

HD50SB100

1000V 50A

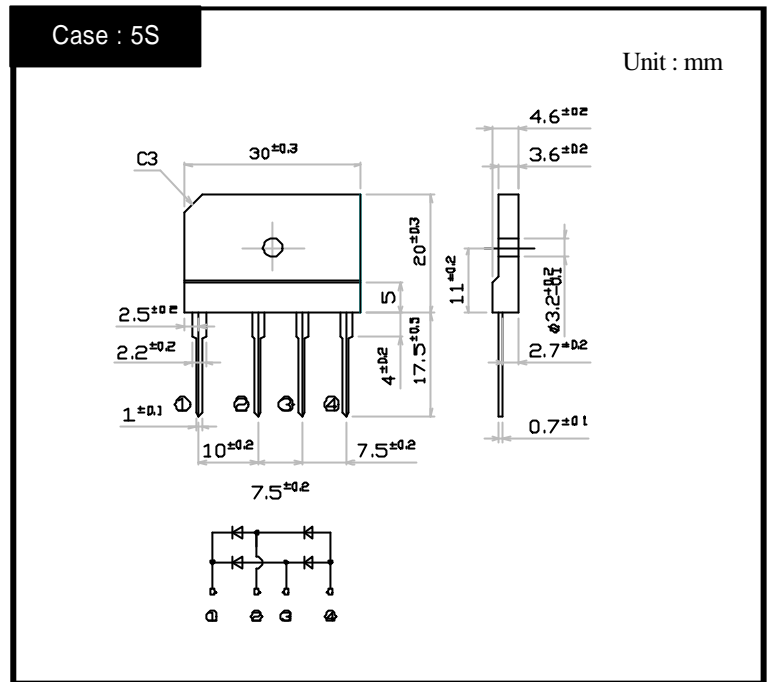
FEATURES

- 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

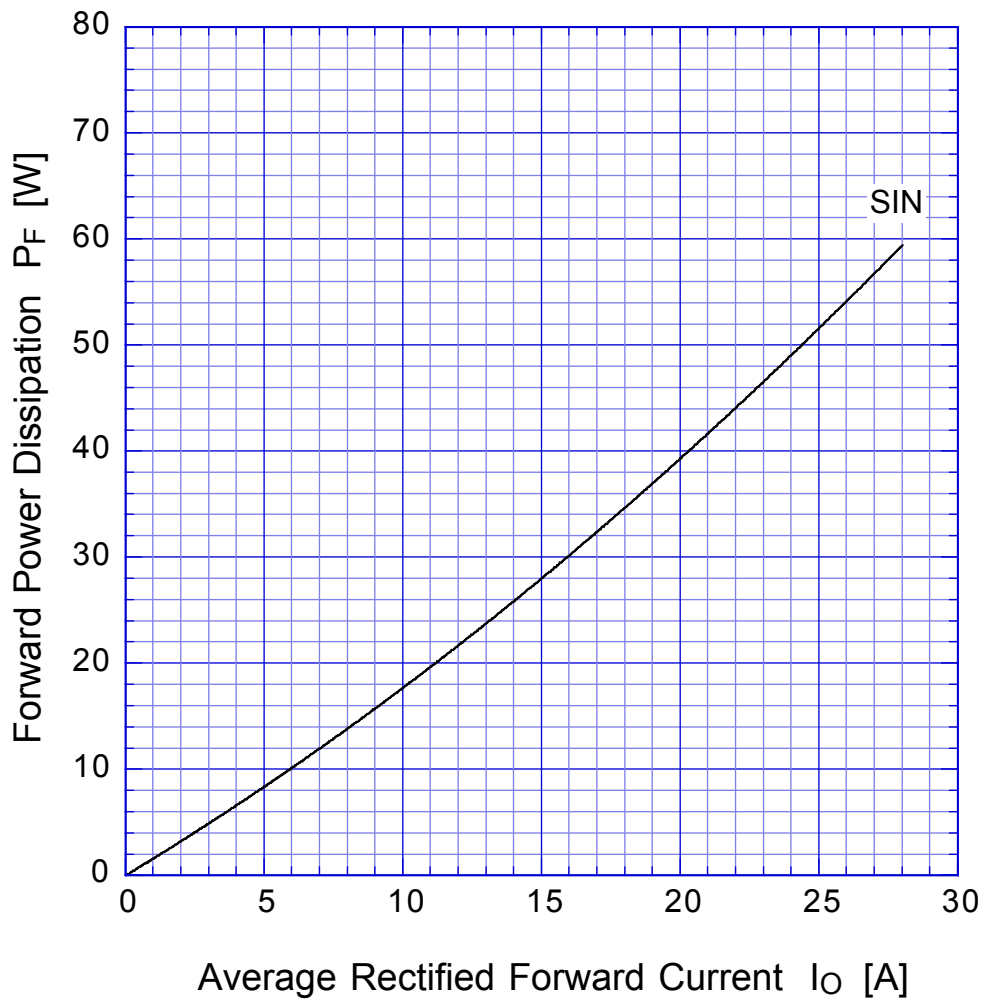
Absolute Maximum Ratings (If not specified Tc=25)

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-40 ~ 150	
Operating Junction Temperature	Tj		150	
Maximum Reverse Voltage	V _{RM}		1000	V
Average Rectified Forward Current	I _O	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 _{FSM}	50Hz sine wave, Non-repetitive 1cycle peak value, Tj=25	350	A
Current Squared Time	I ² t	1ms t < 10ms Tj=25	300	A ² 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 _F	I _F =12.5A, Pulse measurement, Rating of per diode	Max.1.05	V
Reverse Current	I _R	V _R =V _{RM} , Pulse measurement, Rating of per diode	Max.10	μA
Thermal Resistance	jc	junction to case With heatsink	Max.1.0	/W
	jl	junction to lead Without heatsink	Max.5	
	ja	junction to ambient Without heatsink	Max.22	

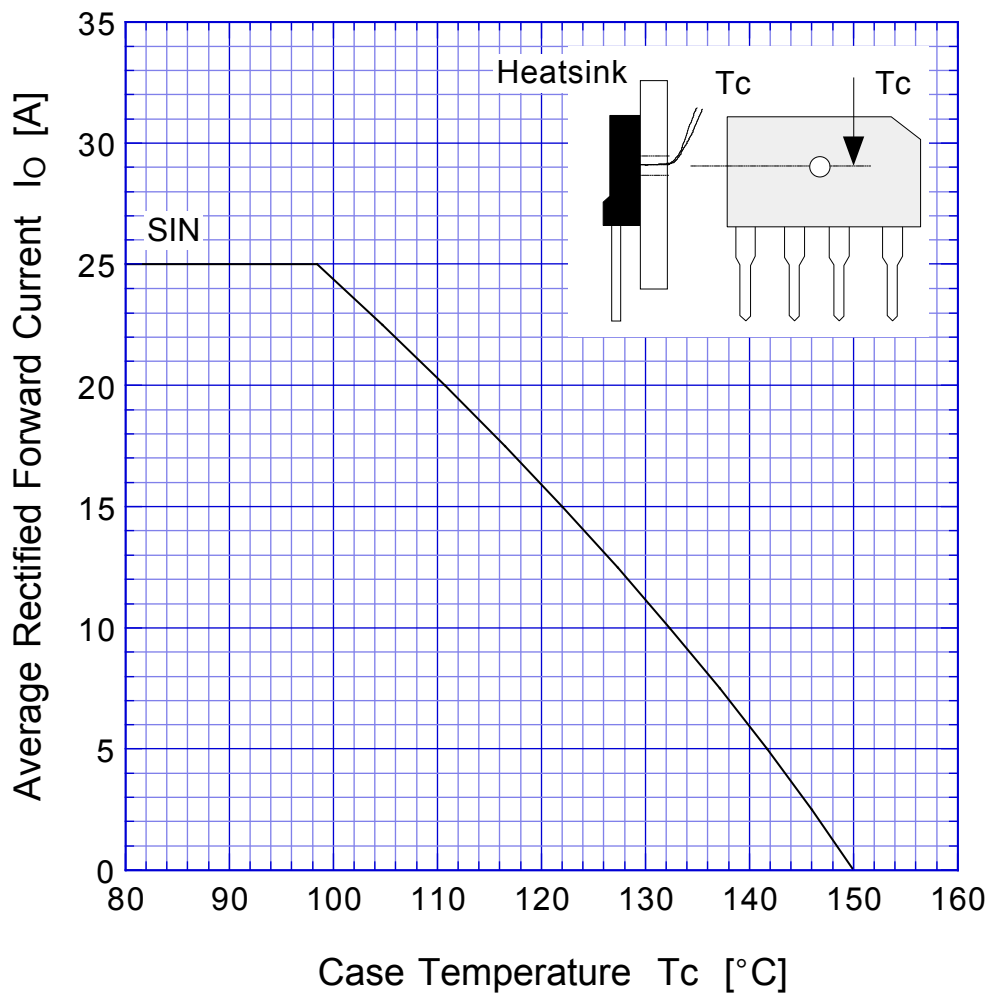
HD50SB100 Forward Power Dissipation



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

HD50SB100

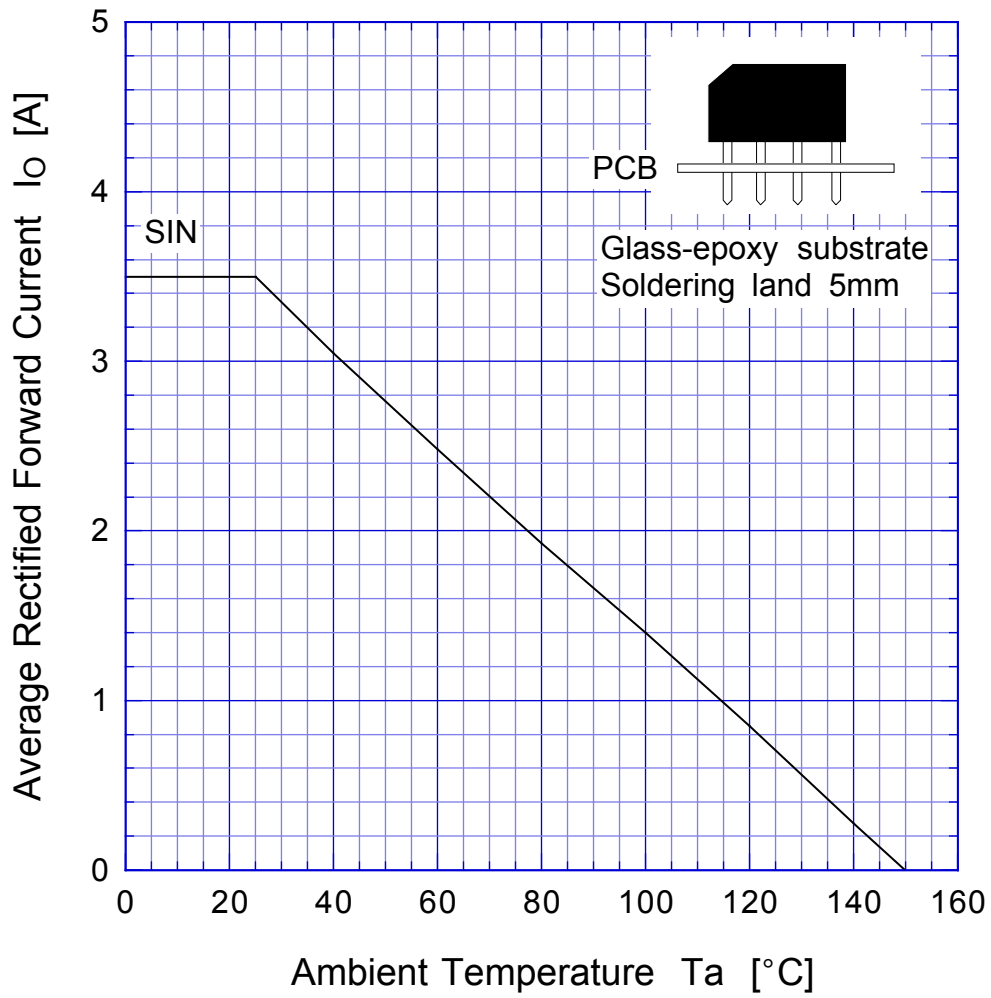
Derating Curve



Sine wave
R-load
with heatsink

HD50SB100

Derating Curve



Sine wave
R-load
Free in air

HD50SB100 Peak Surge Forward Capability

