermal Impedance
Transient Thermal Impedance θjc 〔℃/W〕
10
1
0.1
0.01
0.001
0.0001
10⁻⁴ 10⁻³ 10⁻² 10⁻¹ 10⁰ 10¹ 10² 10³
Time t〔s〕

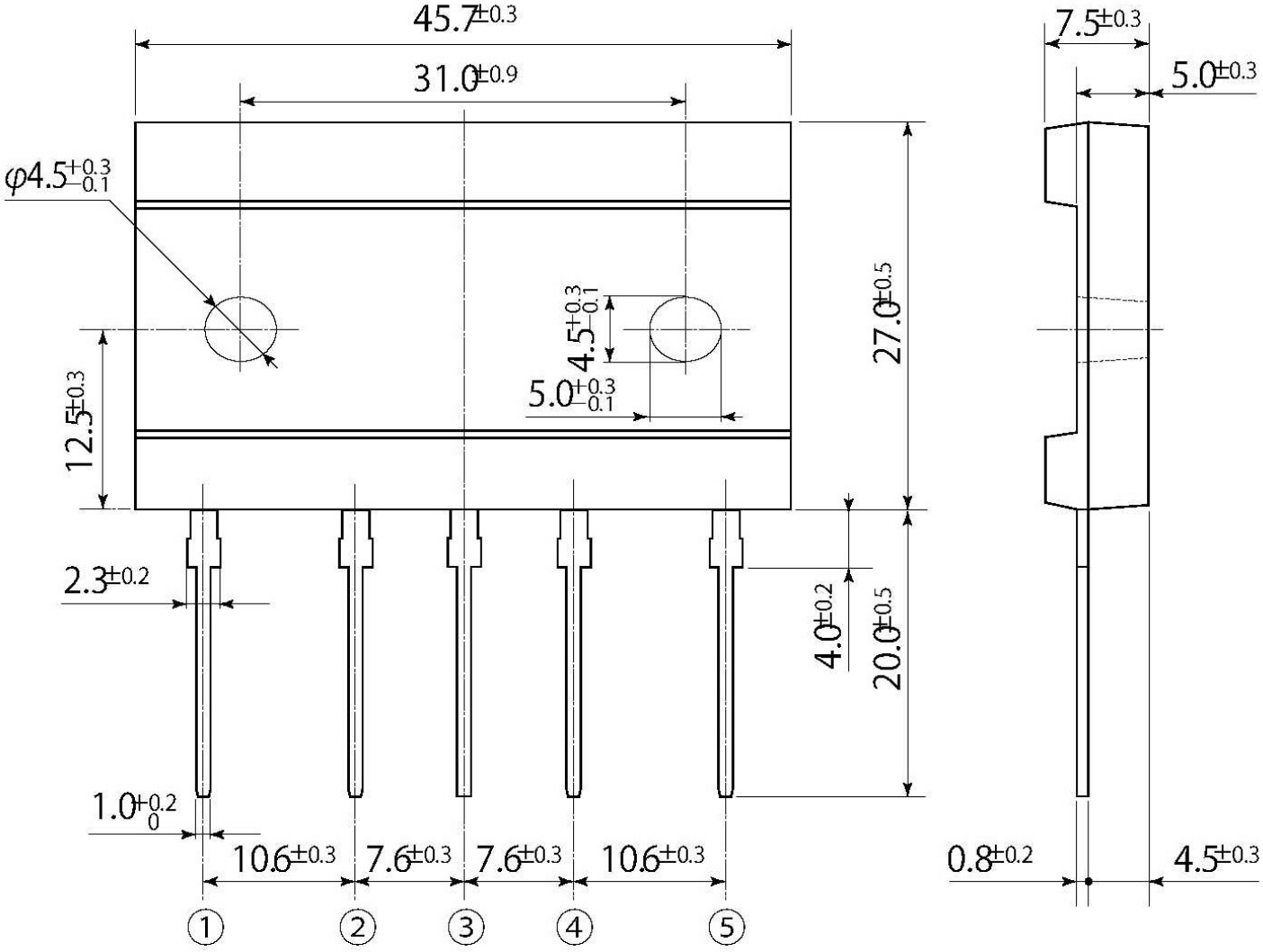
Outline Dimensions

unit:mm

scale: 2/1

D8

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



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