

SHINDENGEN

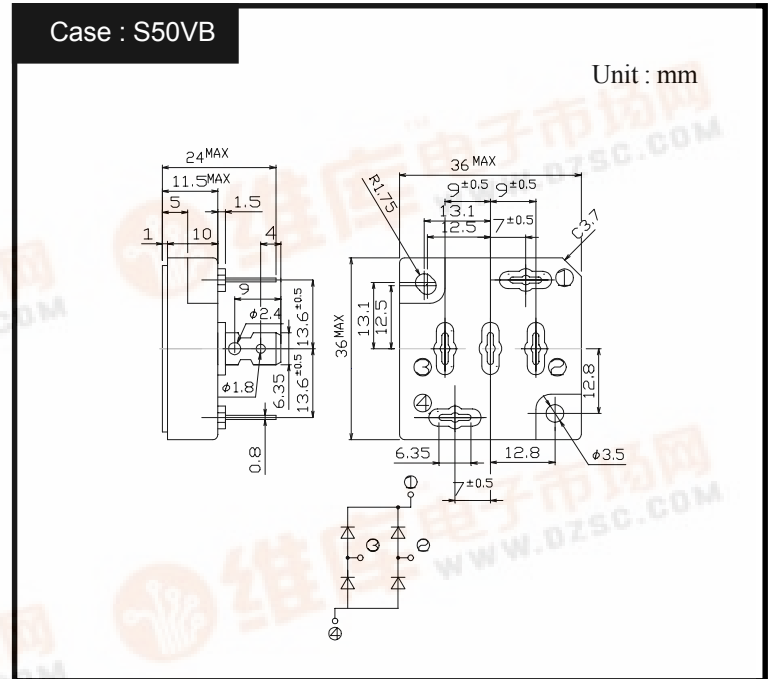
Bridge Diode

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°C | 50 | A |
| Peak Surge Forward Current | I _{FSM} | 50Hz sine wave, Non-repetitive 1cycle peak value, T _j =25°C | 500 | A |
| Current Squared Time | I ² t | 1ms ≤ t < 10ms T _c =25°C | 800 | A ² s |
| Dielectric Strength | V _{dis} | Terminals to case, AC 1 minute | 2 | kV |
| Mounting Torque | TOR | (Recommended torque : 0.6N·m) | 0.8 | N·m |

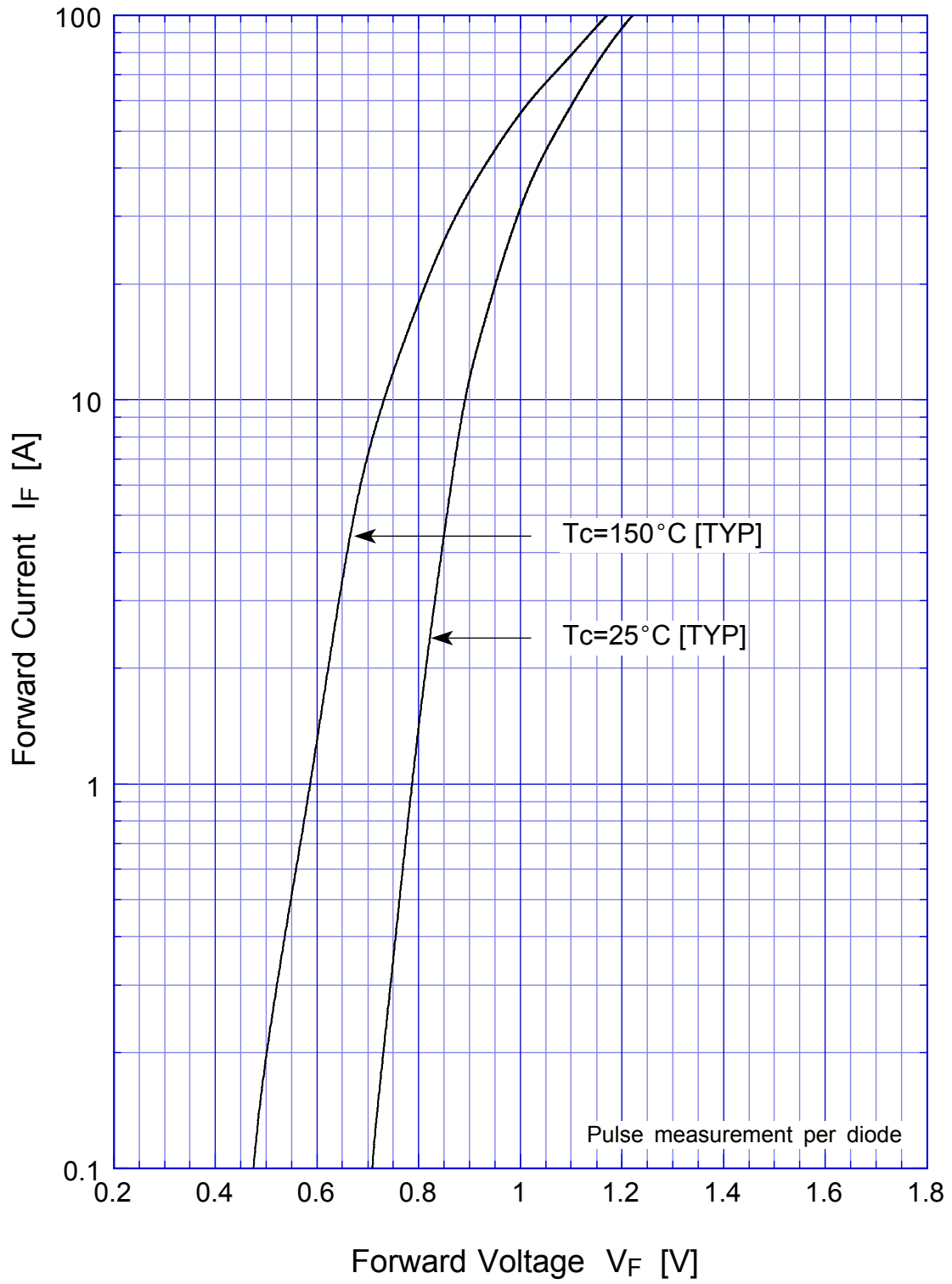
Electrical Characteristics (T_c=25°C)

| 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 | μA |
| Thermal Resistance | θ _{jc} | junction to case | Max.0.5 | °C/W |



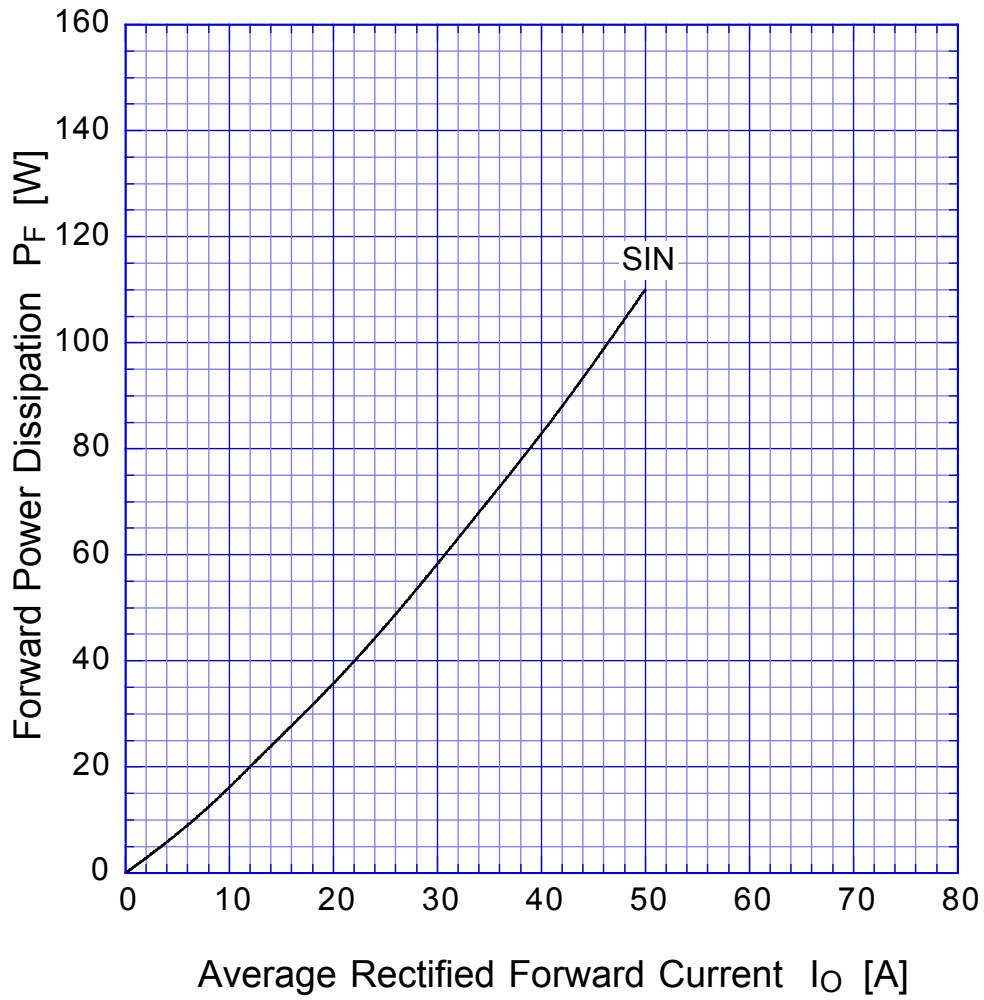
S50VBx

Forward Voltage



S50VBx

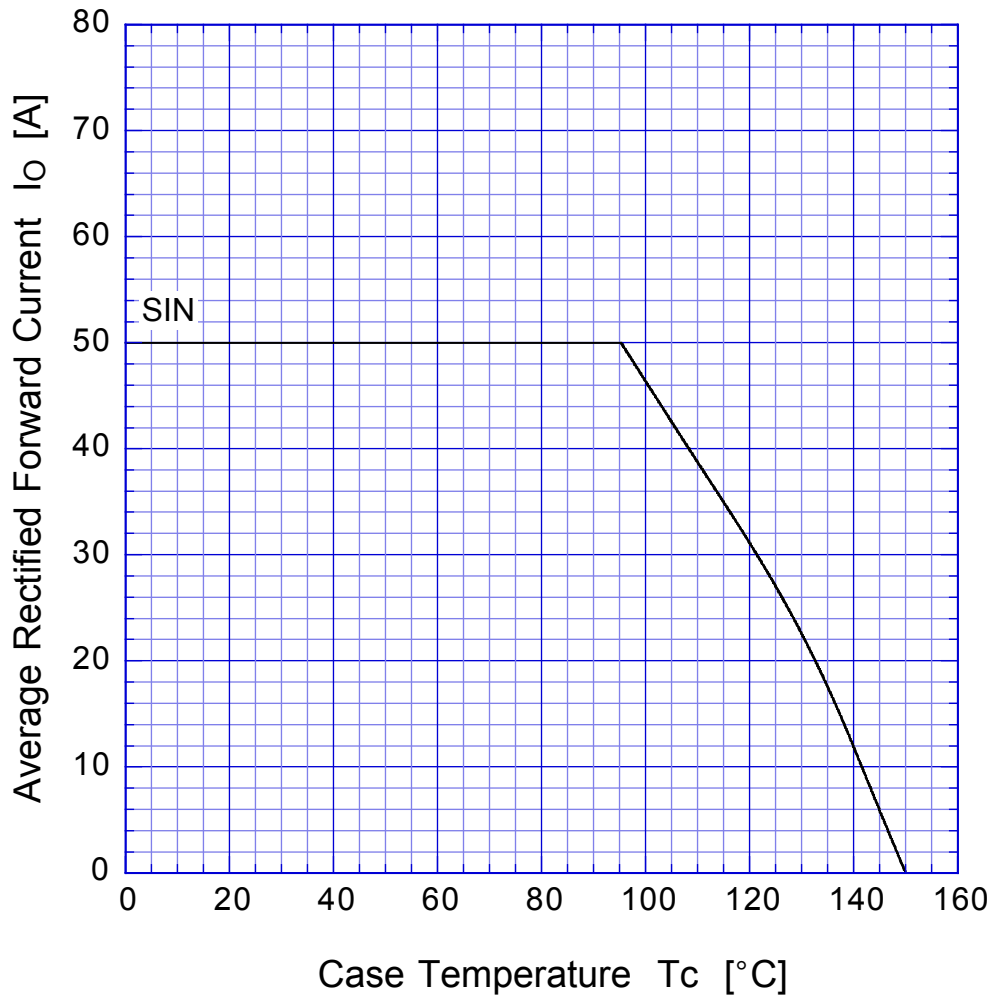
Forward Power Dissipation



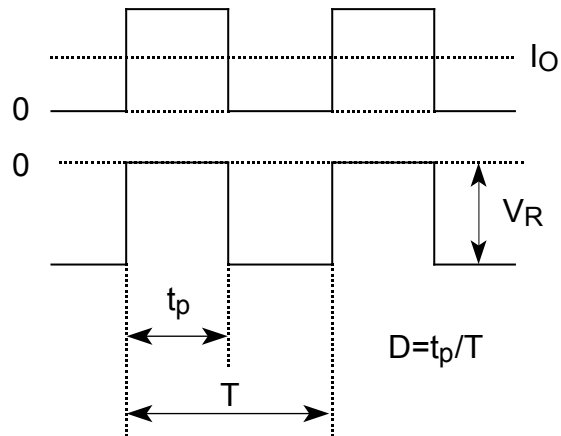
$T_j = T_{jmax}$

S50VBx

Derating Curve



$$V_R = V_{RM}$$



S50VBx

Peak Surge Forward Capability

