

# SHINDENGEN

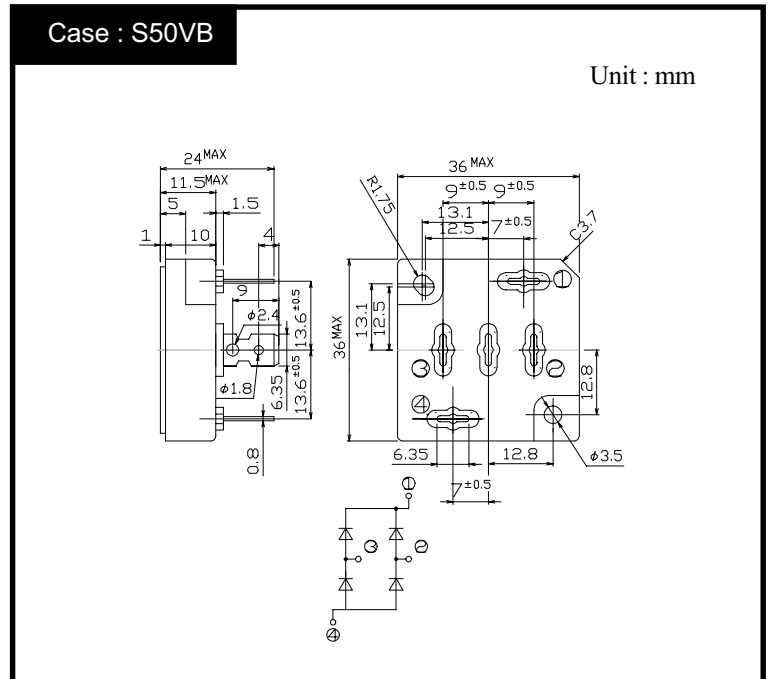
## General Purpose Rectifiers

Square In-line Package

# S50VB80

## 800V 50A

### OUTLINE DIMENSIONS



### RATINGS

#### ● Absolute Maximum Ratings

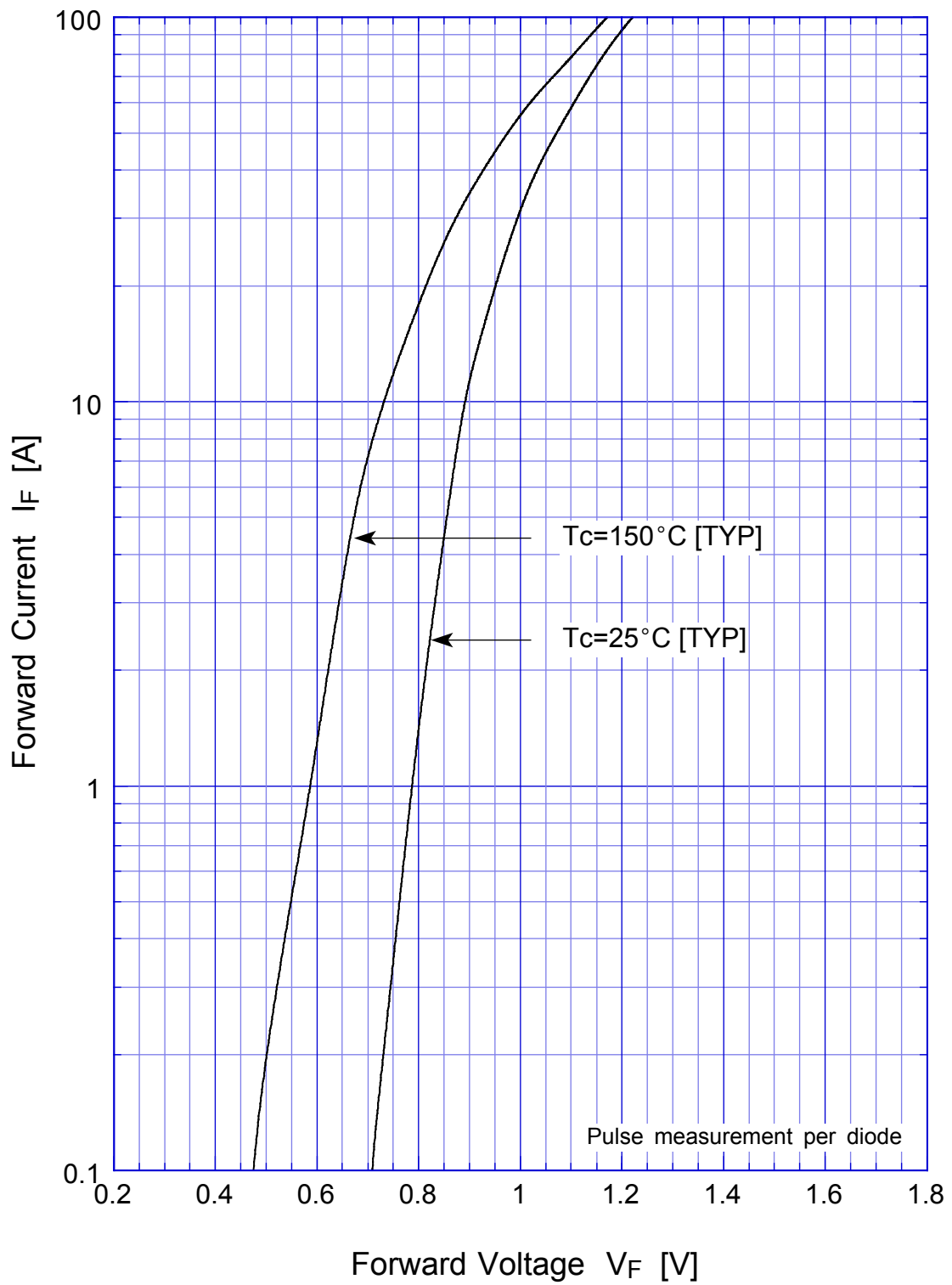
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	$T_{stg}$		-40~150	°C
Operating Junction Temperature	$T_j$		150	°C
Maximum Reverse Voltage	$V_{RM}$		800	V
Average Rectified Forward Current	$I_O$	50Hz sine wave, R-load, With heatsink, $T_c=95^{\circ}C$	50	A
Peak Surge Forward Current	$I_{FSM}$	50Hz sine wave, Non-repetitive 1cycle peak value, $T_j=25^{\circ}C$	500	A
Current Squared Time	$I^2t$	$1ms \leq t < 10ms$ $T_j=25^{\circ}C$	800	$A^2s$
Dielectric Strength	$V_{dis}$	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque : 0.6N·m)	0.8	N·m

#### ● Electrical Characteristics ( $T_c=25^{\circ}C$ )

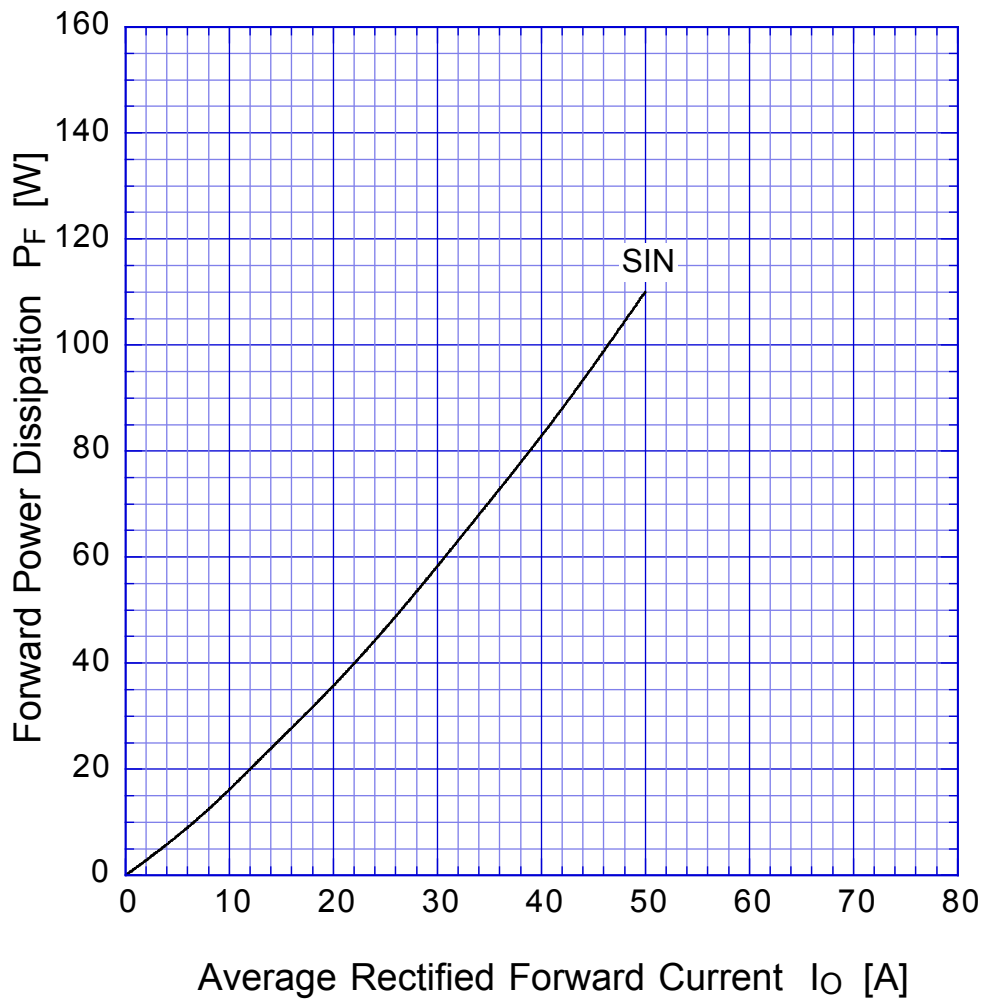
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	$V_F$	$I_F=25A$ , Pulse measurement, Rating of per diode	Max.1.05	V
Reverse Current	$I_R$	$V_R=V_{RM}$ , Pulse measurement, Rating of per diode	Max.10	$\mu A$
Thermal Resistance	$\theta_{jc}$	junction to case	Max.0.5	°C/W

S50VBx

Forward Voltage



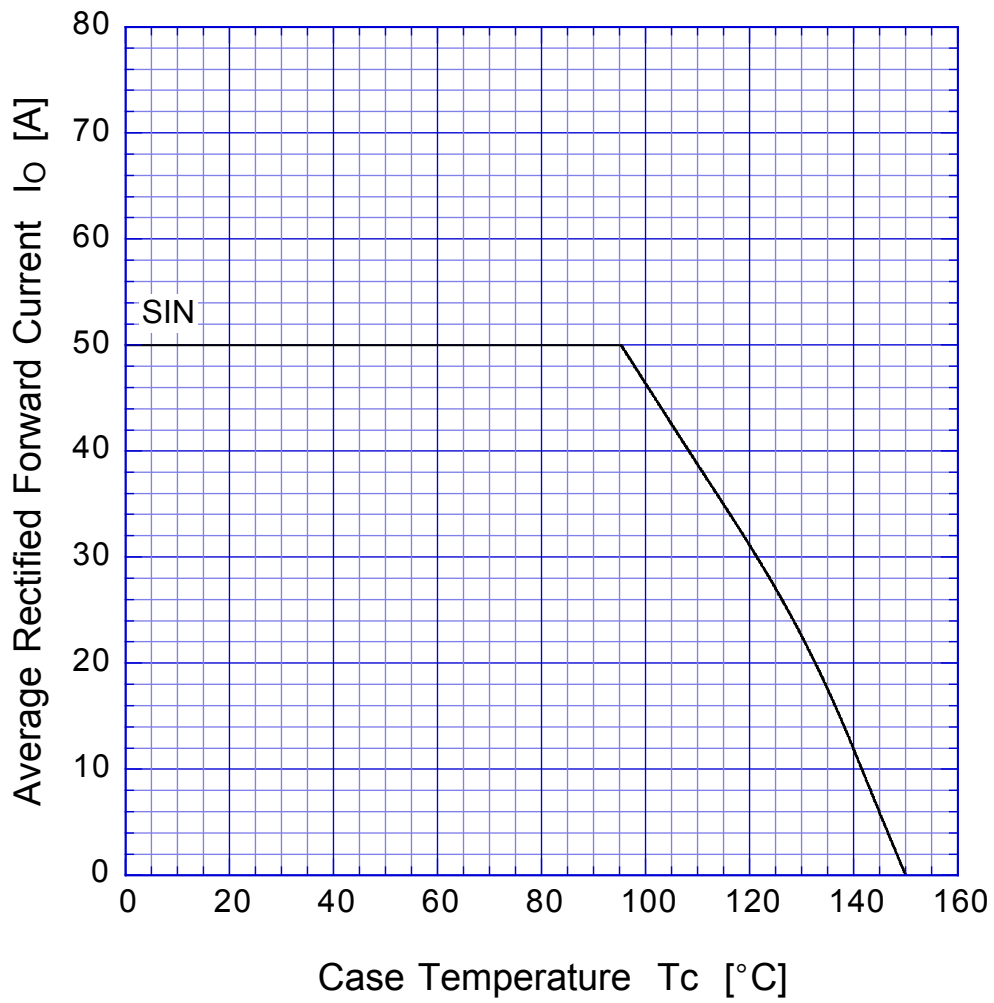
## S50VBx Forward Power Dissipation



$T_j = T_{jmax}$

# S50VBx

# Derating Curve



$$V_R = V_{RM}$$



# S50VBx

## Peak Surge Forward Capability

