

SHINDENGEN

Schottky Rectifiers (SBD)

Dual

S20SC9M

90V 20A

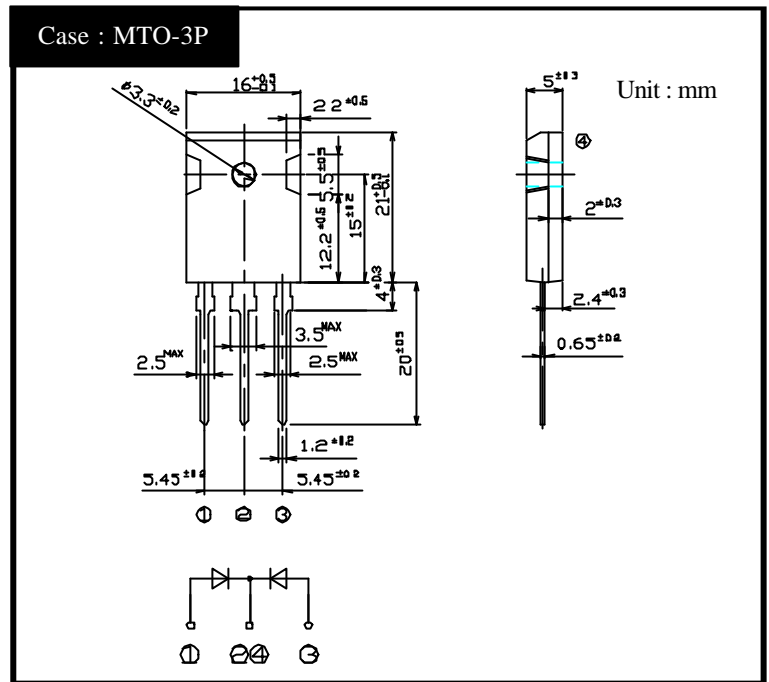
FEATURES

- Tj150
- P_{RRSM} avalanche guaranteed
- Small jc
- High current capacity

APPLICATION

- Switching power supply
- DC/DC converter
- Home Appliances, Office Equipment
- Telecommunication

OUTLINE DIMENSIONS



RATINGS

Absolute Maximum Ratings (If not specified Tc=25)

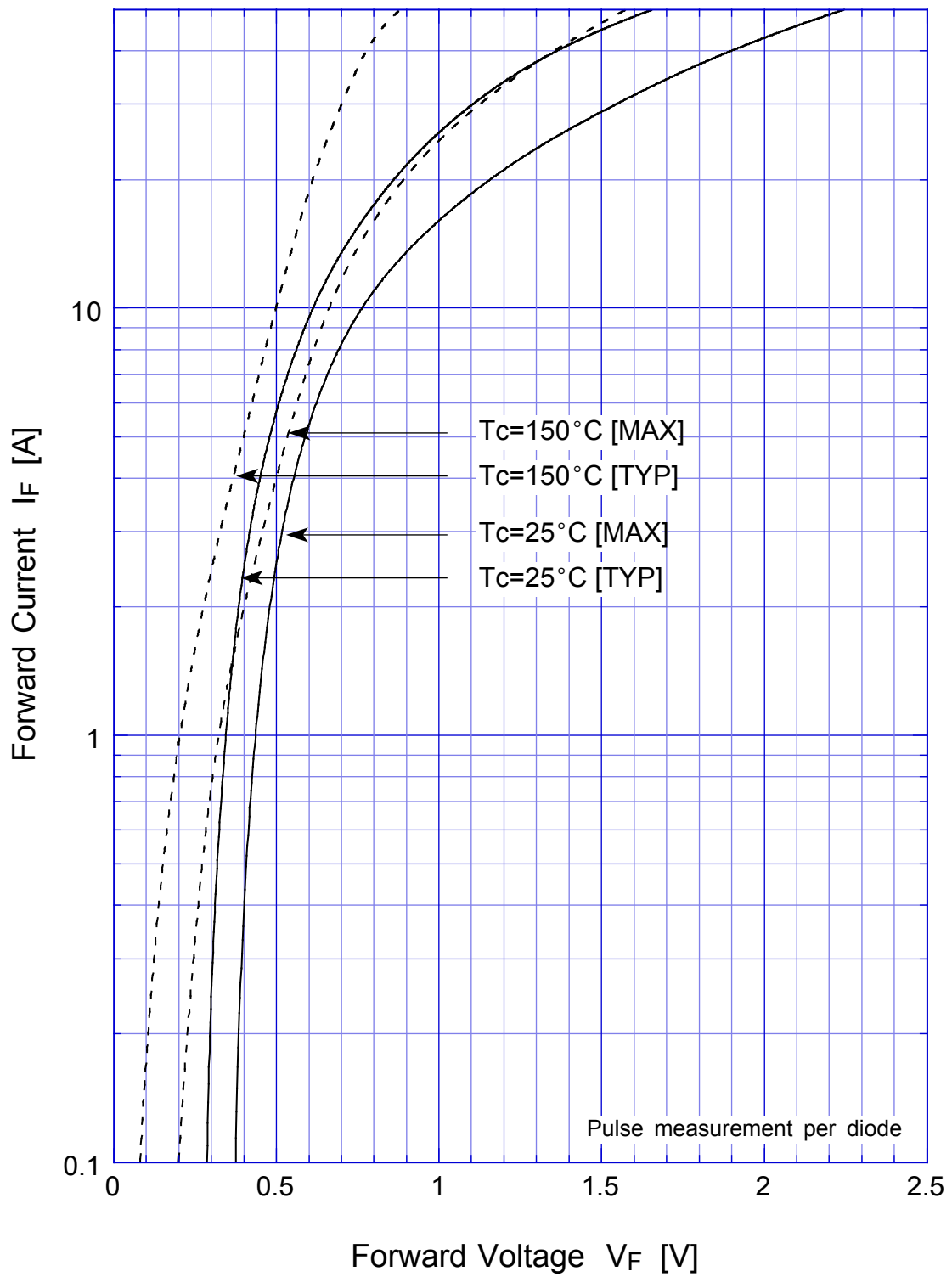
| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------------|-------------------|--------------------------------------------------------------------------------------|-----------|------|
| Storage Temperature | T _{stg} | | -40 ~ 150 | |
| Operating Junction Temperature | T _j | | 150 | |
| Maximum Reverse Voltage | V _{RM} | | 90 | V |
| Repetitive Peak Surge Reverse Voltage | V _{RRSM} | Pulse width 0.5ms, duty 1/40 | 100 | V |
| Average Rectified Forward Current | I _o | 50Hz sine wave, R-load, Rating for each diode I _o /2, T _c =125 | 20 | A |
| Peak Surge Forward Current | I _{FSM} | 50Hz sine wave, Non-repetitive 1 cycle peak value, T _j =25 | 200 | A |
| Repetitive Peak Surge Reverse Power | P _{RRSM} | Pulse width 10 μs, Rating of per diode, T _j =25 | 660 | W |
| 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 =10A, Pulse measurement, Rating of per diode | Max.0.75 | V |
| Reverse Current | I _R | V _R =V _{RM} , Pulse measurement, Rating of per diode | Max.10 | mA |
| Junction Capacitance | C _j | f=1MHz, V _R =10V, Rating of per diode | Typ.370 | pF |
| Thermal Resistance | jc | junction to case | Max.1.0 | /W |

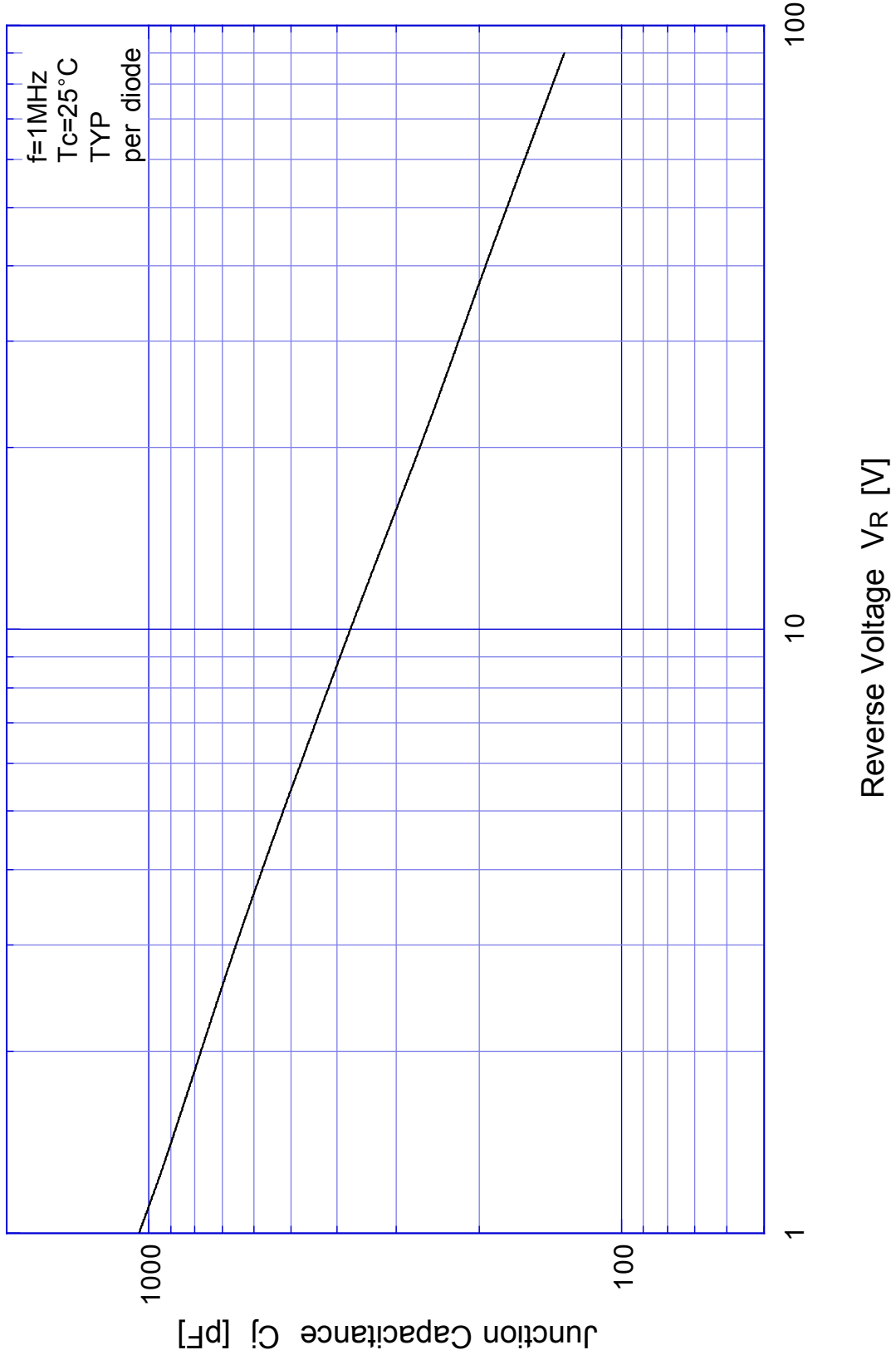
S20SC9M

Forward Voltage



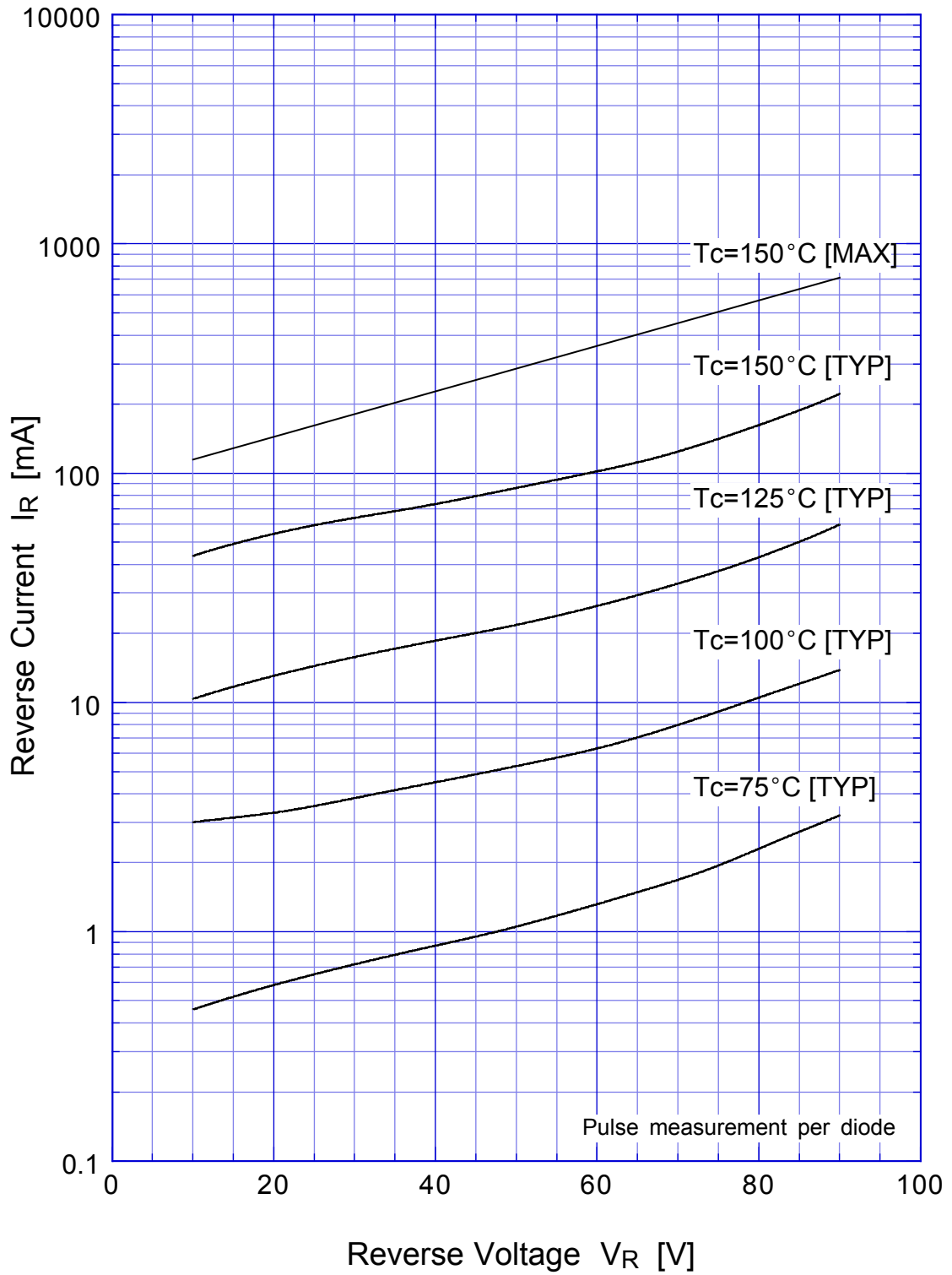
S20SC9M

Junction Capacitance

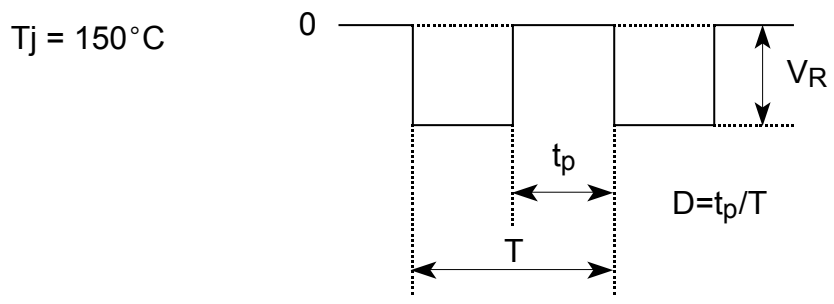
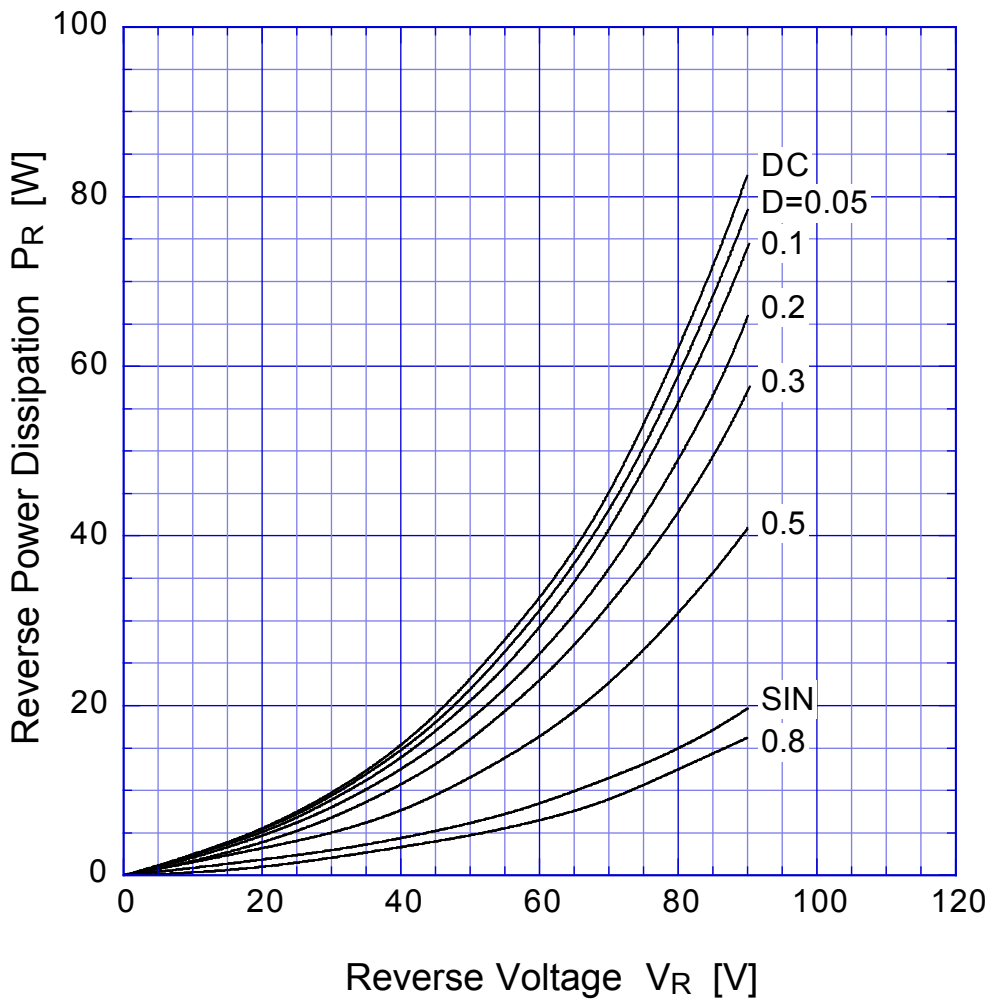


S20SC9M

Reverse Current

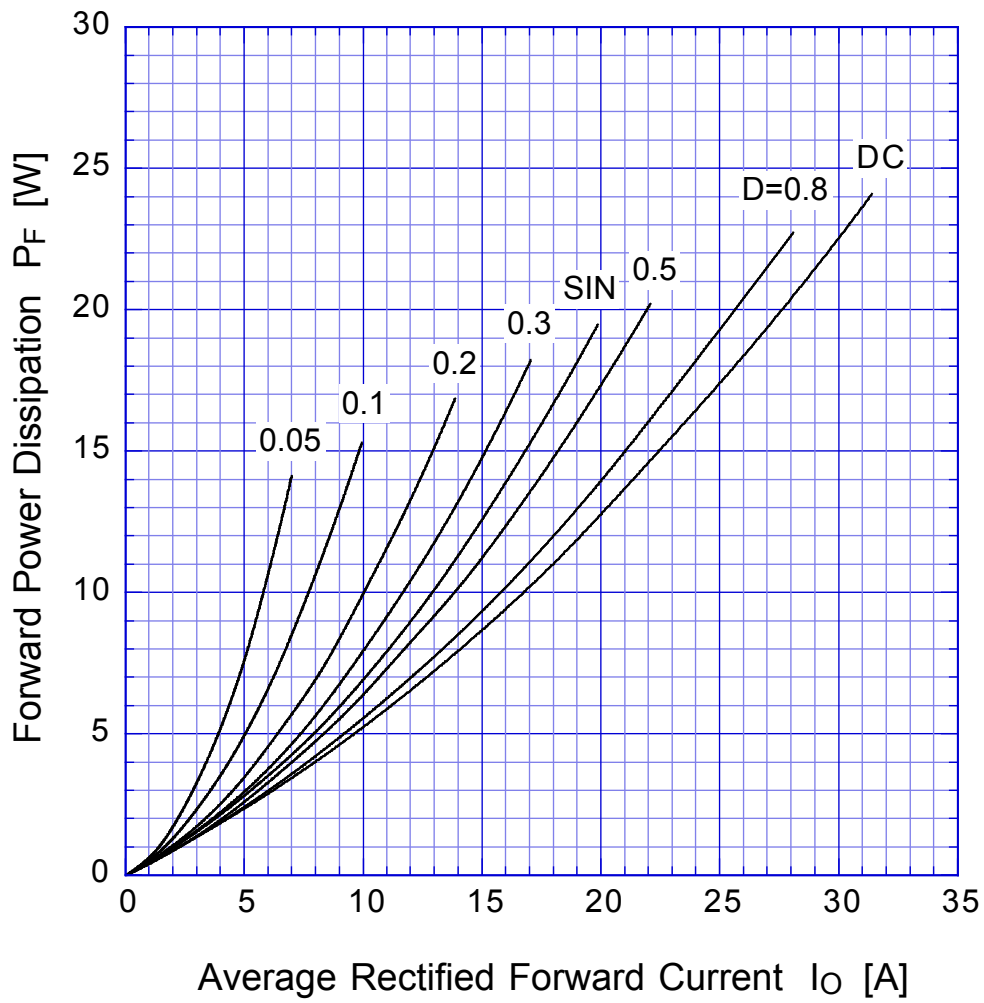


S20SC9M Reverse Power Dissipation

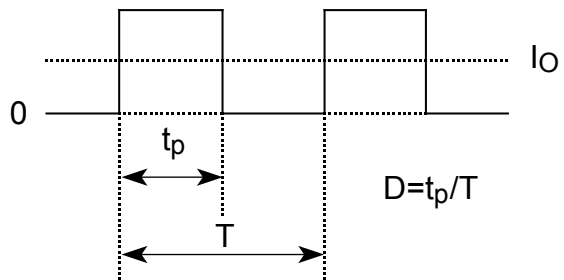


S20SC9M

Forward Power Dissipation

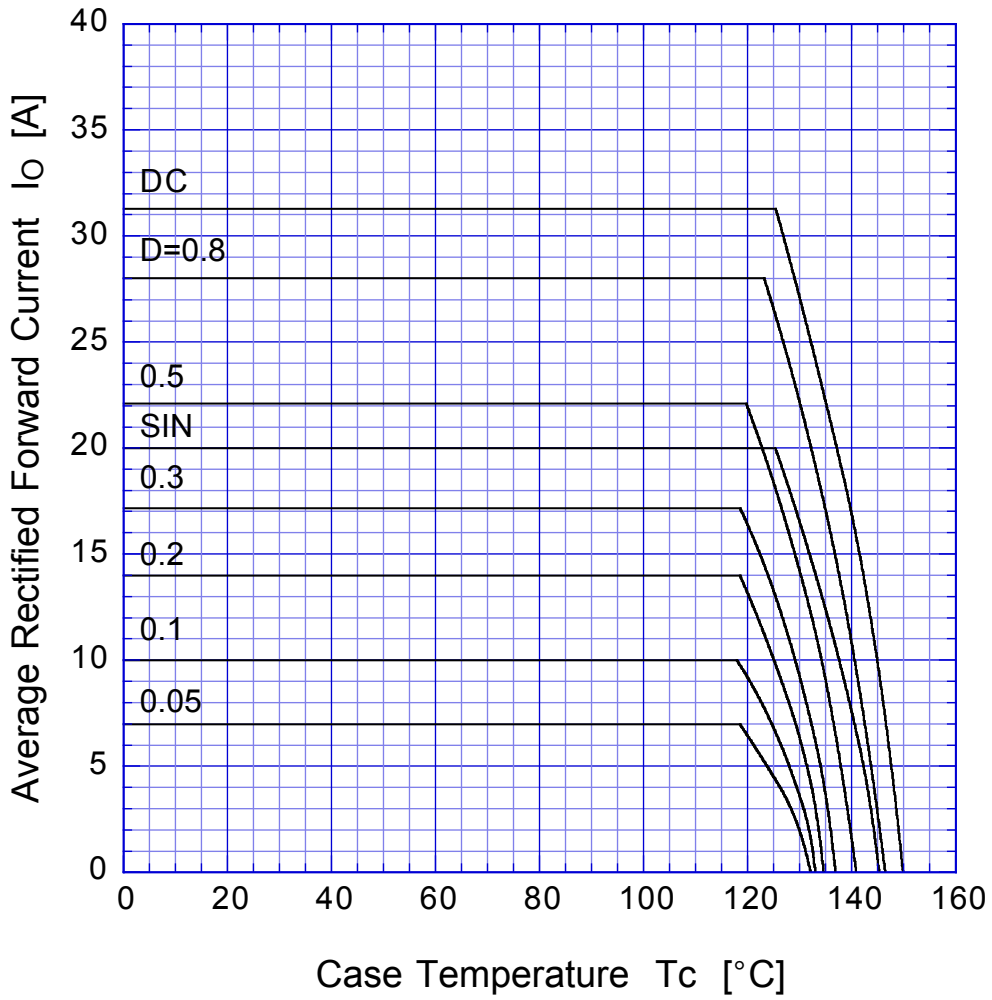


$T_j = 150^\circ\text{C}$

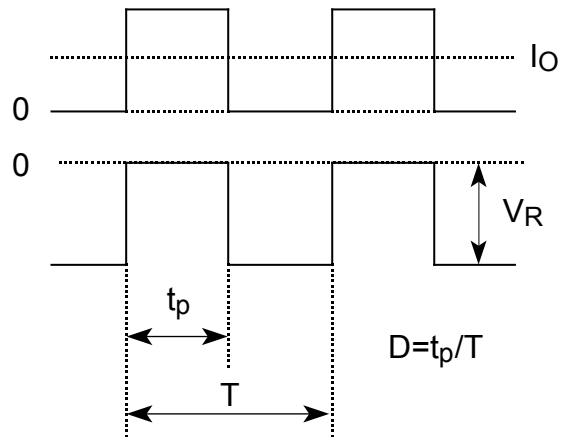


S20SC9M

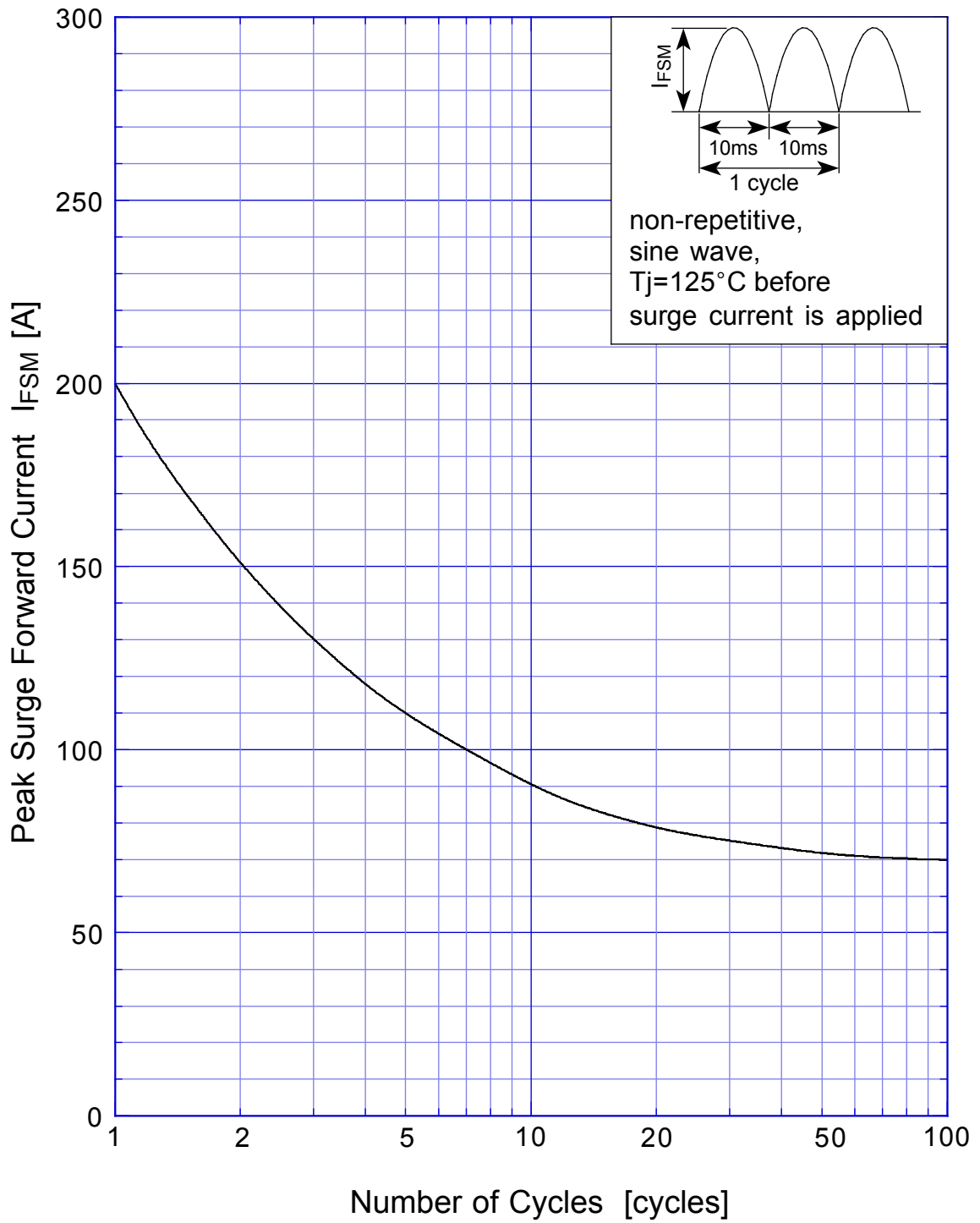
Derating Curve



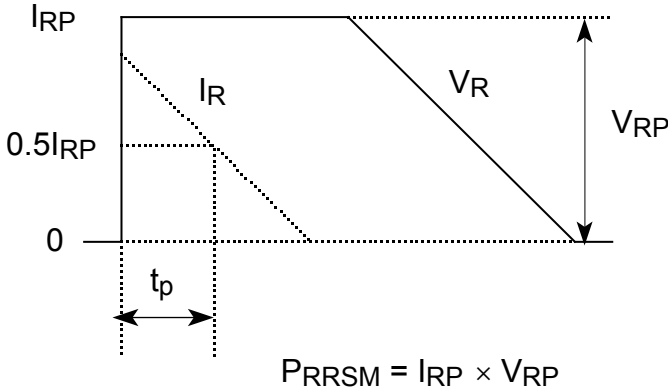
$V_R = 45V$



S20SC9M Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve



SBD

Repetitive Surge Reverse Power Capability

