

D3S6M

60V 3A

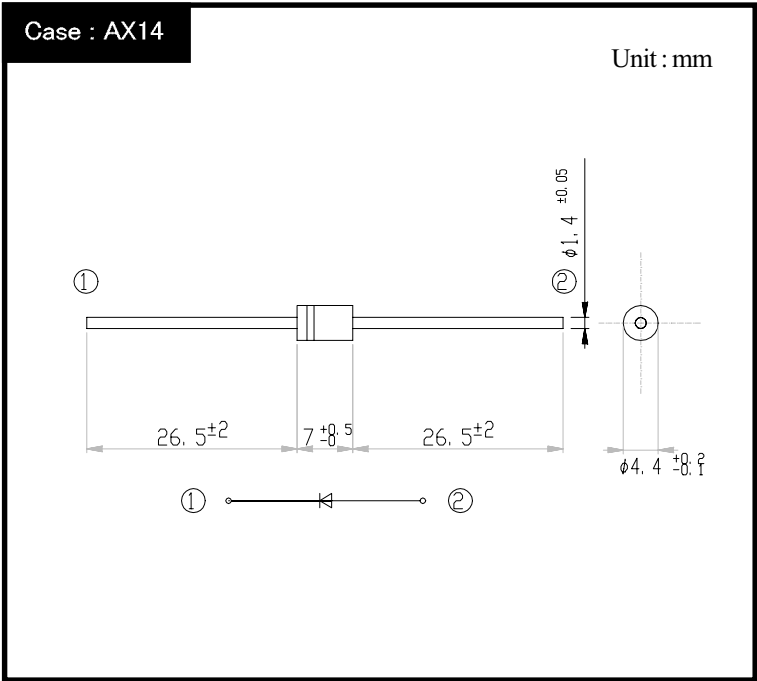
FEATURES

- Tj150°C
- P<sub>RRSM</sub> avalanche guaranteed
- 1.4 ϕ lead

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

● Absolute Maximum Ratings Tl=25°C

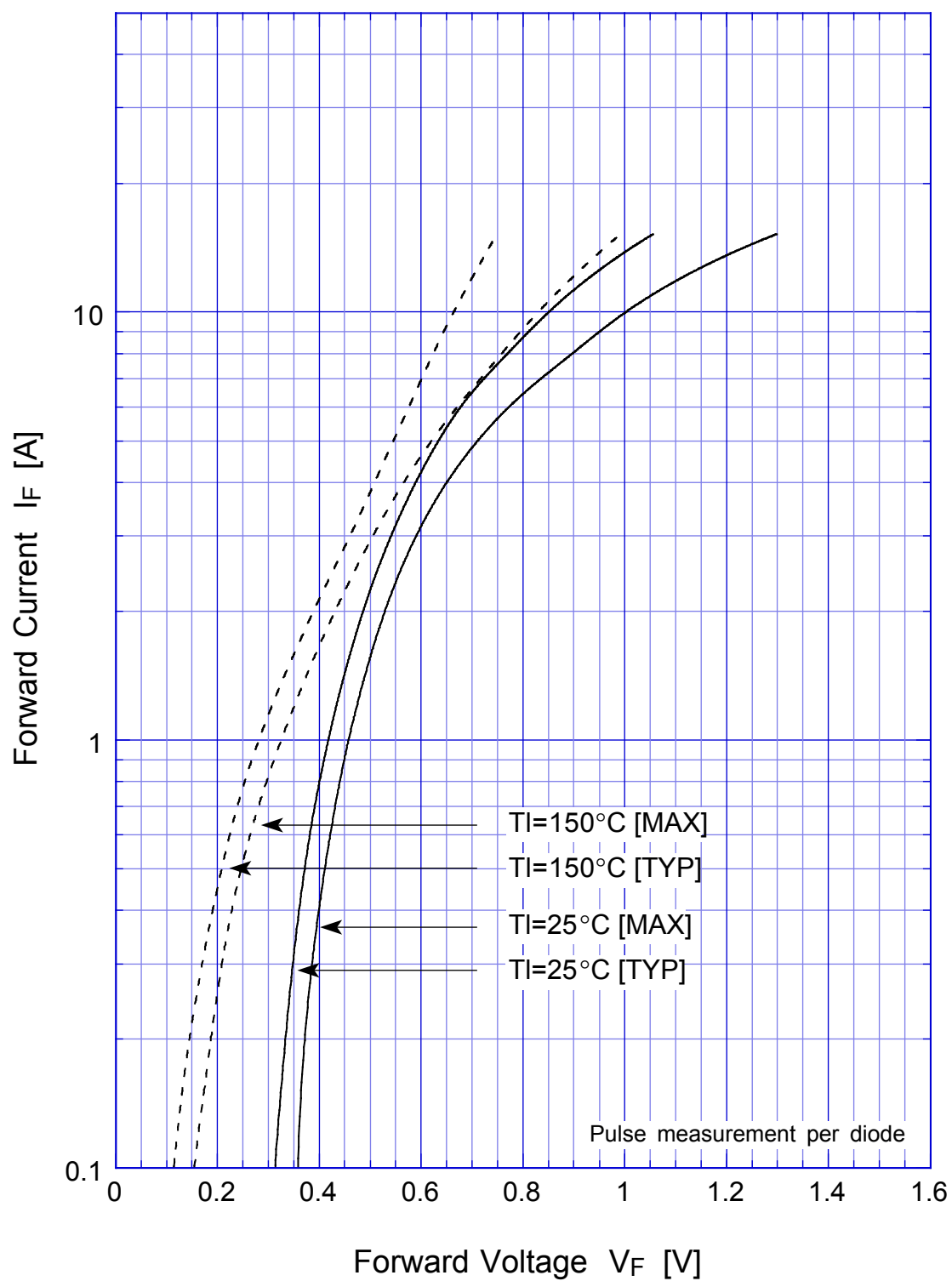
| Item                                  | Symbol            | Conditions                                                                       | Ratings | Unit |
|---------------------------------------|-------------------|----------------------------------------------------------------------------------|---------|------|
| Storage Temperature                   | Tstg              |                                                                                  | -40~150 | °C   |
| Operating Junction Temperature        | Tj                |                                                                                  | 150     | °C   |
| Maximum Reverse Voltage               | V <sub>RM</sub>   |                                                                                  | 60      | V    |
| Repetitive Peak Surge Reverse Voltage | V <sub>RRSM</sub> | Pulse width0.5ms, duty 1/40                                                      | 65      | V    |
| Average Rectified Forward Current     | I <sub>O</sub>    | 50Hz sine wave, R-load Tl=133°C                                                  | 3       | A    |
|                                       |                   | 50Hz sine wave, R-load Ta=57°C                                                   | 1.8     |      |
| Peak Surge Forward Current            | I <sub>FSM</sub>  | 50Hz sine wave, Non-repetitive 1 cycle peak value, Rating of per diode, Tj=125°C | 80      | A    |
| Repetitive Peak Surge Reverse Power   | P <sub>RRSM</sub> | Pulse width10 μ s, Tj=25°C                                                       | 330     | W    |

● Electrical Characteristics Tl=25°C

| Item                 | Symbol          | Conditions                                          | Ratings  | Unit |
|----------------------|-----------------|-----------------------------------------------------|----------|------|
| Forward Voltage      | V <sub>F</sub>  | I <sub>F</sub> =3A, Pulse measurement               | Max.0.58 | V    |
| Reverse Current      | I <sub>R</sub>  | V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement | Max.2.5  | mA   |
| Junction Capacitance | C <sub>j</sub>  | f=1MHz, V <sub>R</sub> =10V                         | Typ.130  | pF   |
| Thermal Resistance   | θ <sub>jl</sub> | junction to lead                                    | Max.6.5  | °C/W |
|                      | θ <sub>ja</sub> | junction to ambient (Without heatsink)              | Max.62   |      |

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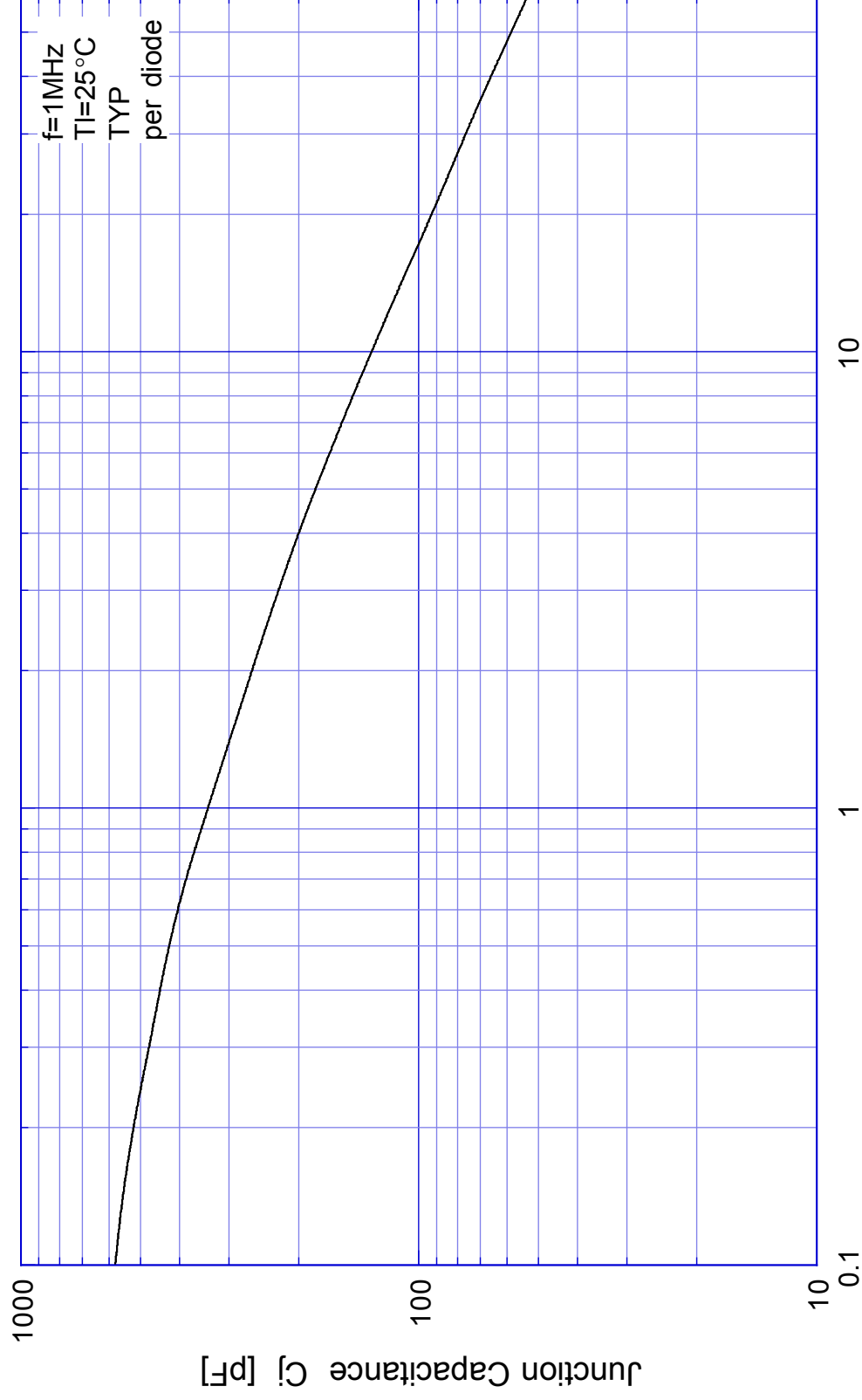
Forward Voltage



# D3S6M

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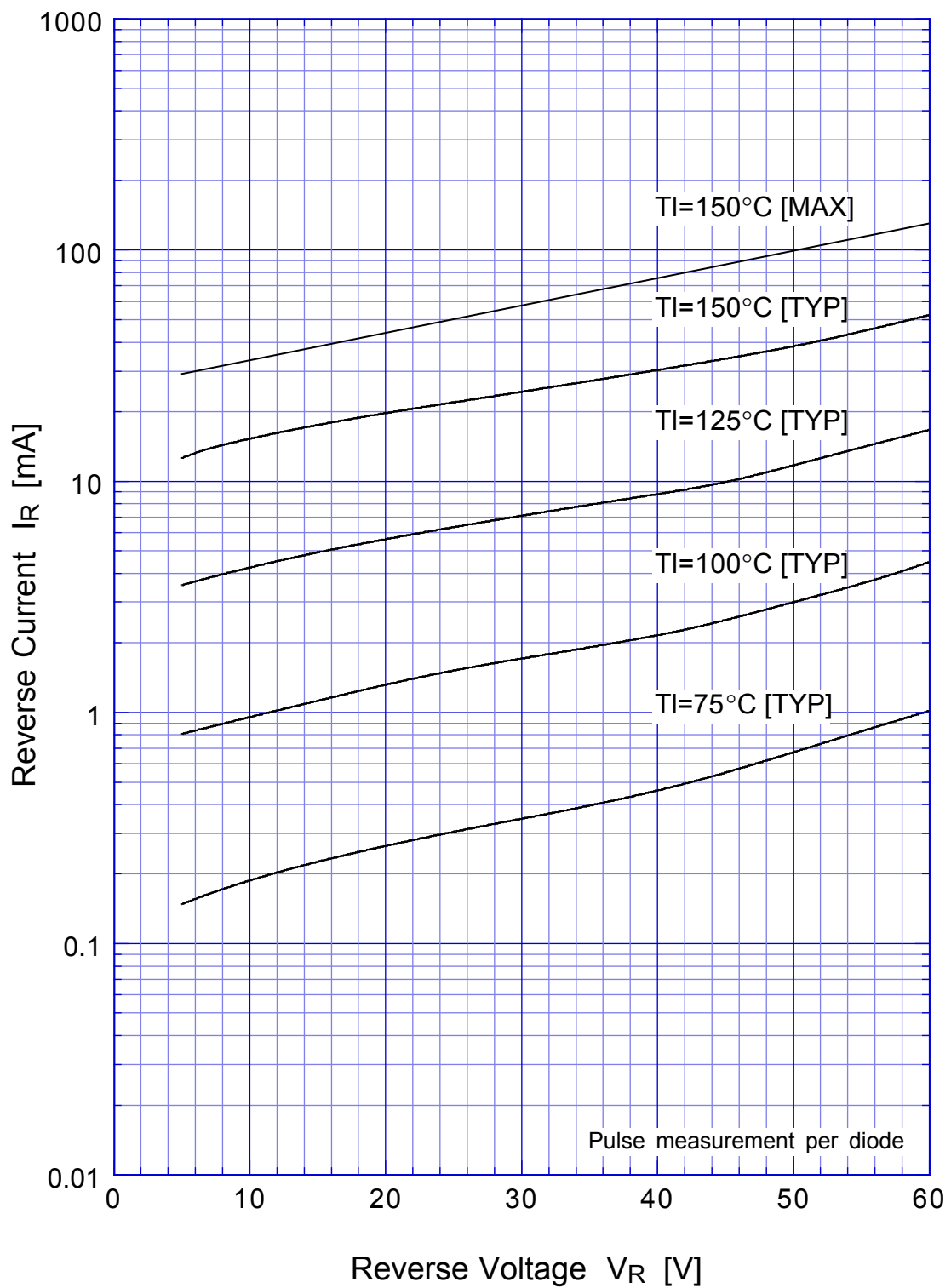
Junction Capacitance



Reverse Voltage  $V_R$  [V]

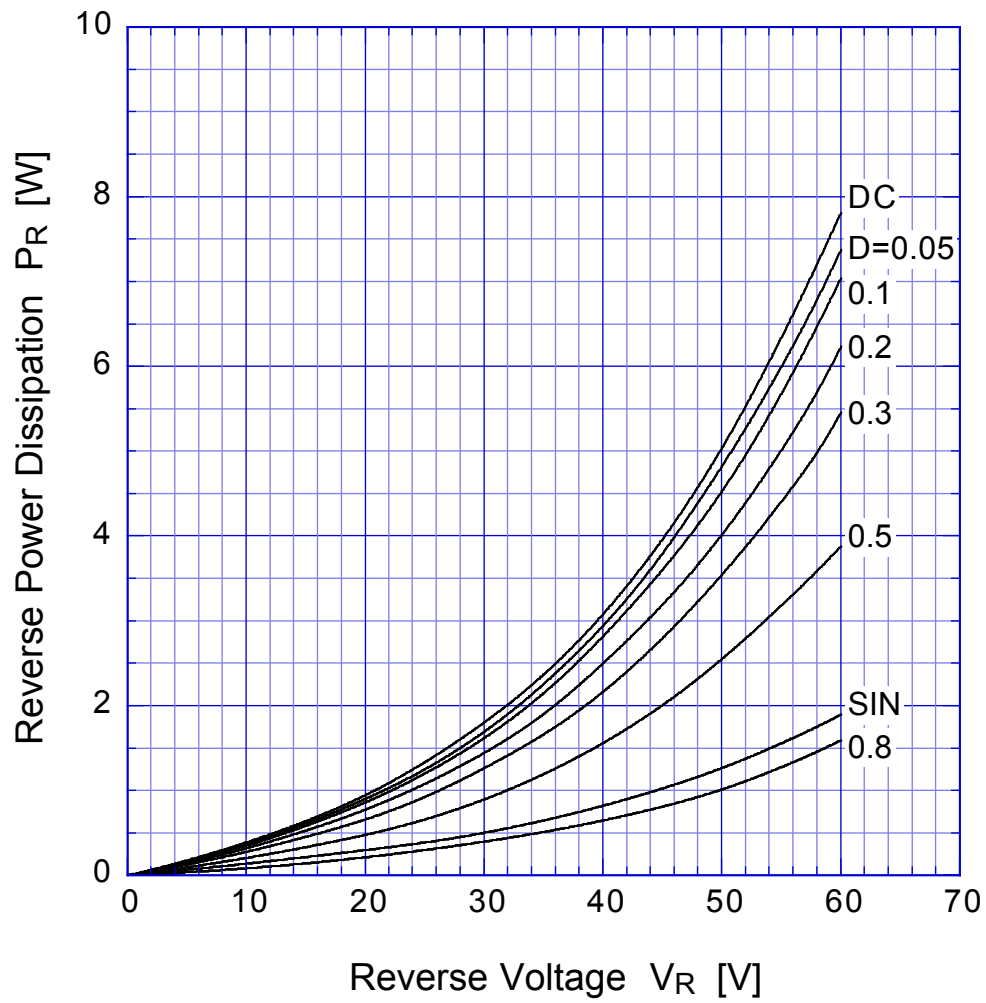
# D3S6M

## Reverse Current

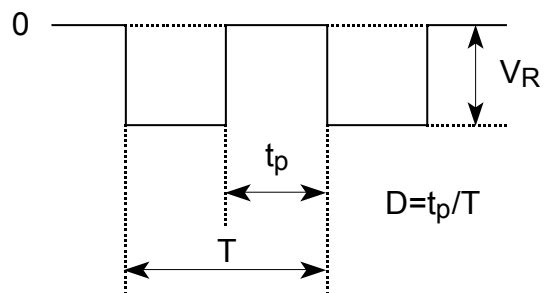


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Reverse Power Dissipation

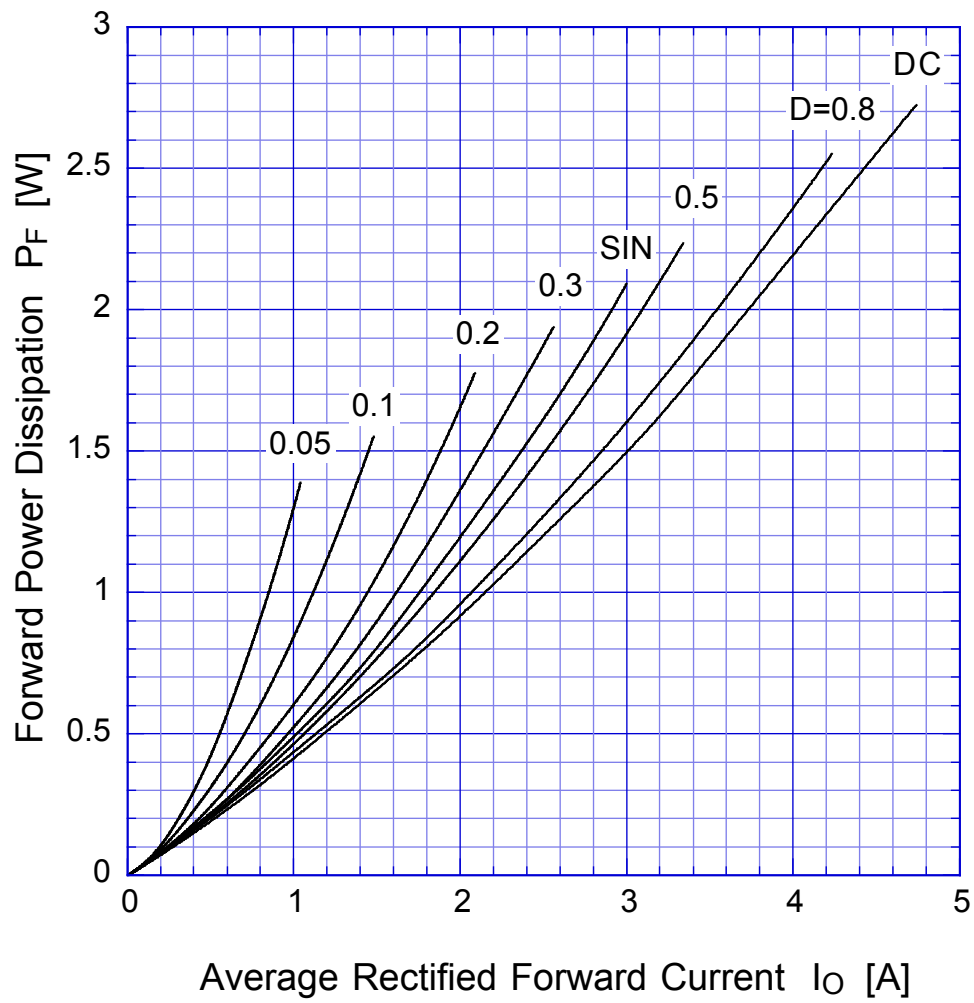


$T_j = 150^\circ\text{C}$



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Forward Power Dissipation

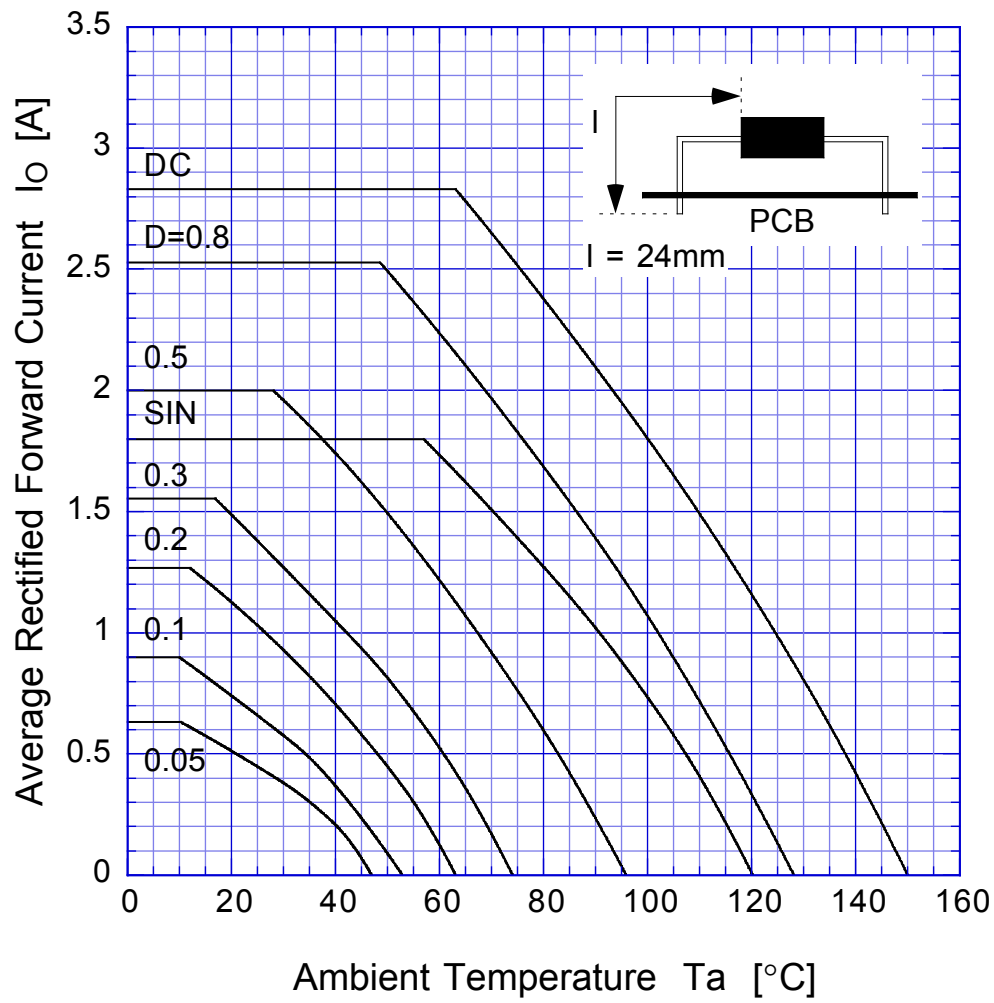


$T_j = 150^\circ\text{C}$

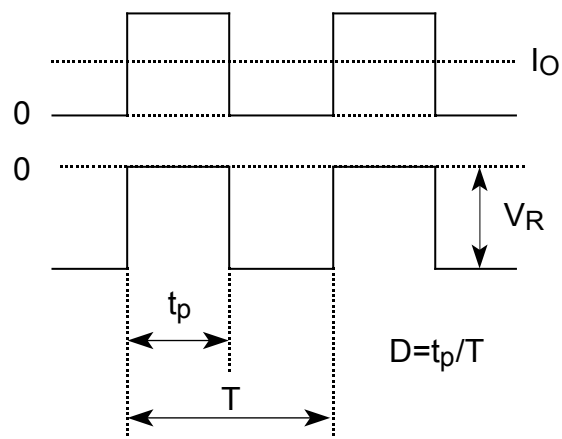


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## Derating Curve

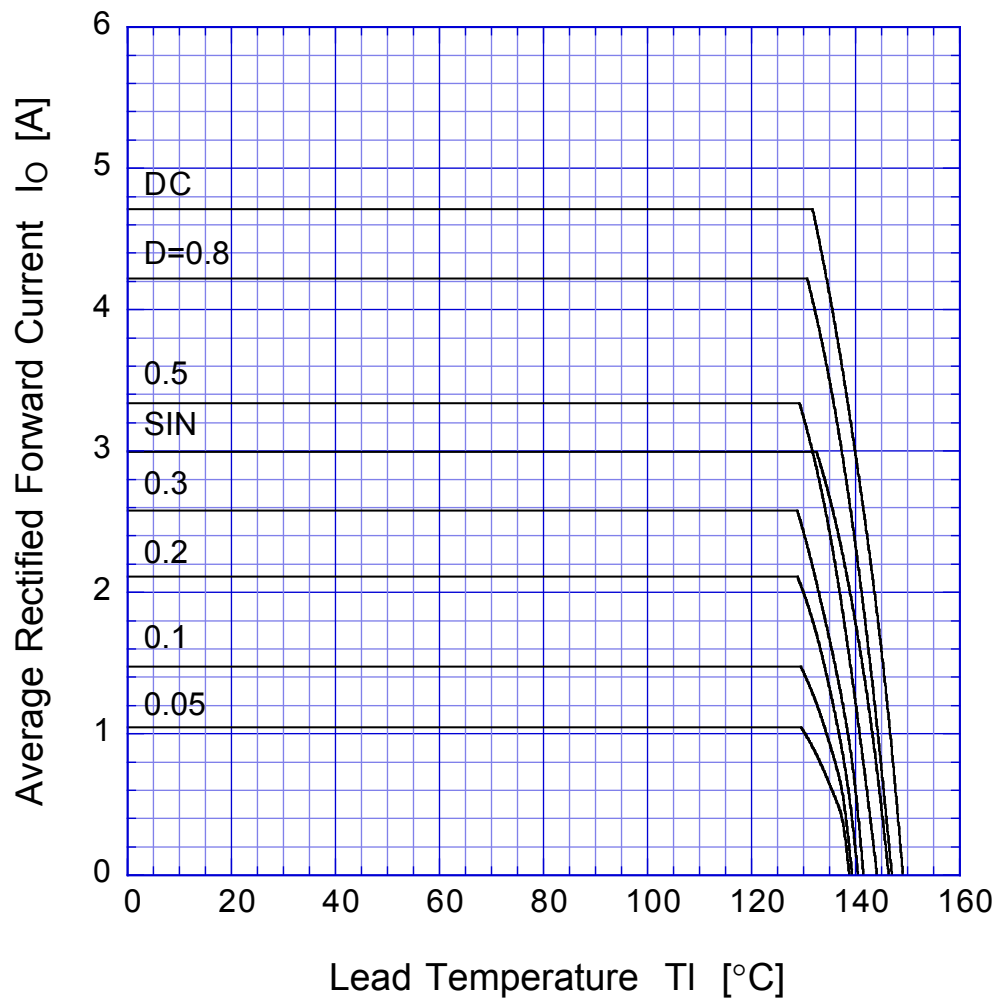


$V_R = 30V$

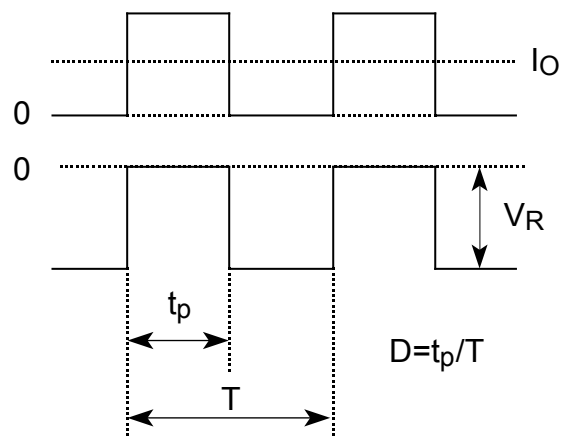


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Derating Curve

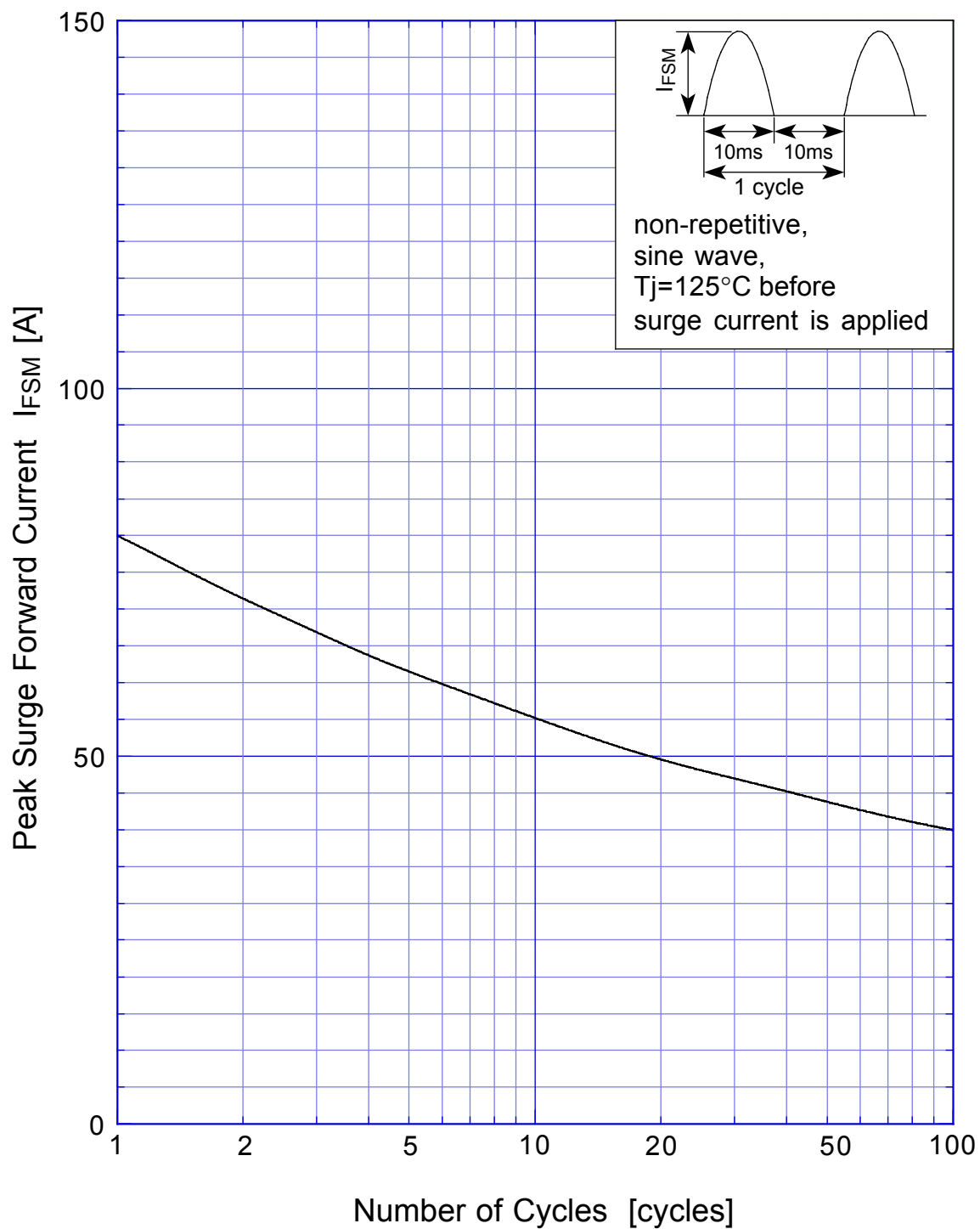


$V_R = 30V$



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Peak Surge Forward Capability



## SBD Repetitive Surge Reverse Power Derating Curve

