

# HD50SB100

## 1000V 50A

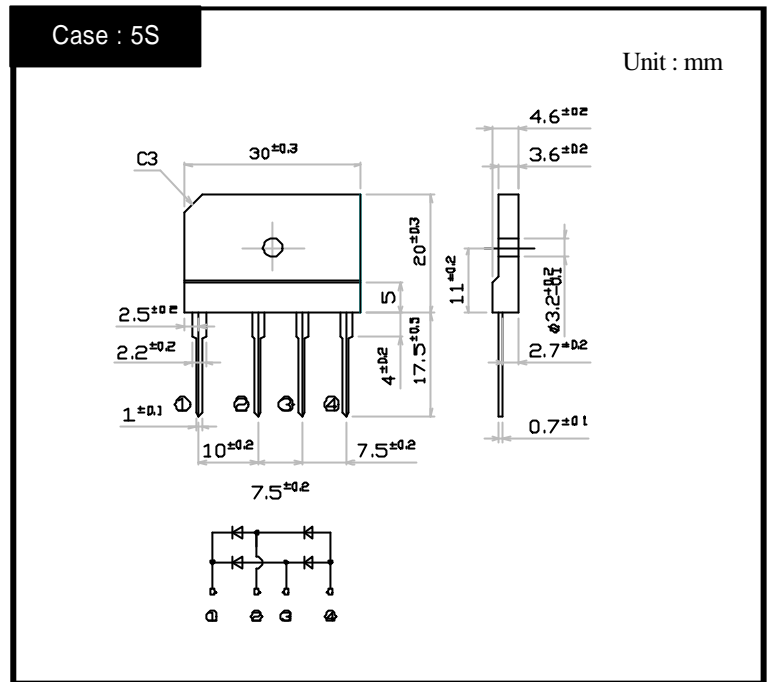
### FEATURES

- Thin Single In-Line Package
- High current capacity with Small Package
- High IFSM
- Superior Thermal Conductivity

### APPLICATION

- Switching power supply
- Home Appliances, Office Equipment
- Factory Automation, Inverter

### OUTLINE DIMENSIONS



### RATINGS

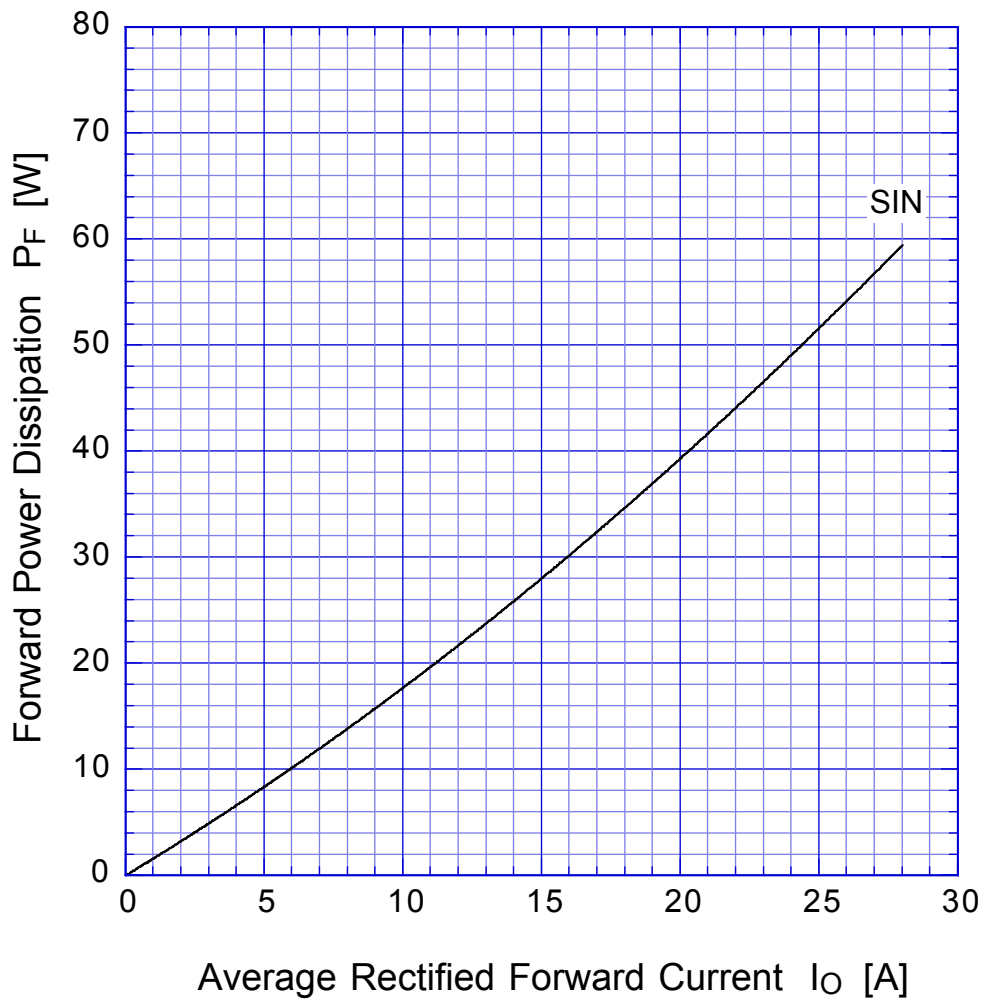
Absolute Maximum Ratings (If not specified Tc=25 )

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-40 ~ 150	
Operating Junction Temperature	Tj		150	
Maximum Reverse Voltage	V <sub>RM</sub>		1000	V
Average Rectified Forward Current	I <sub>O</sub>	50Hz sine wave, R-load With heatsink Tc=98	50	A
		50Hz sine wave, R-load Without heatsink Ta=25	3.5	
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1cycle peak value, Tj=25	350	A
Current Squared Time	I <sup>2</sup> t	1ms t < 10ms Tj=25	300	A <sup>2</sup> s
Dielectric Strength	Vdis	Terminals to case. AC 1 minute	2.5	kV
Mounting Torque	TOR	(Recommended torque 0.5N·m )	0.8	N·m

Electrical Characteristics (If not specified Tc=25 )

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =12.5A, Pulse measurement, Rating of per diode	Max.1.05	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement, Rating of per diode	Max.10	μA
Thermal Resistance	j-c	junction to case With heatsink	Max.1.0	/W
	j-l	junction to lead Without heatsink	Max.5	
	j-a	junction to ambient Without heatsink	Max.22	

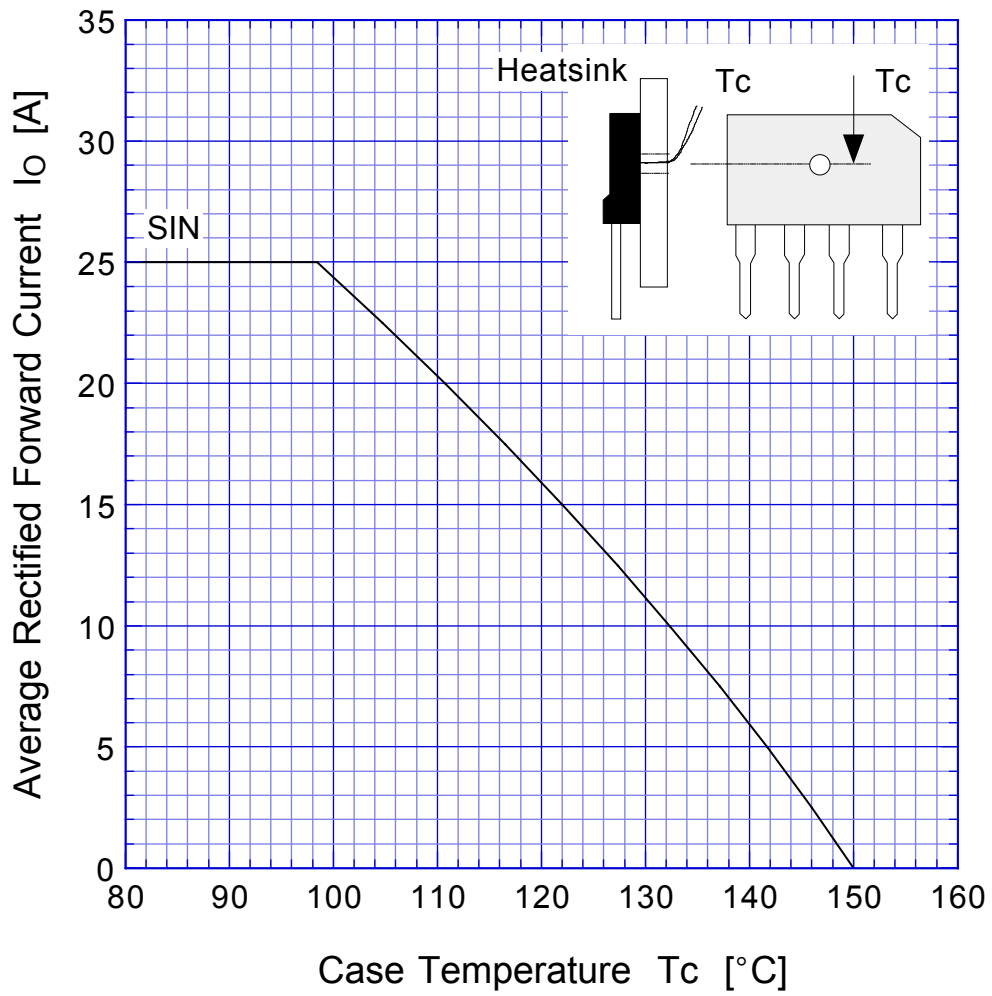
## HD50SB100 Forward Power Dissipation



$T_j = 150^\circ\text{C}$   
Sine wave

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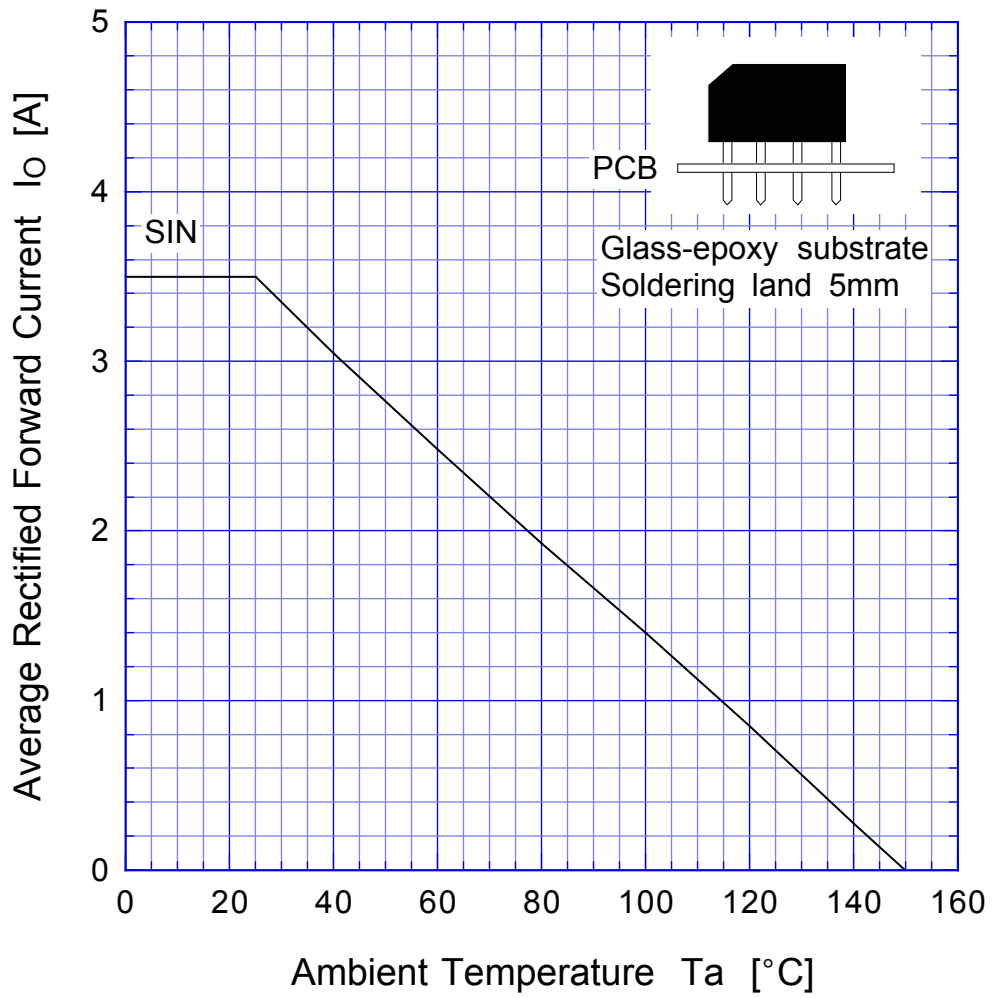
## Derating Curve



Sine wave  
R-load  
with heatsink

# HD50SB100

# Derating Curve



Sine wave  
R-load  
Free in air

## HD50SB100 Peak Surge Forward Capability

