

# D45JCT160V

Bridge Diodes  
1600V, 45A

### Feature

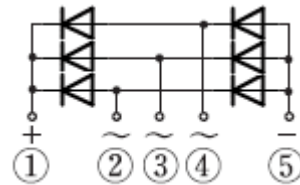
- Compact SIP
- UL E142422
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): JC(5pin)



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : T<sub>c</sub>=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		-55 to 150	°C
Repetitive peak reverse voltage	V <sub>RRM</sub>		1600	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, With heatsink, T <sub>c</sub> =97°C	45	A
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, Without heatsink, T <sub>a</sub> =25°C	4.6	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, per diode, T <sub>j</sub> =25°C	450	A
Surge forward current	I <sub>FSM1</sub>	t <sub>p</sub> =1ms, sine wave, Non-repetitive, peak value, per diode, T <sub>j</sub> =25°C	1423	A
Current squared time	I <sup>2</sup> t	1ms ≤ t < 10ms, T <sub>j</sub> =25°C, per diode	1013	A <sup>2</sup> s
Dielectric strength	V <sub>dis</sub>	Terminals to case backside, AC 1 minute Cut-off current 0.5mA, 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

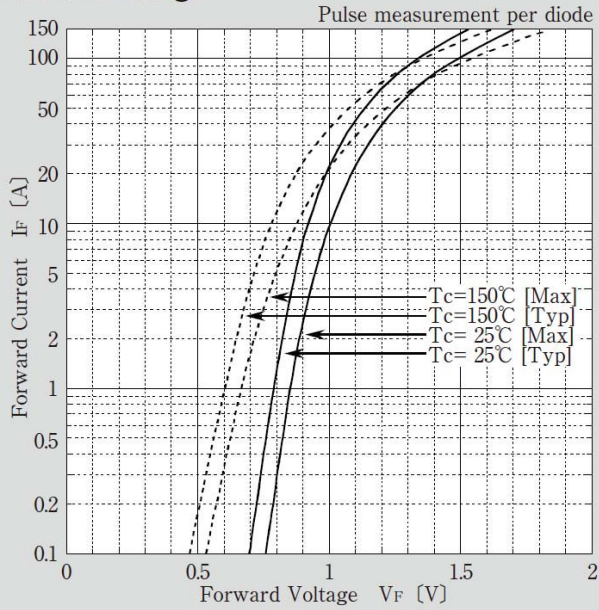
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =15A, Pulse measurement, per diode			1.05	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =1600V, Pulse measurement, per diode			10	μA
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case ,With heatsink			0.5	°C/W
Thermal resistance	R <sub>th(j-a)</sub>	Junction to ambient, Without heatsink			16	°C/W

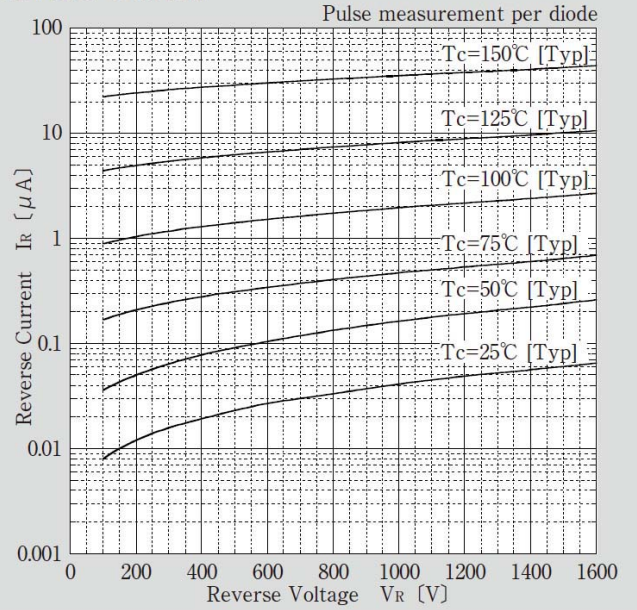
\* : See the original Specifications

# CHARACTERISTIC DIAGRAMS

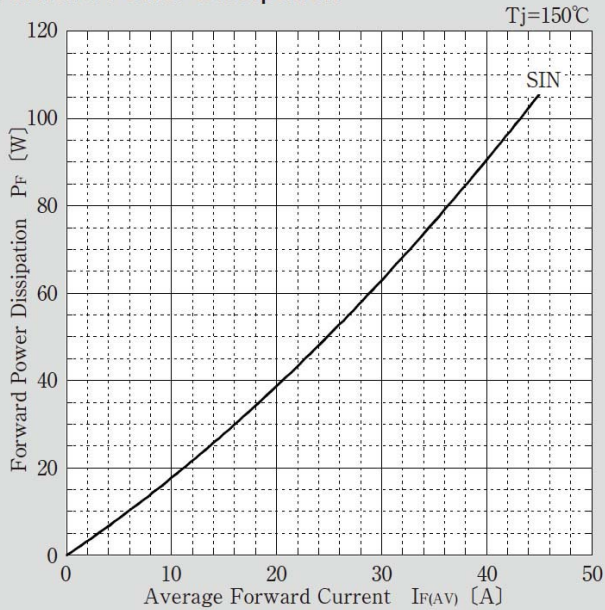
### Forward Voltage



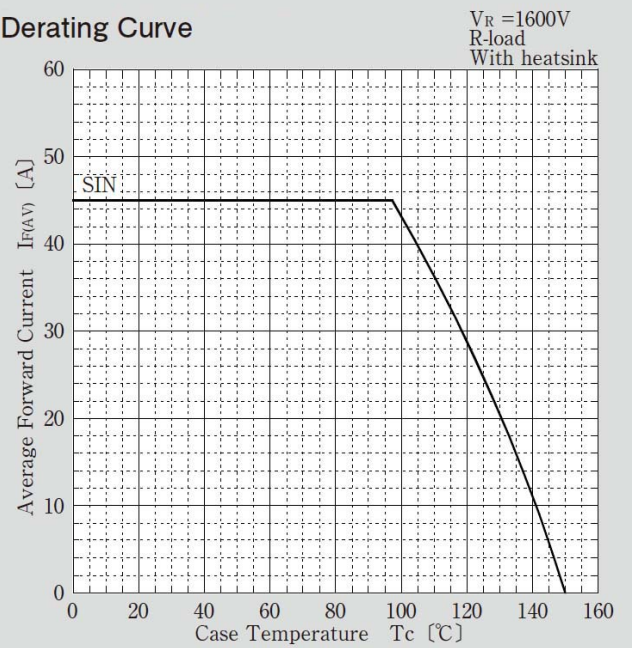
### Reverse Current



### Forward Power Dissipation

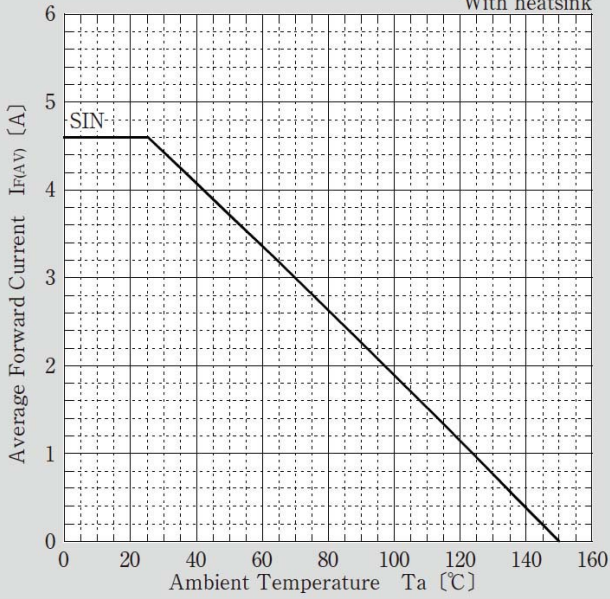


### Derating Curve

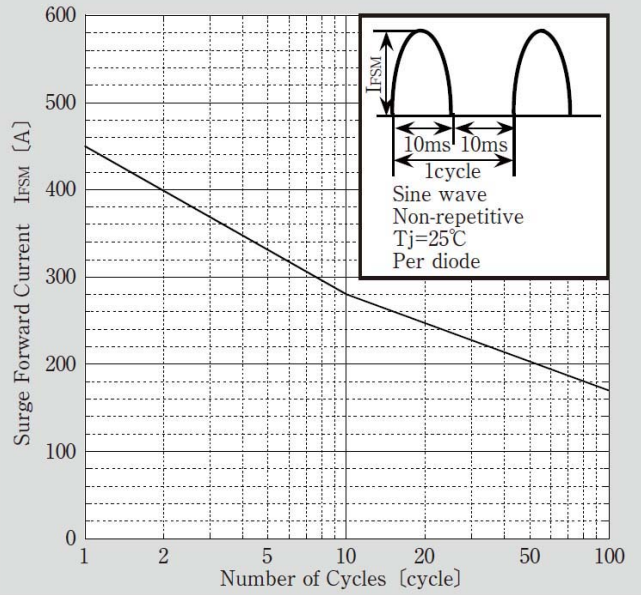


### Derating Curve

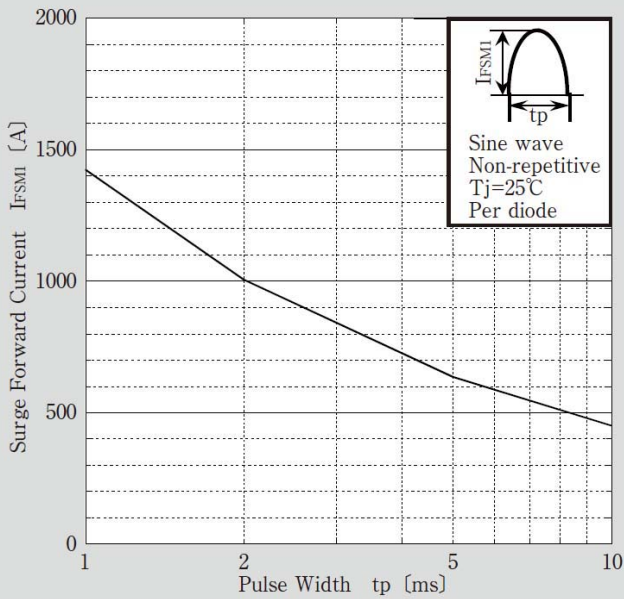
$V_R = 1600V$   
R-load  
With heatsink



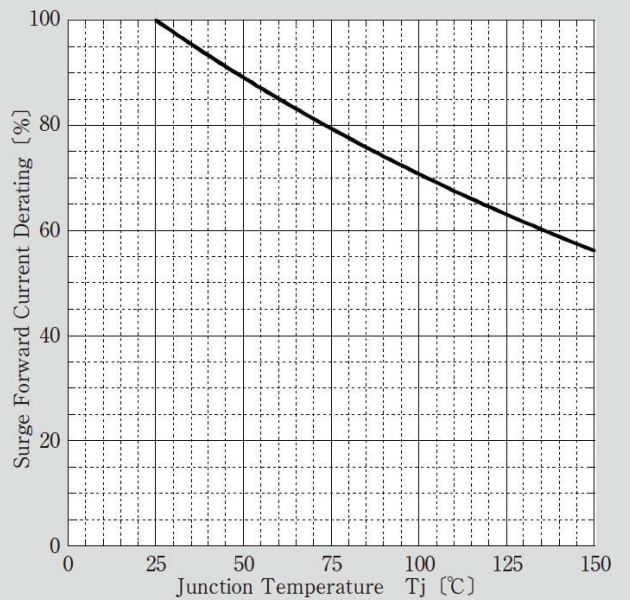
### Surge Forward Current Capability



### Surge Forward Current Capability

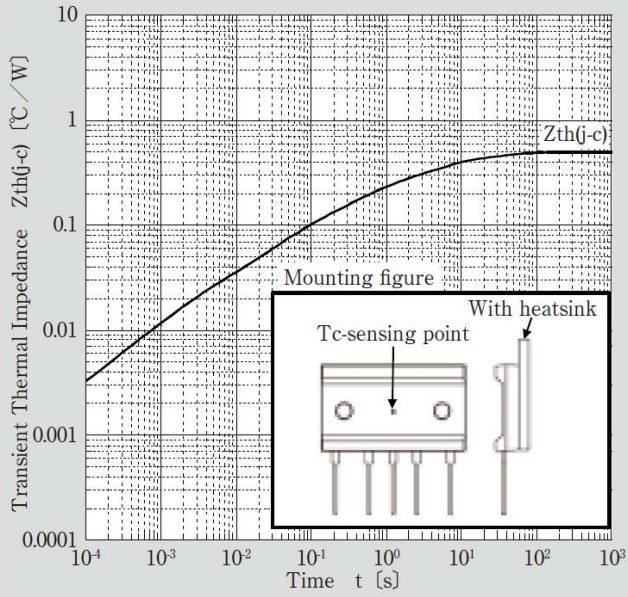


### Surge Forward Current Derating vs Junction Temperature

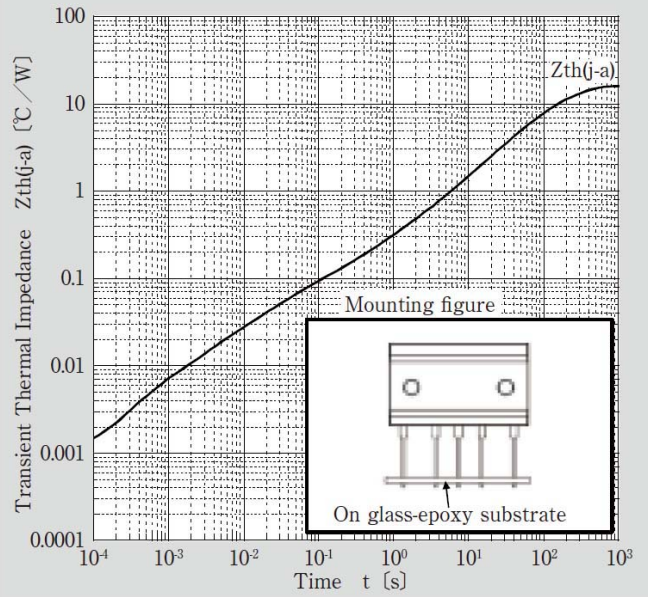




### Transient Thermal Impedance



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