

# SHINDENGEN

## General Purpose Rectifiers

## 3 Phase Bridge Modules

# S20VT80

## 800V 20A

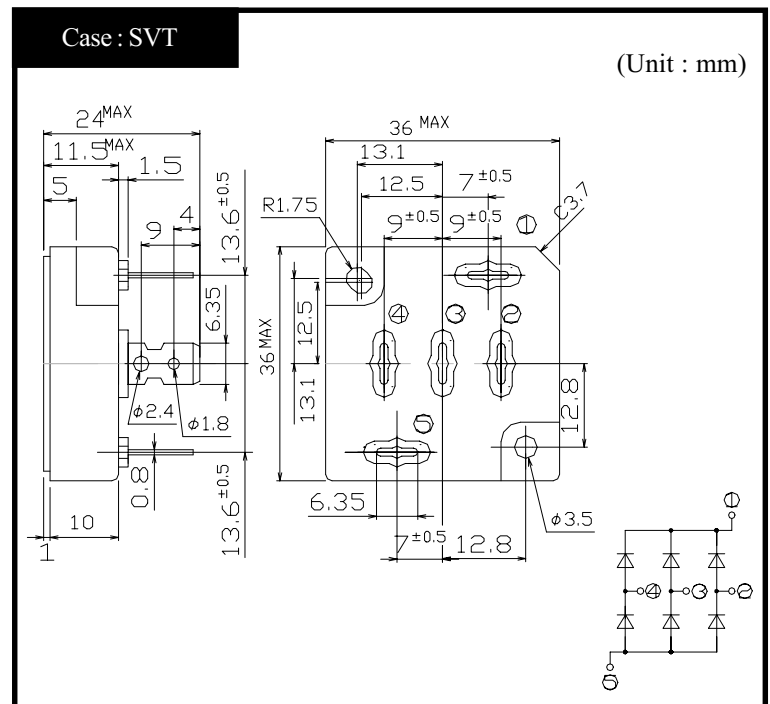
### FEATURES

- Dual In-Line Package
- Compact 3 phase bridge
- High IFSM
- Applicable to mount on glass-epoxy substrate (VTA type)

### APPLICATION

- Big power supply
- Air conditioner
- Factory automation, Inverter

### OUTLINE DIMENSIONS



### RATINGS

#### ● Absolute Maximum Ratings (If not specified $T_c=25^\circ\text{C}$ )

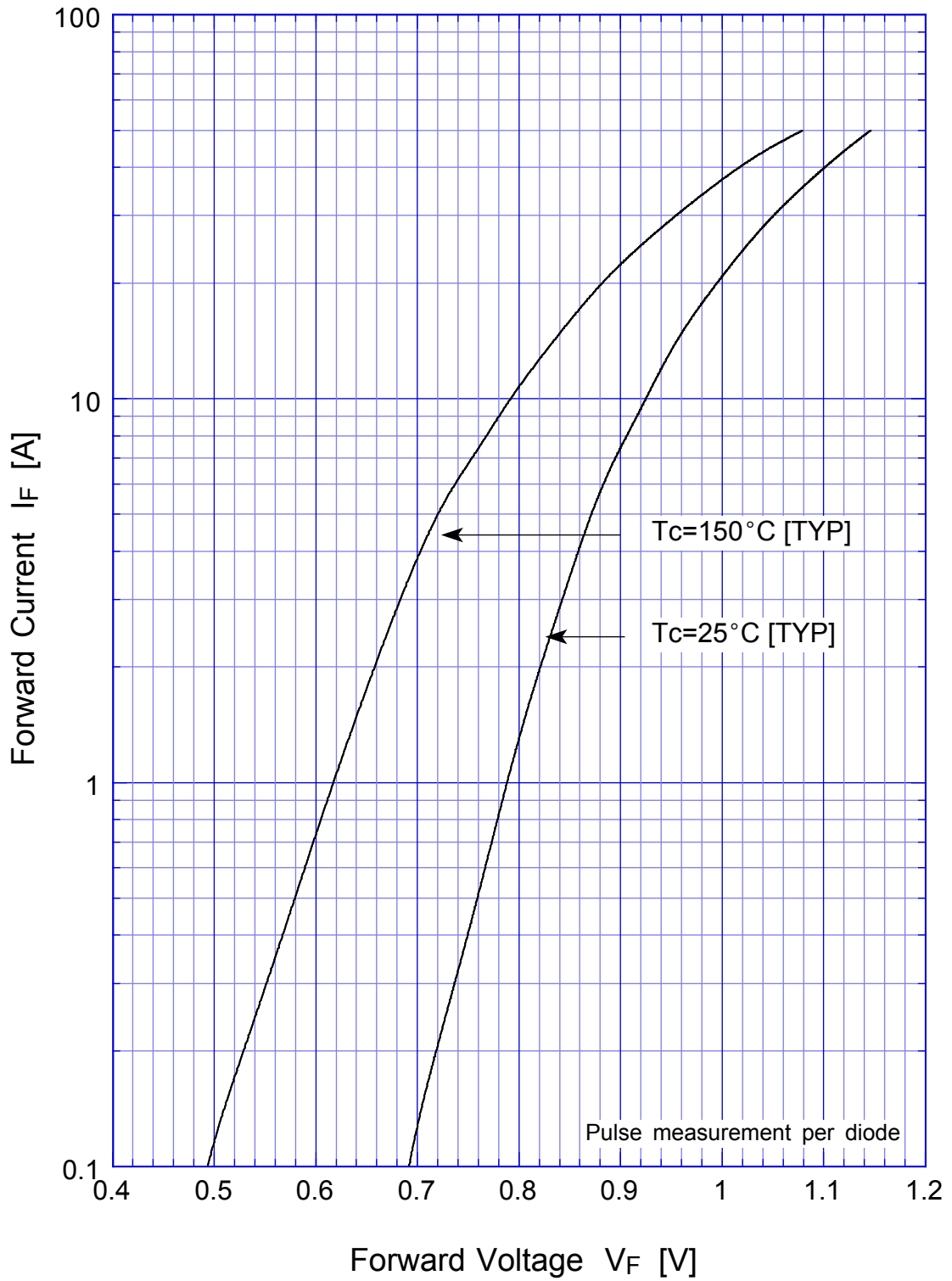
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	$T_{stg}$		-40~150	$^\circ\text{C}$
Operating Junction Temperature	$T_j$		150	$^\circ\text{C}$
Maximum Reverse Voltage	$V_{RM}$		800	V
Average Rectified Forward Current	$I_O$	50Hz sine wave, R-load, With heatsink, $T_c=128^\circ\text{C}$	20	A
Peak Surge Forward Current	$I_{FSM}$	50Hz sine wave, Non-repetitive 1cycle peak value, Rating of per arm, $T_j=25^\circ\text{C}$	300	A
Current Squared Time	$I^2t$	$1\text{ms} \leq t < 10\text{ms}$ $T_j=25^\circ\text{C}$	300	$\text{A}^2\text{s}$
Dielectric Strength	Vdis	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	( Recommended torque : 0.6N·m)	0.8	N·m

#### ● Electrical Characteristics (If not specified $T_c=25^\circ\text{C}$ )

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	$V_F$	$I_F=7\text{A}$ , Pulse measurement, Rating of per arm	Max.1.05	V
Reverse Current	$I_R$	$V_R=V_{RM}$ , Pulse measurement, Rating of per arm	Max.10	$\mu\text{A}$
Thermal Resistance	$\theta_{jc}$	junction to case	Max.0.55	$^\circ\text{C/W}$

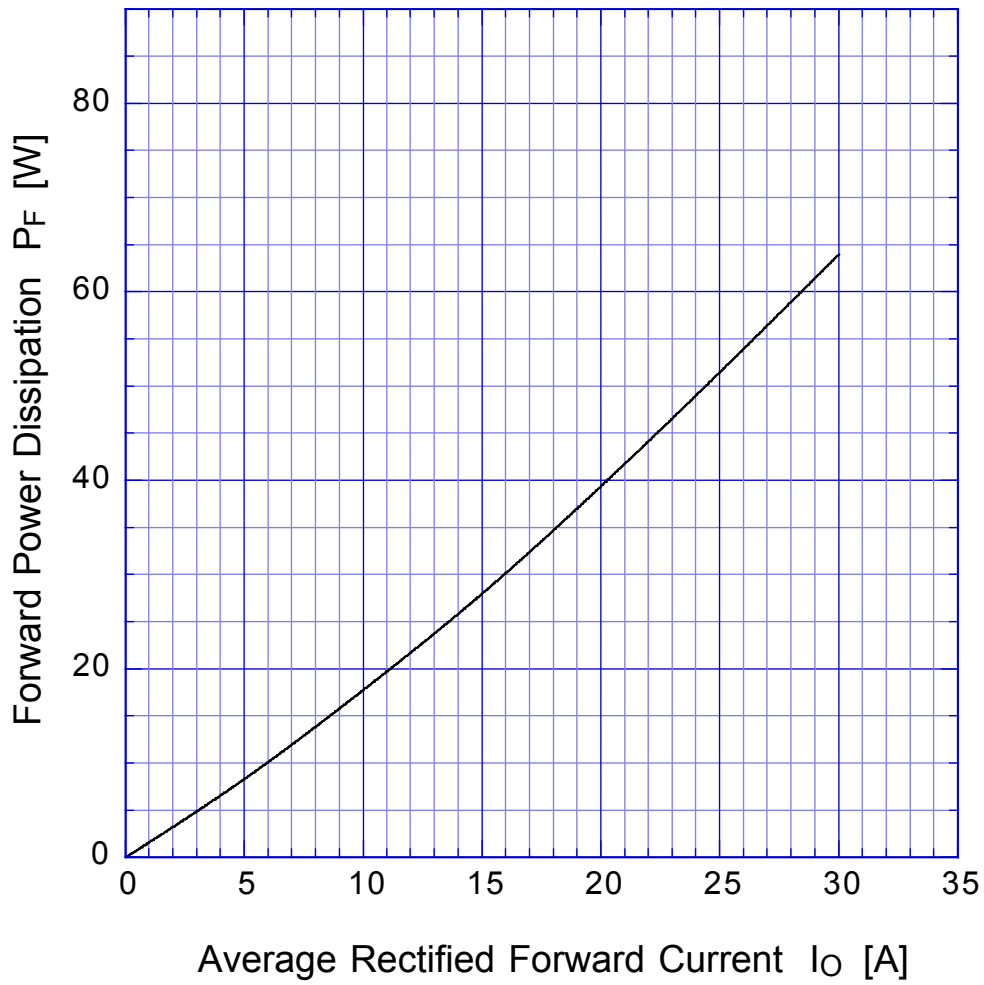
S20VTx

Forward Voltage



S20VTx

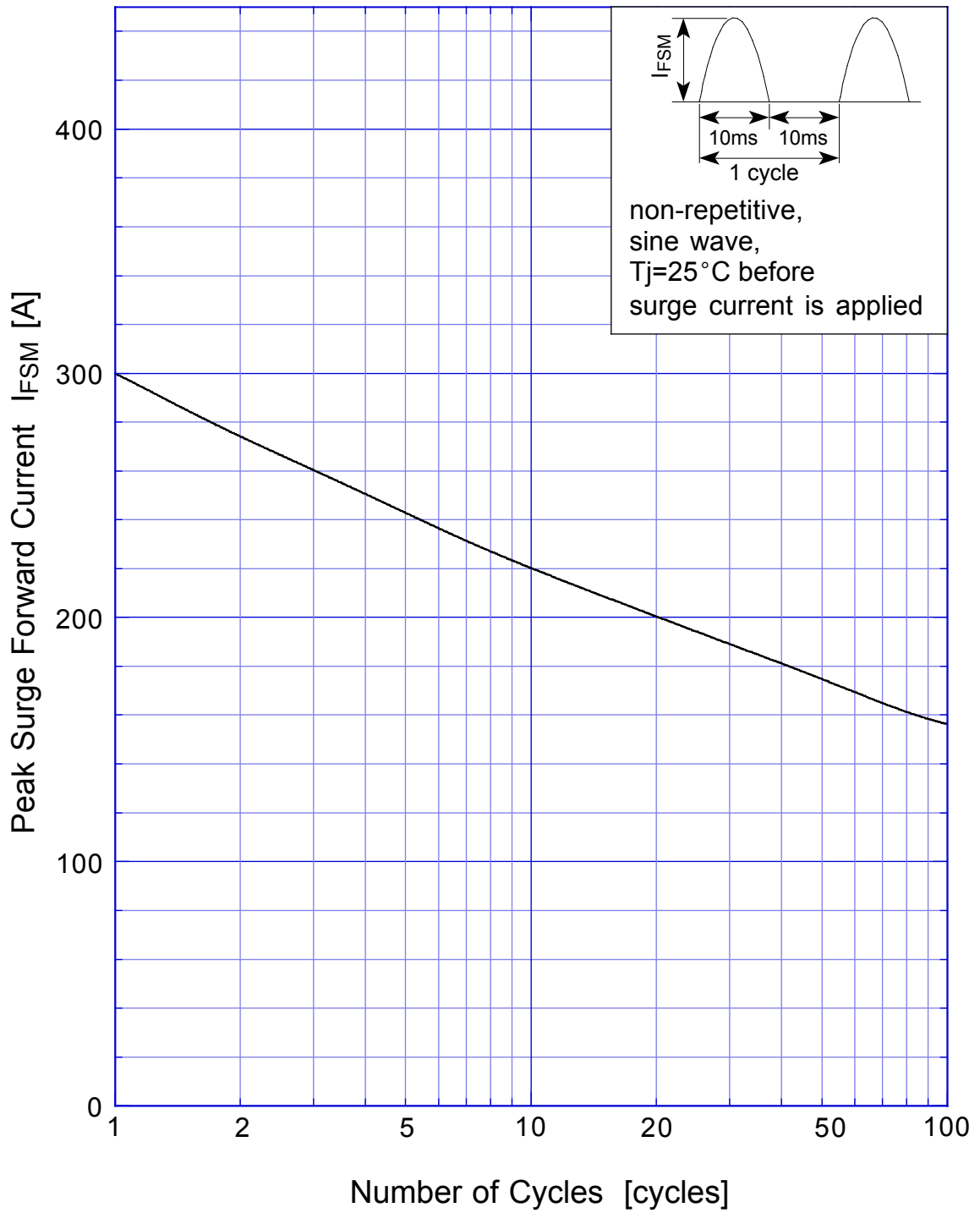
Forward Power Dissipation



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

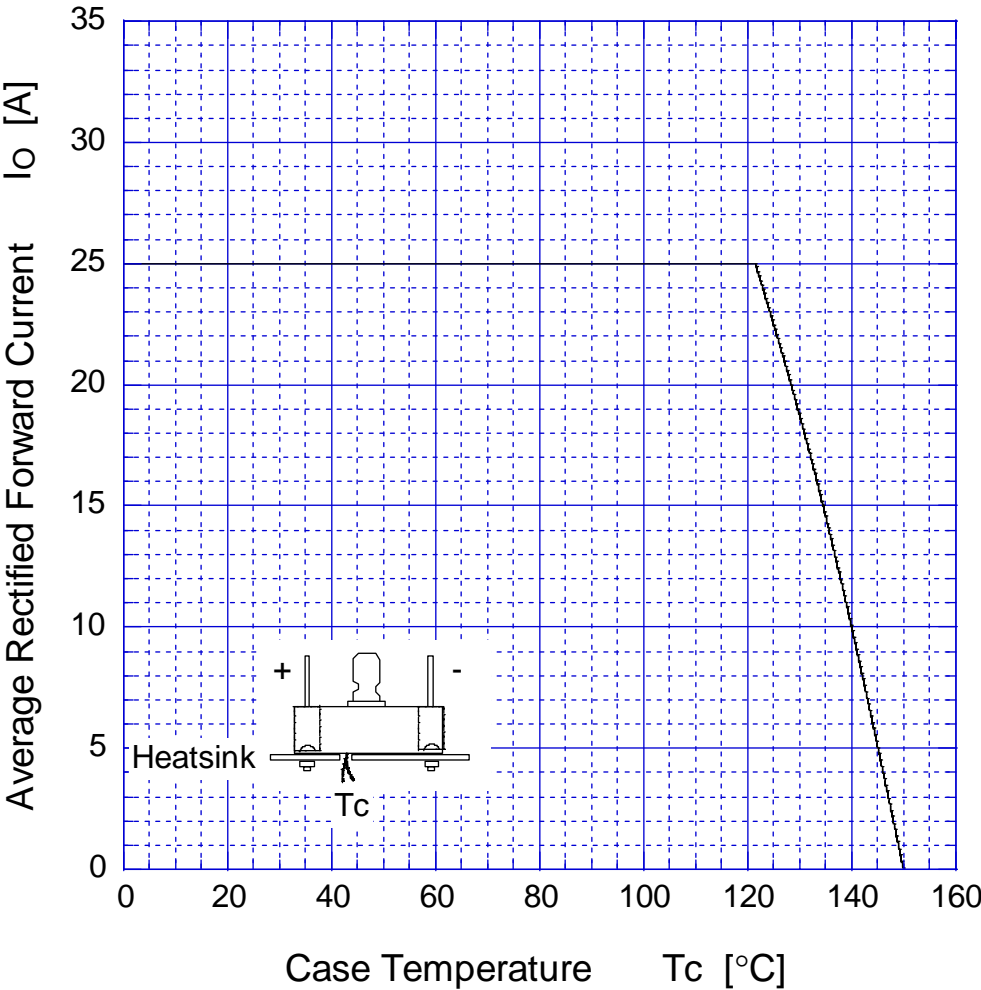
# S20VTx

## Peak Surge Forward Capability



# S20VT80

# Derating Curve



sine wave  
R-load  
with heatsink