

SHINDENGEN

Schottky Rectifiers (SBD)

Single

DE5S6M

60V 5A

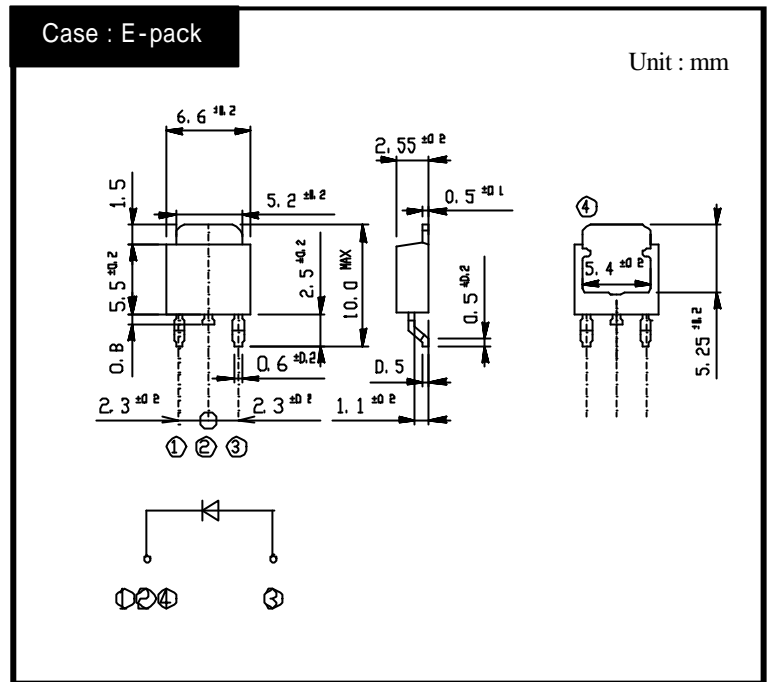
FEATURES

- SMT
- Tj150
- P_{RRSM} avalanche guaranteed
- High current capacity with Small Package

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

Absolute Maximum Ratings (If not specified T_c=25)

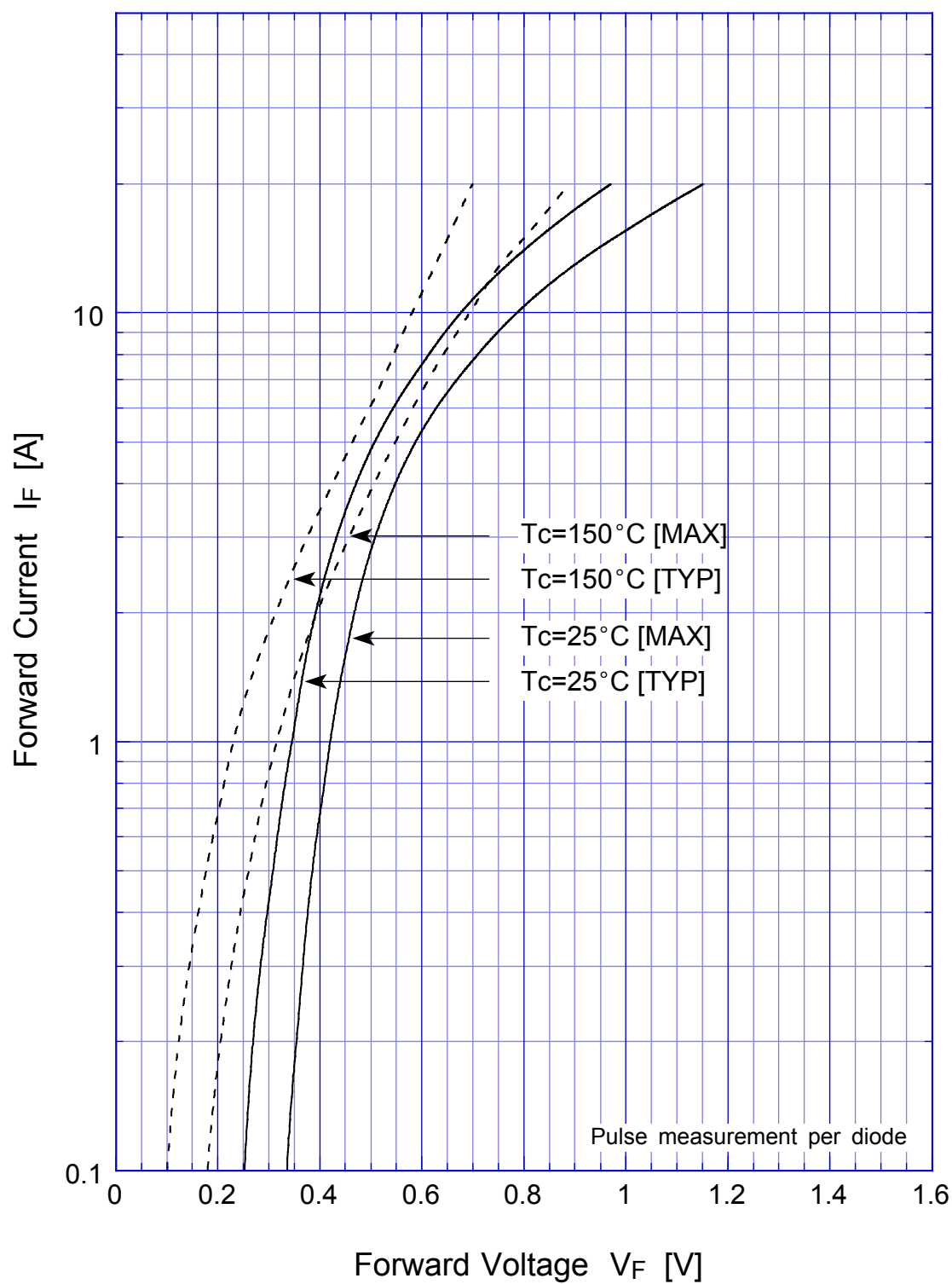
| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------------|-------------------|------------------------------------------------------------------------|-----------|------|
| Storage Temperature | T _{stg} | | -40 ~ 150 | |
| Operating Junction Temperature | T _j | | 150 | |
| Maximum Reverse Voltage | V _{RM} | | 60 | V |
| Repetitive Peak Surge Reverse Voltage | V _{RRSM} | Pulse width 0.5ms, duty1/40 | 65 | V |
| Average Rectified Forward Current | I _O | 50Hz sine wave, R-load, T _c =96 On alumina substrate | 5 | A |
| | | 50Hz sine wave, R-load, T _a =45 On glass-epoxy substrate | 2.6 | |
| Peak Surge Forward Current | I _{FSM} | 50Hz sine wave, Non-repetitive 1 cycle peak value, T _j =125 | 90 | A |
| Repetitive Peak Surge Reverse Power | P _{RRSM} | Pulse width 10 μs, T _j =25 | 330 | W |

Electrical Characteristics (If not specified T_c=25)

| Item | Symbol | Conditions | Ratings | Unit |
|----------------------|----------------|-----------------------------------------------------|----------|------|
| Forward Voltage | V _F | I _F =5A, Pulse measurement | Max.0.58 | V |
| Reverse Current | I _R | V _R =V _{RM} , Pulse measurement | Max.2.5 | mA |
| Junction Capacitance | C _j | f=1MHz, V _R =10V | Typ.200 | pF |
| Thermal Resistance | j _c | junction to case | Max.12 | /W |
| | j _a | junction to ambient | Max.55 | |

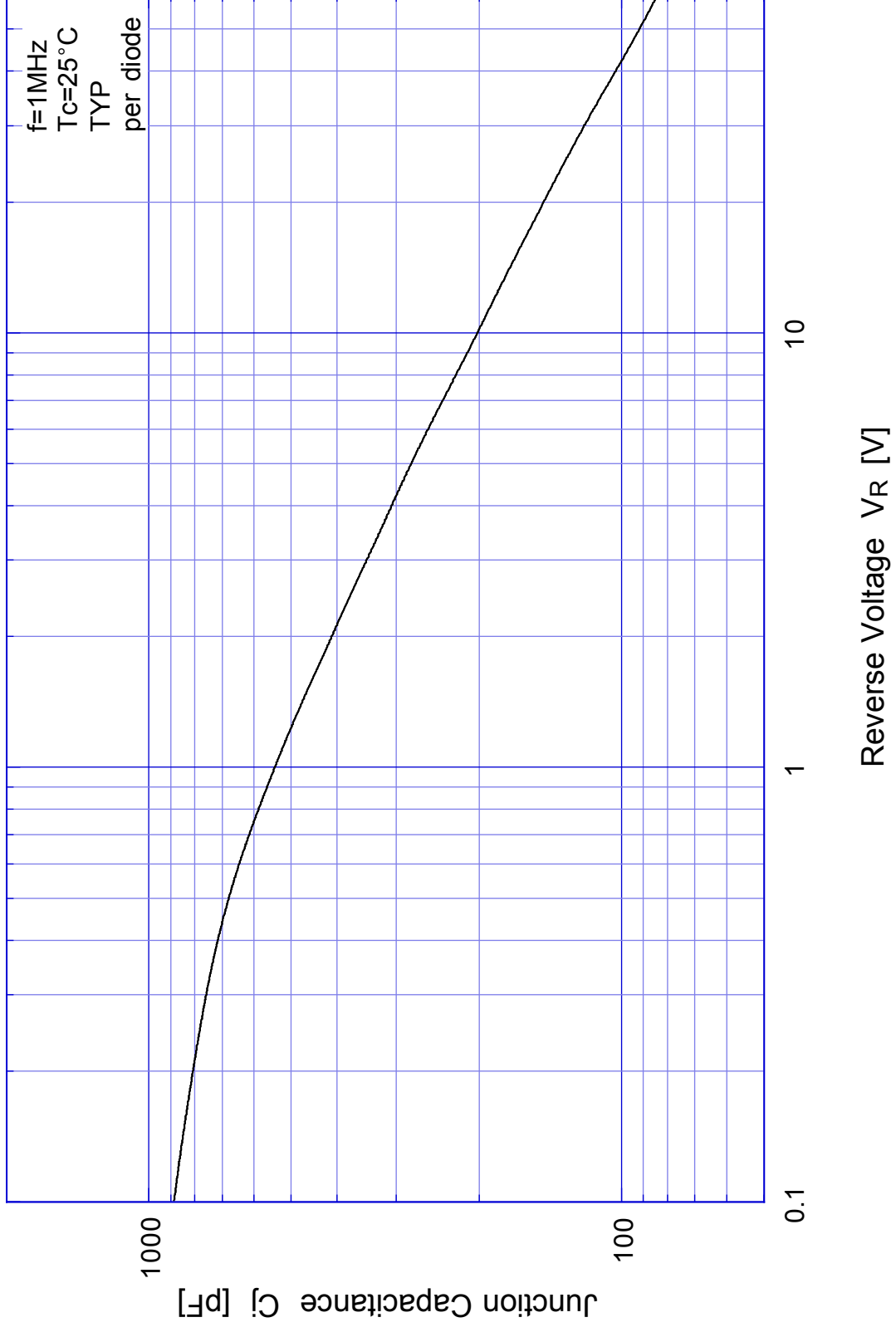
DE5S6M

Forward Voltage



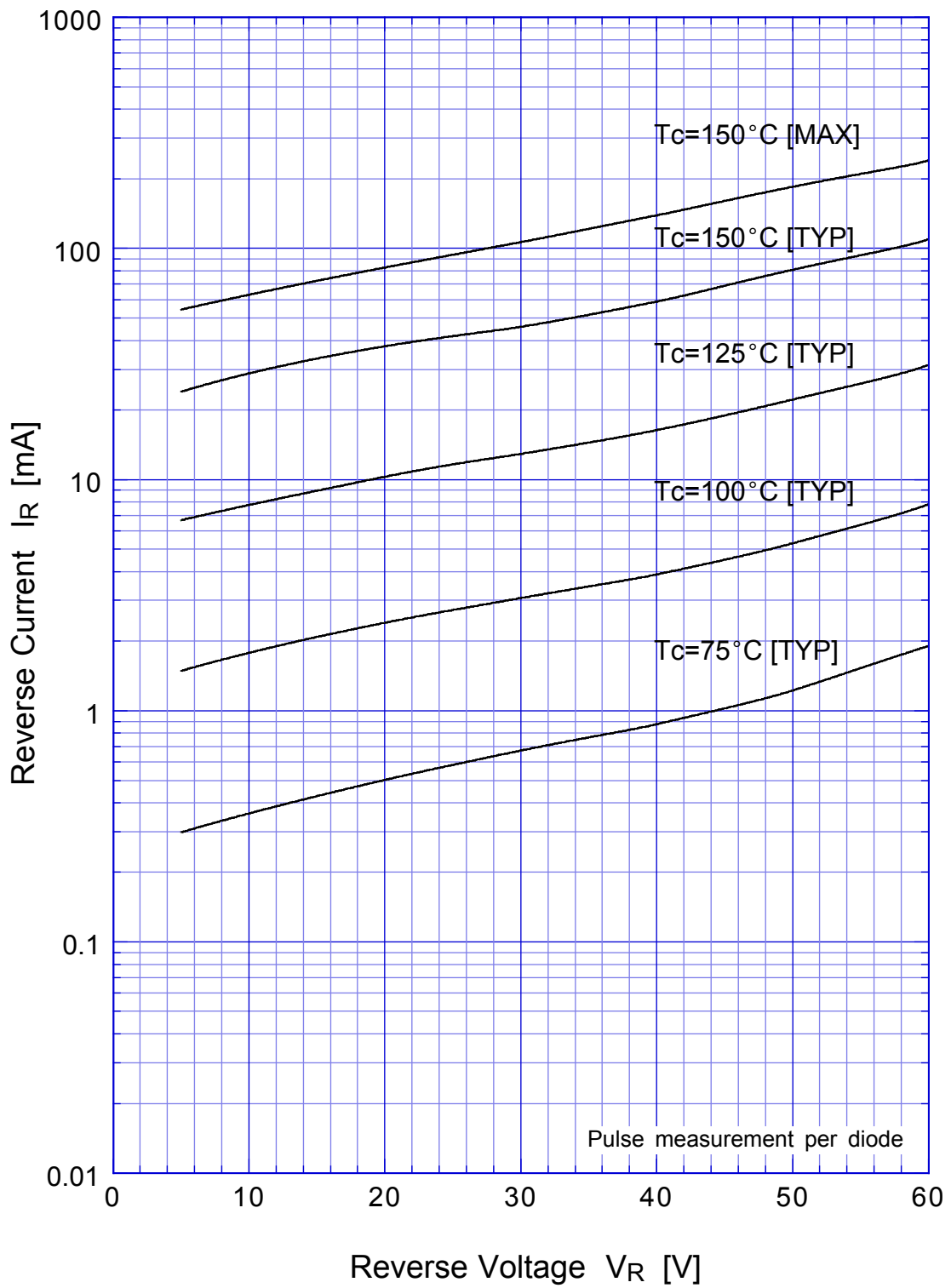
DE5S6M

Junction Capacitance



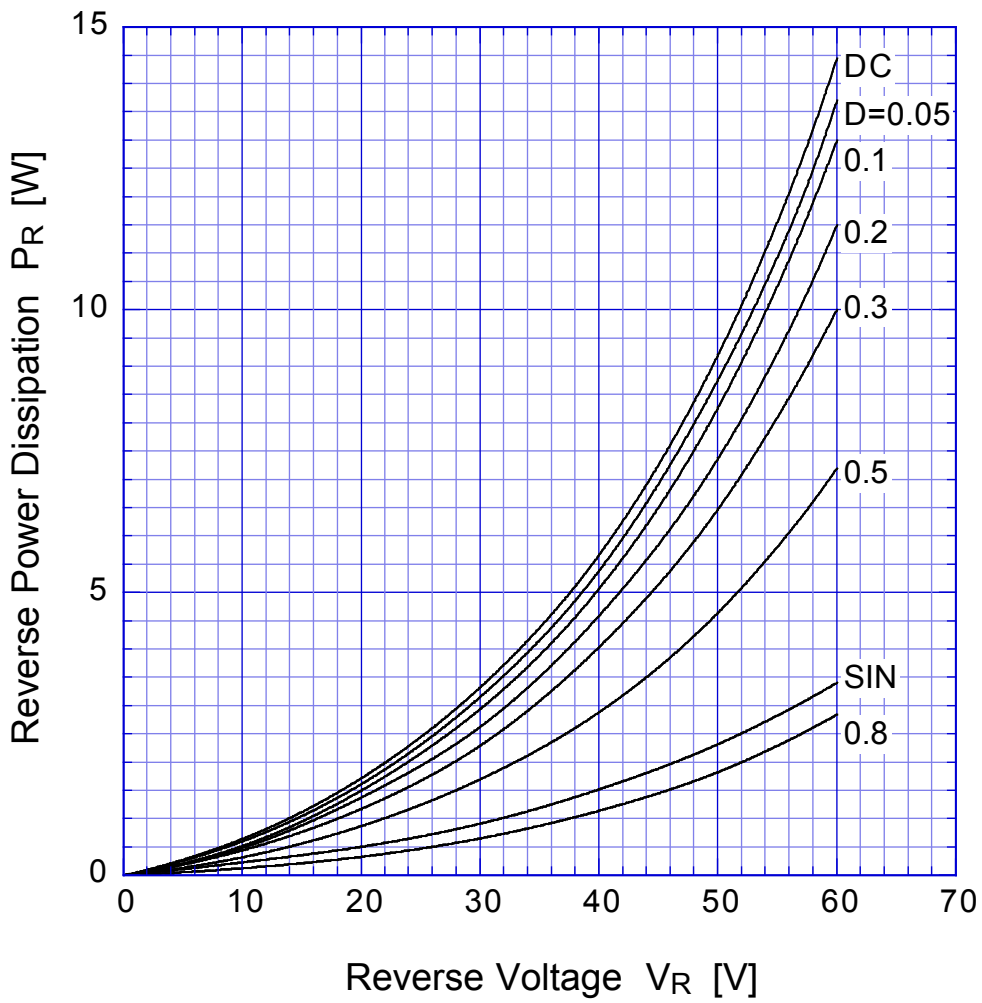
DE5S6M

Reverse Current

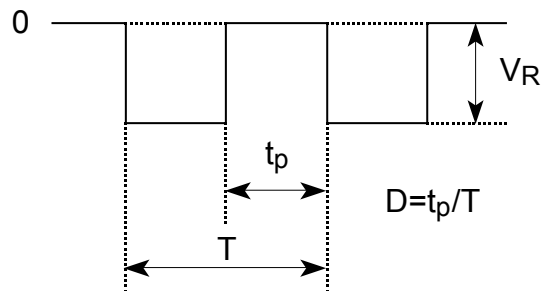


D5S6M

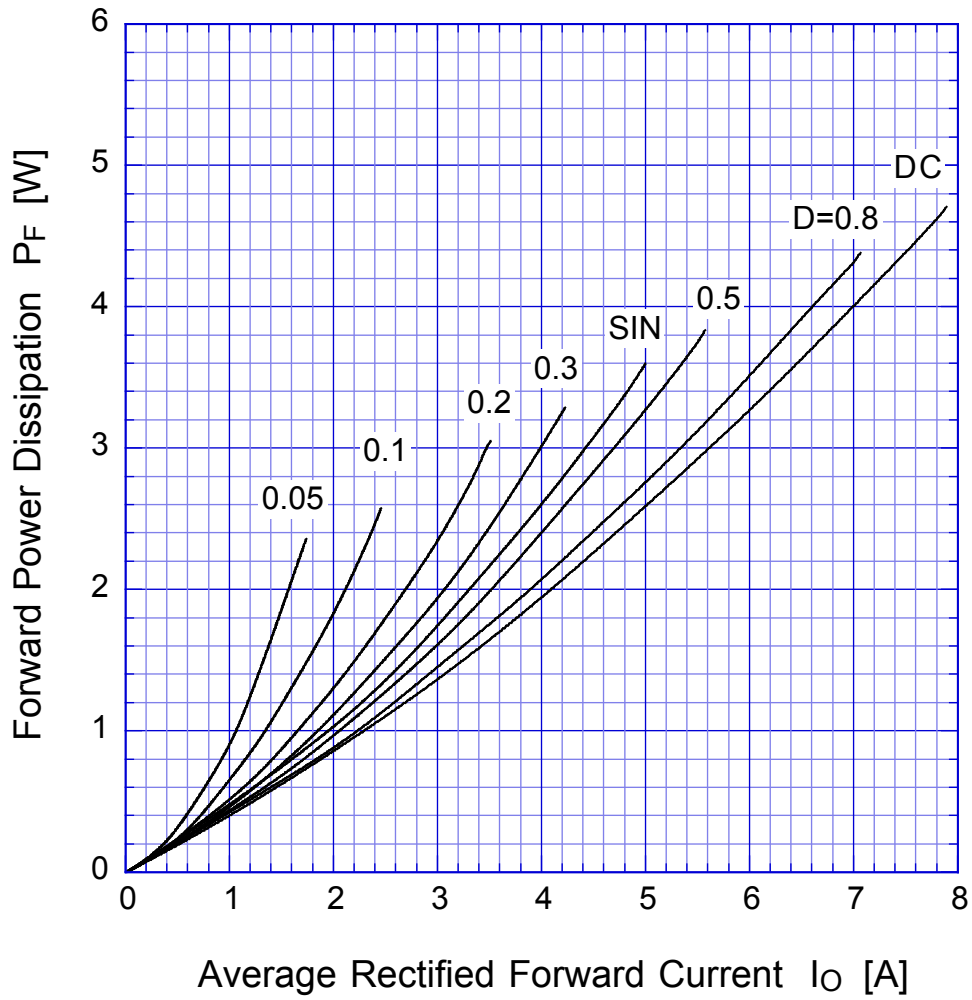
Reverse Power Dissipation



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



DE5S6M Forward Power Dissipation

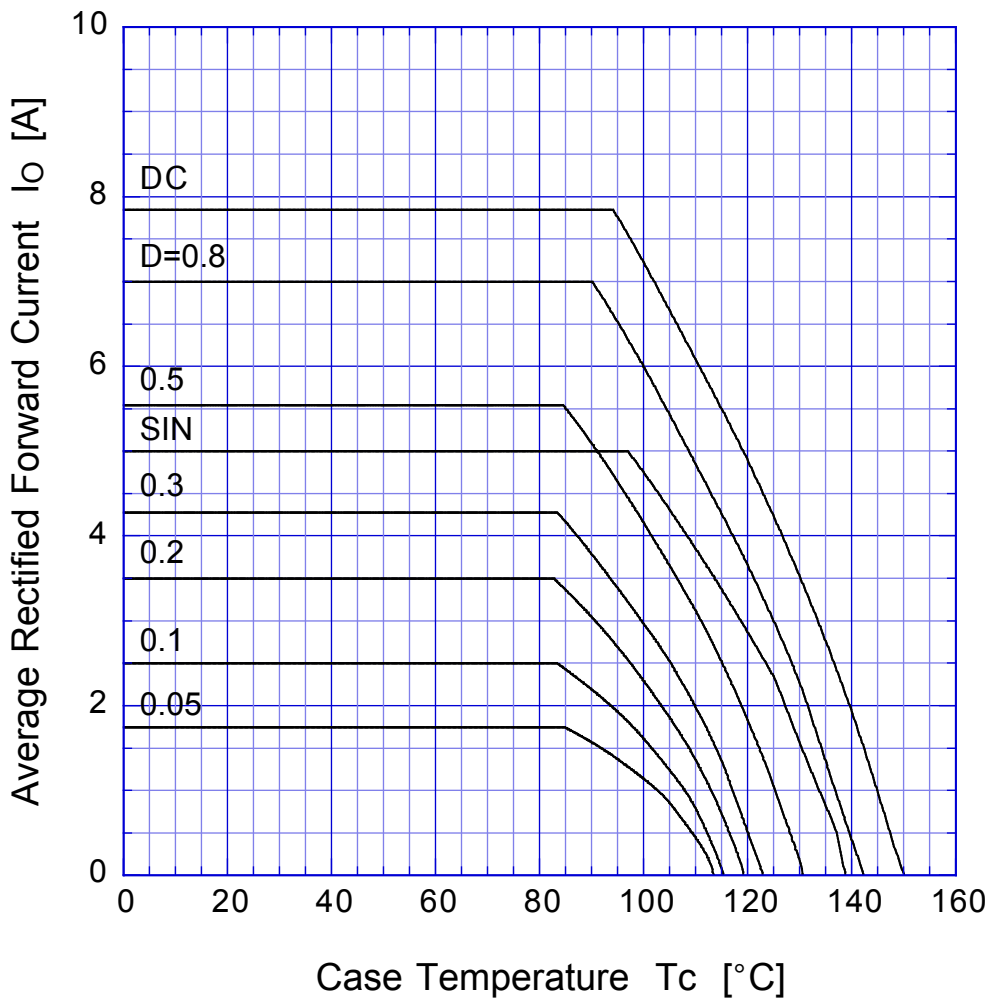


$T_j = 150^\circ\text{C}$



DE5S6M

Derating Curve

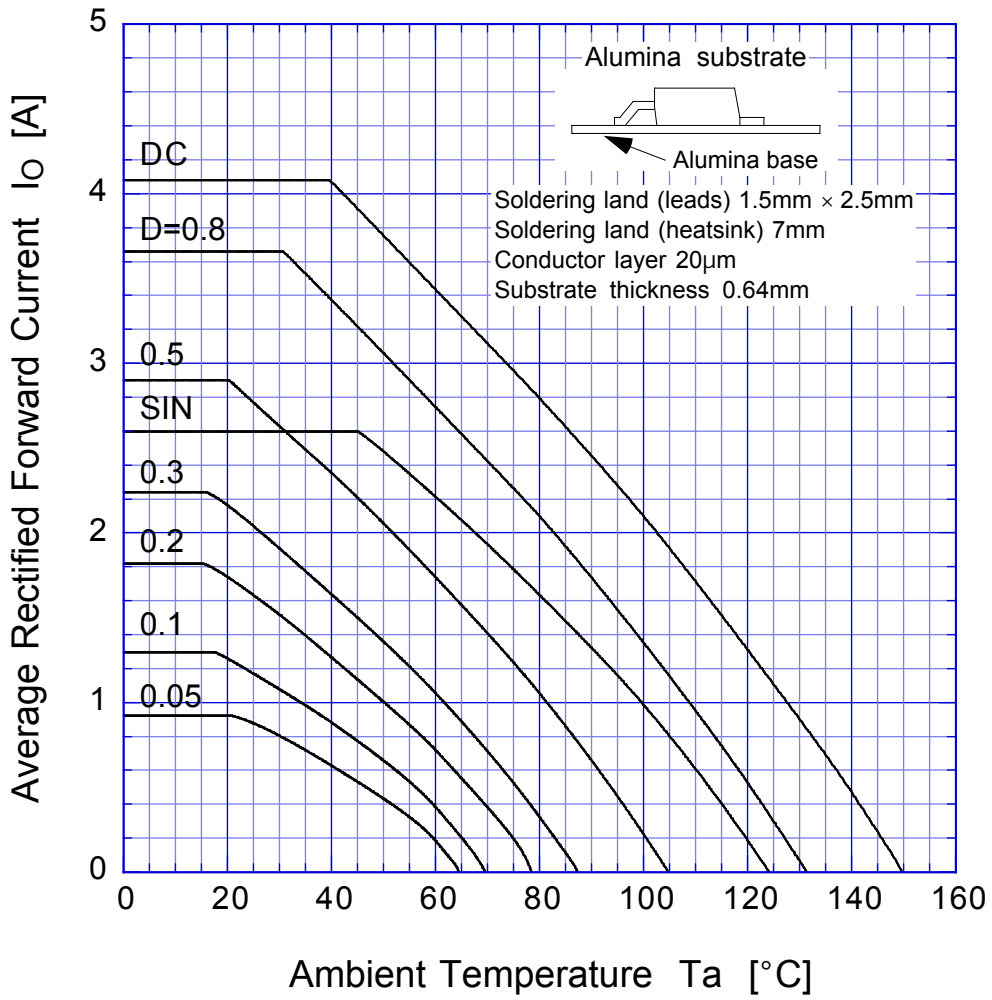


$V_R = 30V$

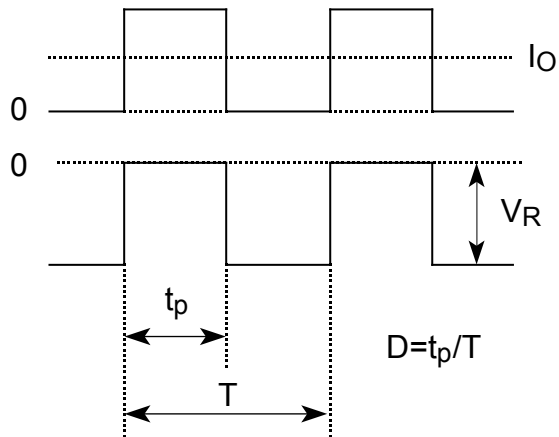


DE5S6M

Derating Curve

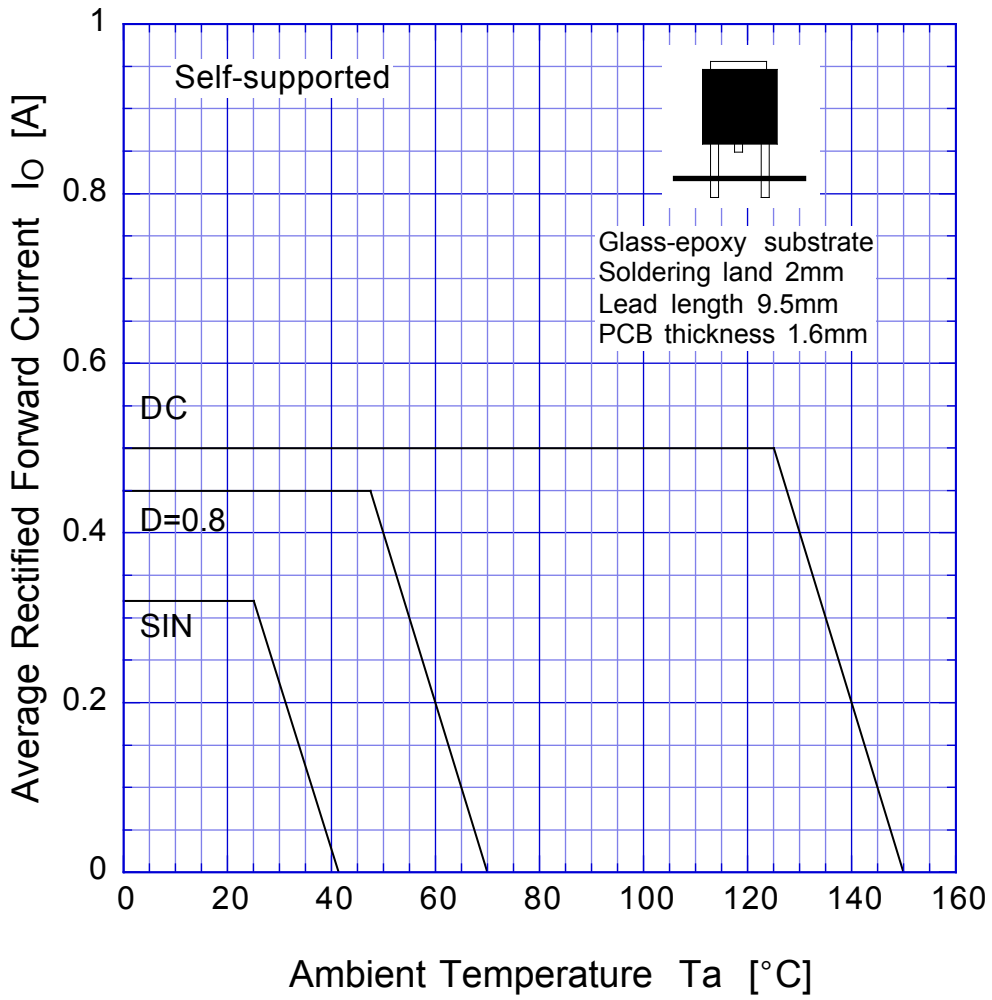


$V_R = 20V$

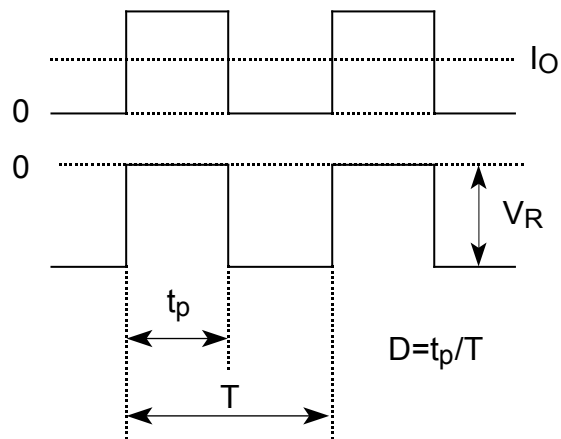


DE5S6M

Derating Curve

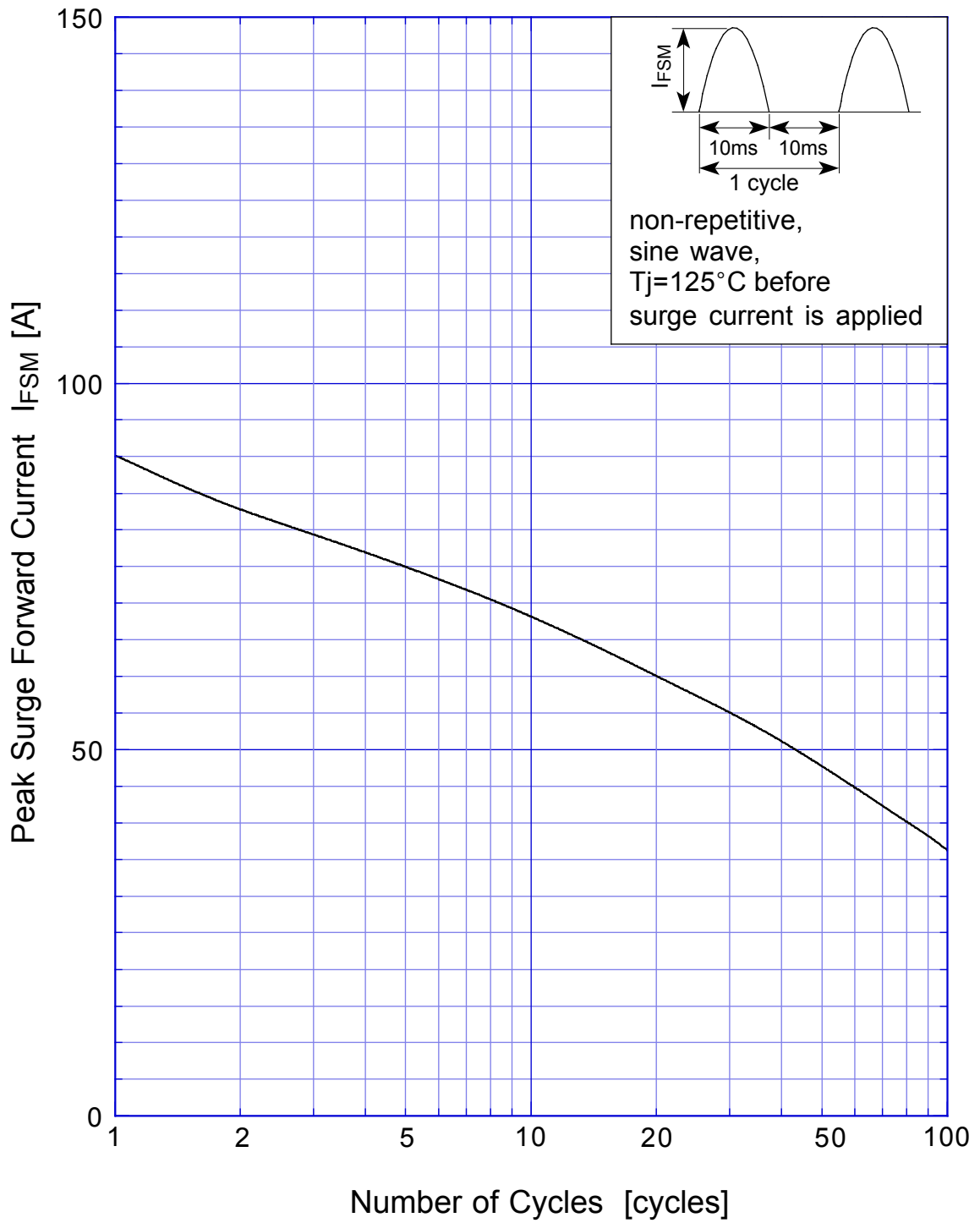


$V_R = 30V$

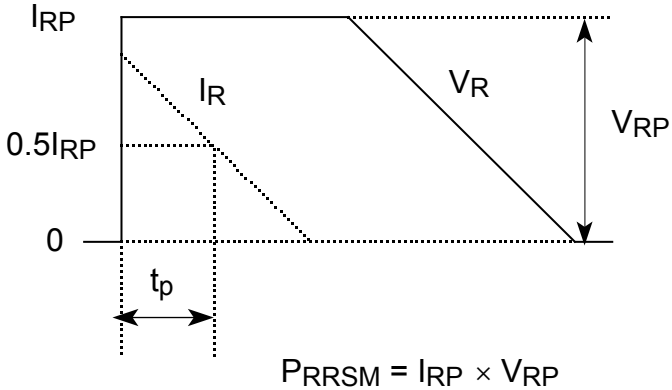
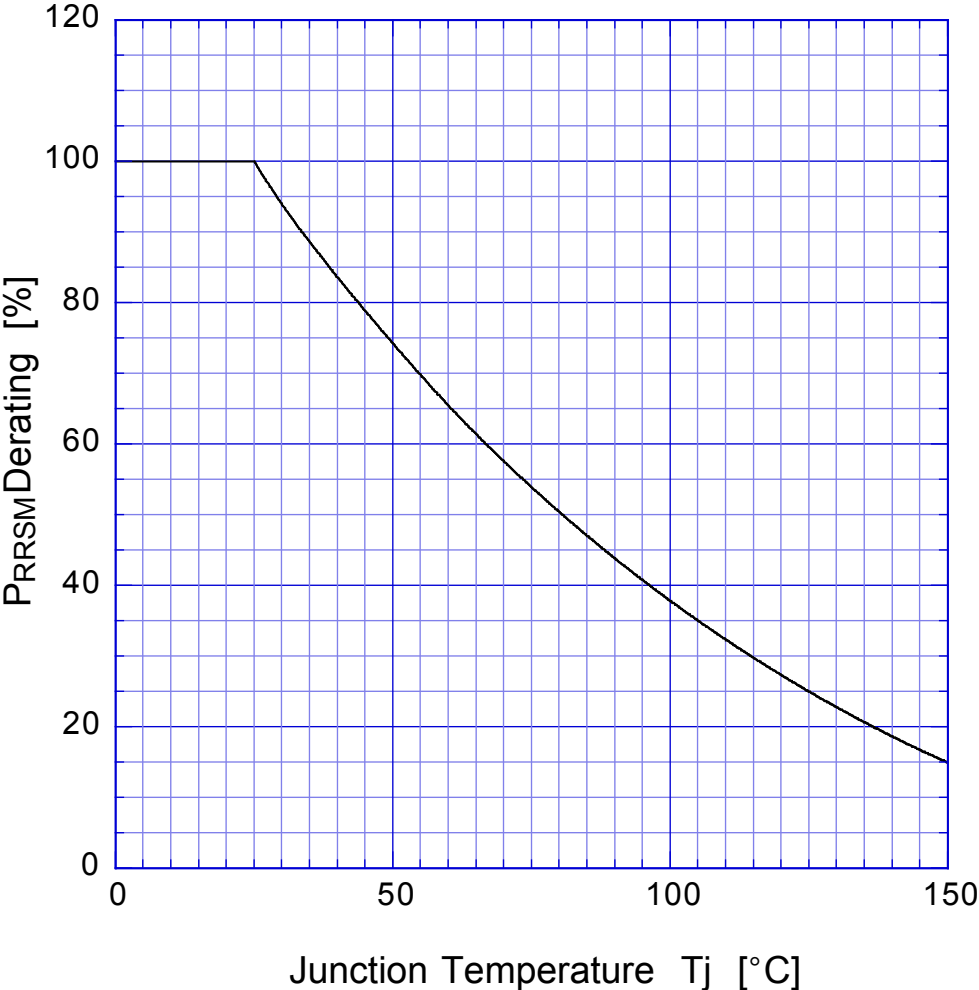


DE5S6M

Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve



SBD

Repetitive Surge Reverse Power Capability

