

### **3 Phase Bridge Diode**

## Diode Module

# S10VT80

**800V 10A**

## FEATURES

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

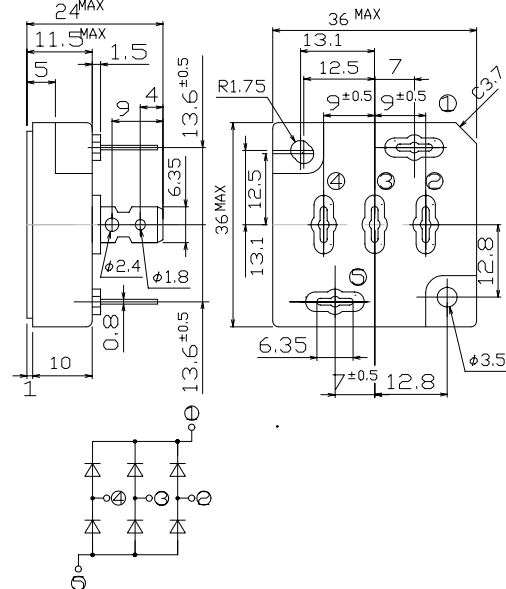
## APPLICATION

- Big Power Supply
- Air conditioner
- Factory Automation, Inverter

## OUTLINE DIMENSIONS

Case : SVT

(Unit : mm)



## RATINGS

- Absolute Maximum Ratings (If not specified Tc=25°C)

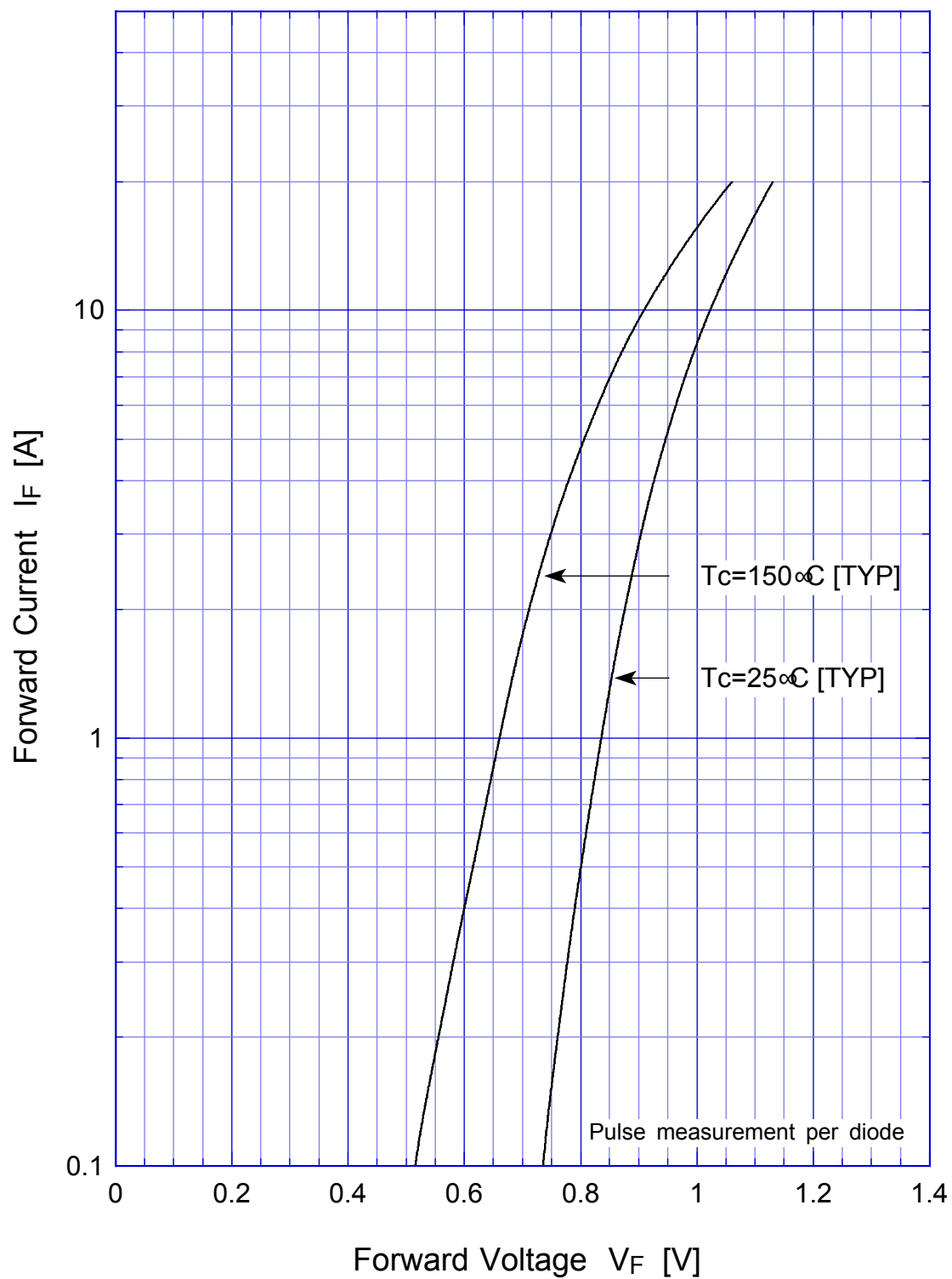
| Item                              | Symbol           | Conditions                                                                    | Ratings | Unit             |
|-----------------------------------|------------------|-------------------------------------------------------------------------------|---------|------------------|
| Storage Temperature               | Tstg             |                                                                               | -40~150 | ℃                |
| Operating Junction Temperature    | Tj               |                                                                               | 150     | ℃                |
| Maximum Reverse Voltage           | V <sub>RM</sub>  |                                                                               | 800     | V                |
| Average Rectified Forward Current | I <sub>O</sub>   | 50Hz sine wave, R-load, With heatsink, Tc=137℃                                | 10      | A                |
| Peak Surge Forward Current        | I <sub>FSM</sub> | 50Hz sine wave, Non-repetitive 1cycle peak value, Rating of per diode, Tj=25℃ | 150     | A                |
| Current Squared Time              | I <sup>2</sup> t | 1ms≤t<10ms Tc=25℃                                                             | 80      | A <sup>2</sup> 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<sub>c</sub>=25°C)

| Item               | Symbol        | Conditions                                            | Ratings  | Unit          |
|--------------------|---------------|-------------------------------------------------------|----------|---------------|
| Forward Voltage    | $V_F$         | $I_F=3.5A$ , 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   | $\mu A$       |
| Thermal Resistance | $\theta_{jc}$ | junction to case                                      | Max.0.65 | $^{\circ}C/W$ |

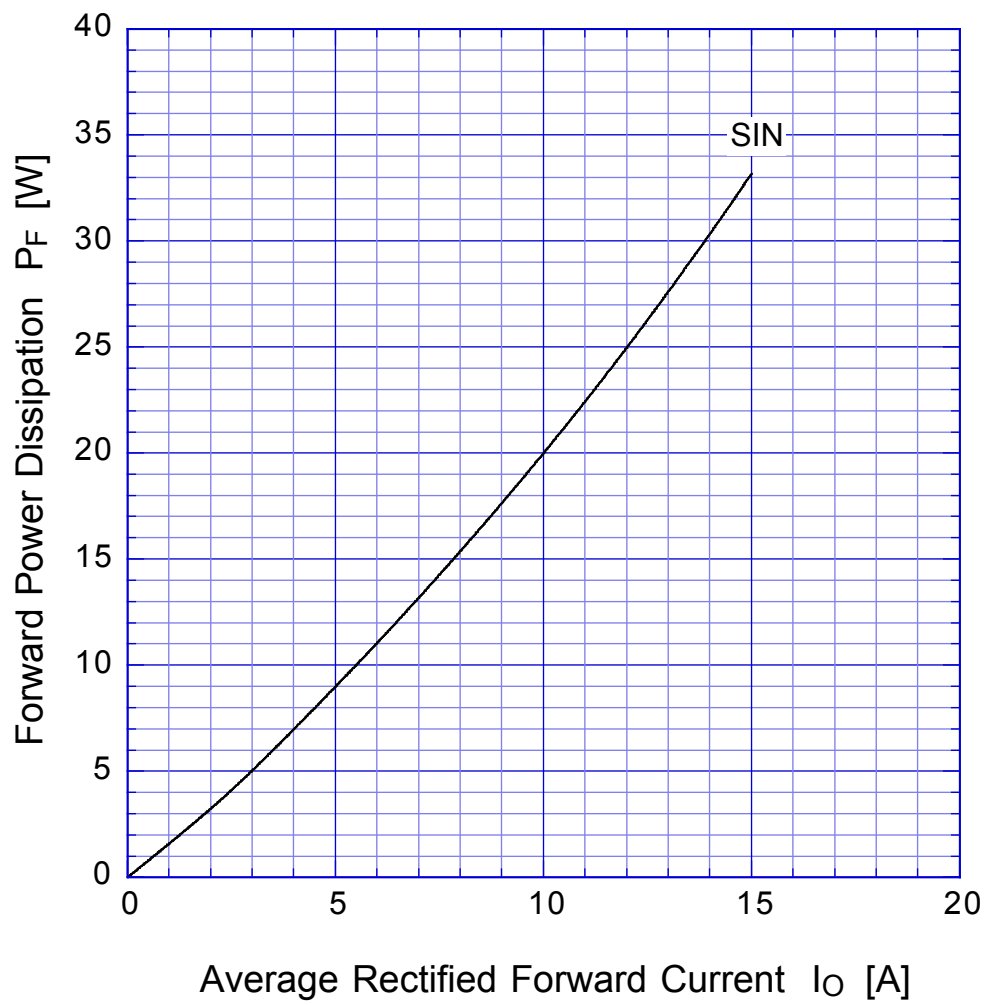
S10VTx

Forward Voltage



S10VTx

Forward Power Dissipation

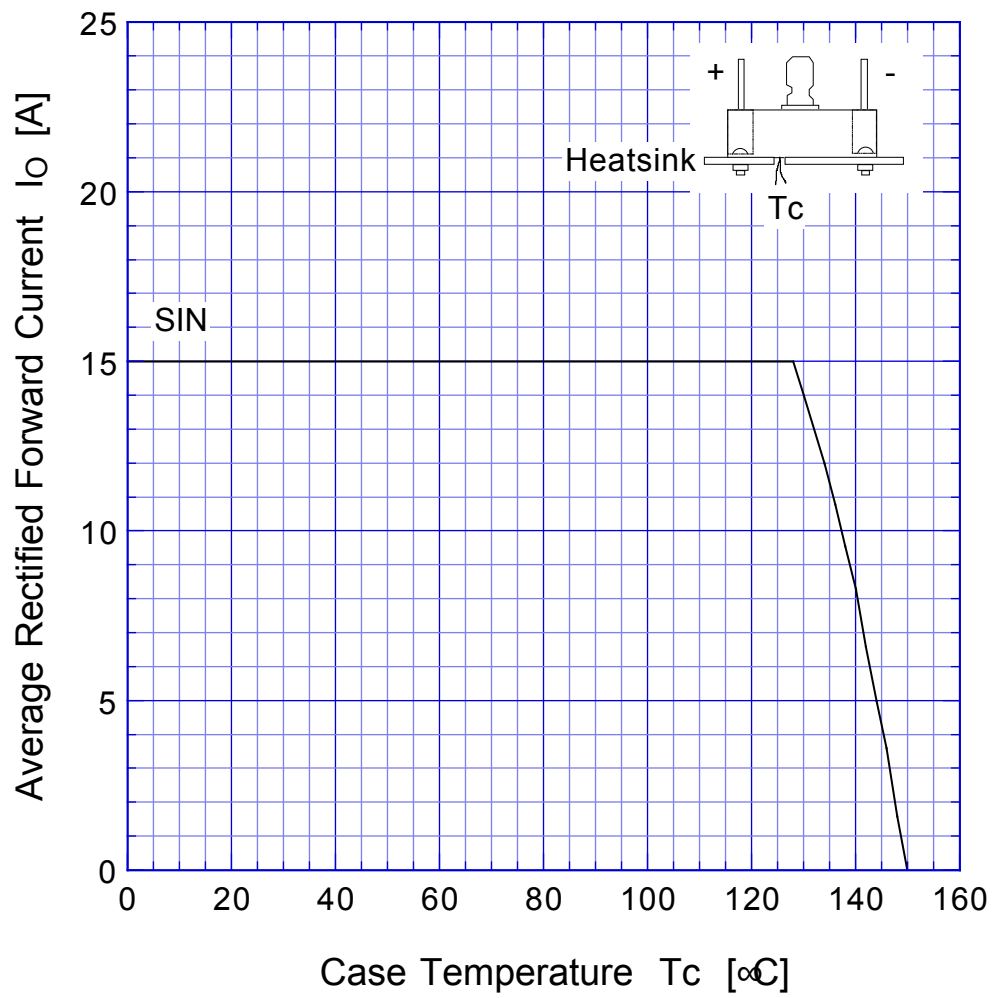


$T_j = 150^{\circ}\text{C}$

Sine wave

S10VTx

Derating Curve



$V_R = V_{RM}$   
Sine wave  
R-load  
with heatsink

# S10VTx

## Peak Surge Forward Capability

