# SHINDENGEN

## Schottky Rectifiers (SBD)

**Single**

# D2S4M

**40V 2A**

## FEATURES

- Tj150°C
- $P_{RRSM}$ avalanche guaranteed
- 0.8φ lead

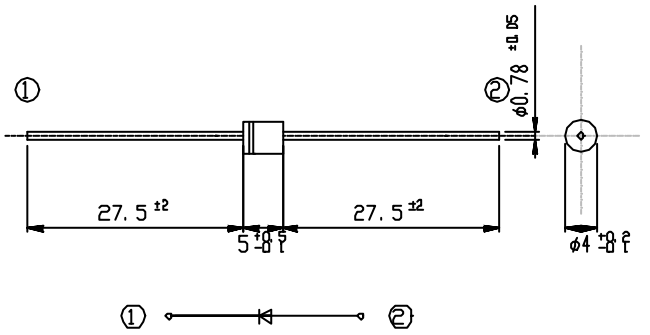
## APPLICATION

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

## OUTLINE DIMENSIONS

Case : AX078

Unit : mm







## RATINGS

●Absolute Maximum Ratings (If not specified Tl=25°C)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage Temperature | Tstg | | -40～150 | °C |
| Operating Junction Temperature | Tj | | 150 | °C |
| Maximum Reverse Voltage | $V_{RM}$ | | 40 | V |
| Repetitive Peak Surge Reverse Voltage | $V_{RRSM}$ | Pulse width 0.5ms, duty 1/40 | 45 | V |
| Average Rectified Forward Current | Io | 50Hz sine wave, R-load Ta=36°C | 1.5 | A |
| | | 50Hz sine wave, R-load Tl=122°C | 2 | |
| Peak Surge Forward Current | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C | 60 | A |
| Repetitive Peak Surge Reverse Power | $P_{RRSM}$ | Pulse width 10μs, Tj=25°C | 160 | W |

●Electrical Characteristics (If not specified Tl=25°C)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=2A, Pulse measurement | Max.0.55 | V |
| Reverse Current | $I_R$ | $V_R$=$V_{RM}$, Pulse measurement | Max.2 | mA |
| Junction Capacitance | Cj | f=1MHz, $V_R$=10V | Typ.95 | pF |
| Thermal Resistance | θ jl | junction to lead | Max.17 | °C/W |
| | θ ja | junction to ambient | Max.105 | |

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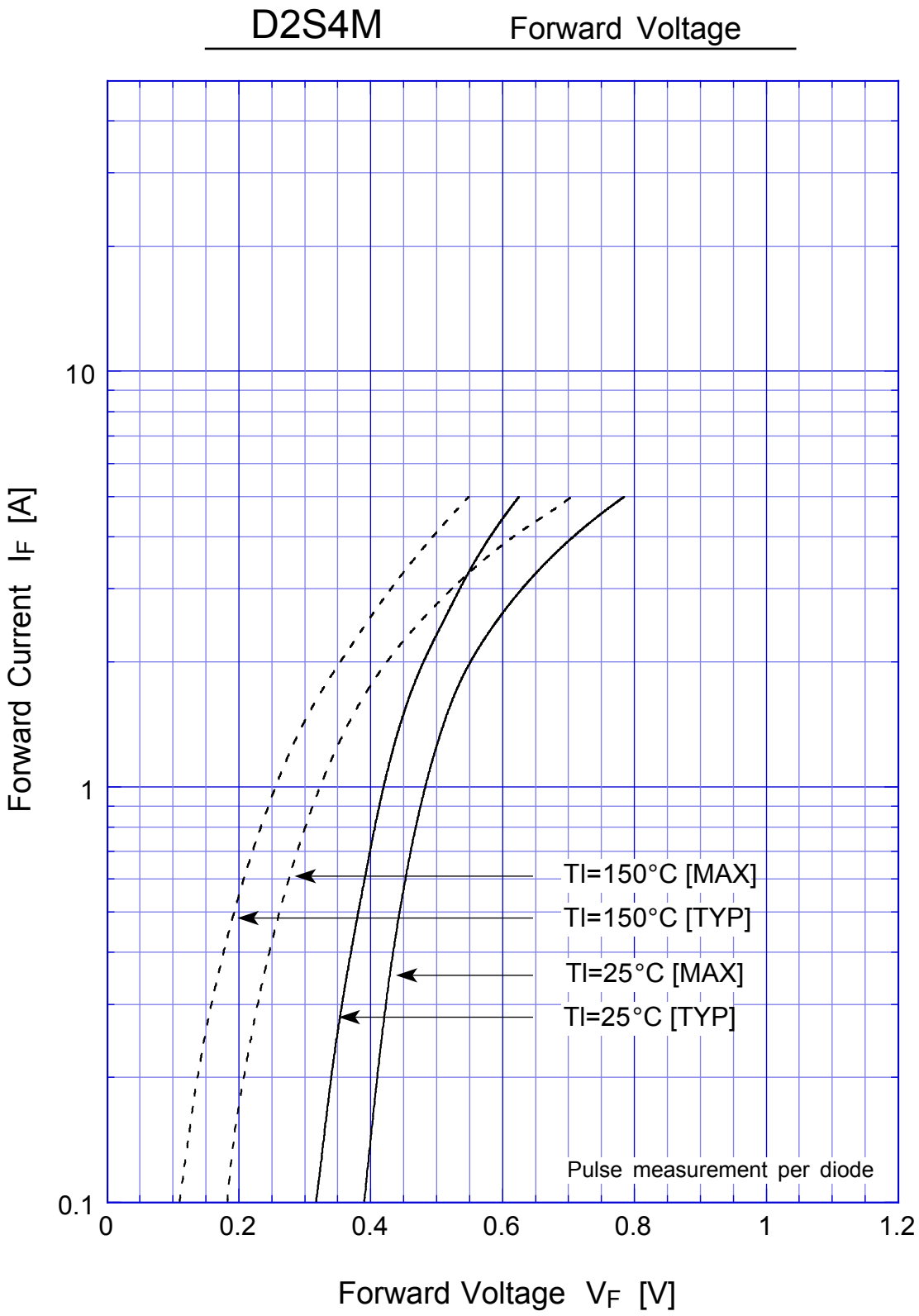
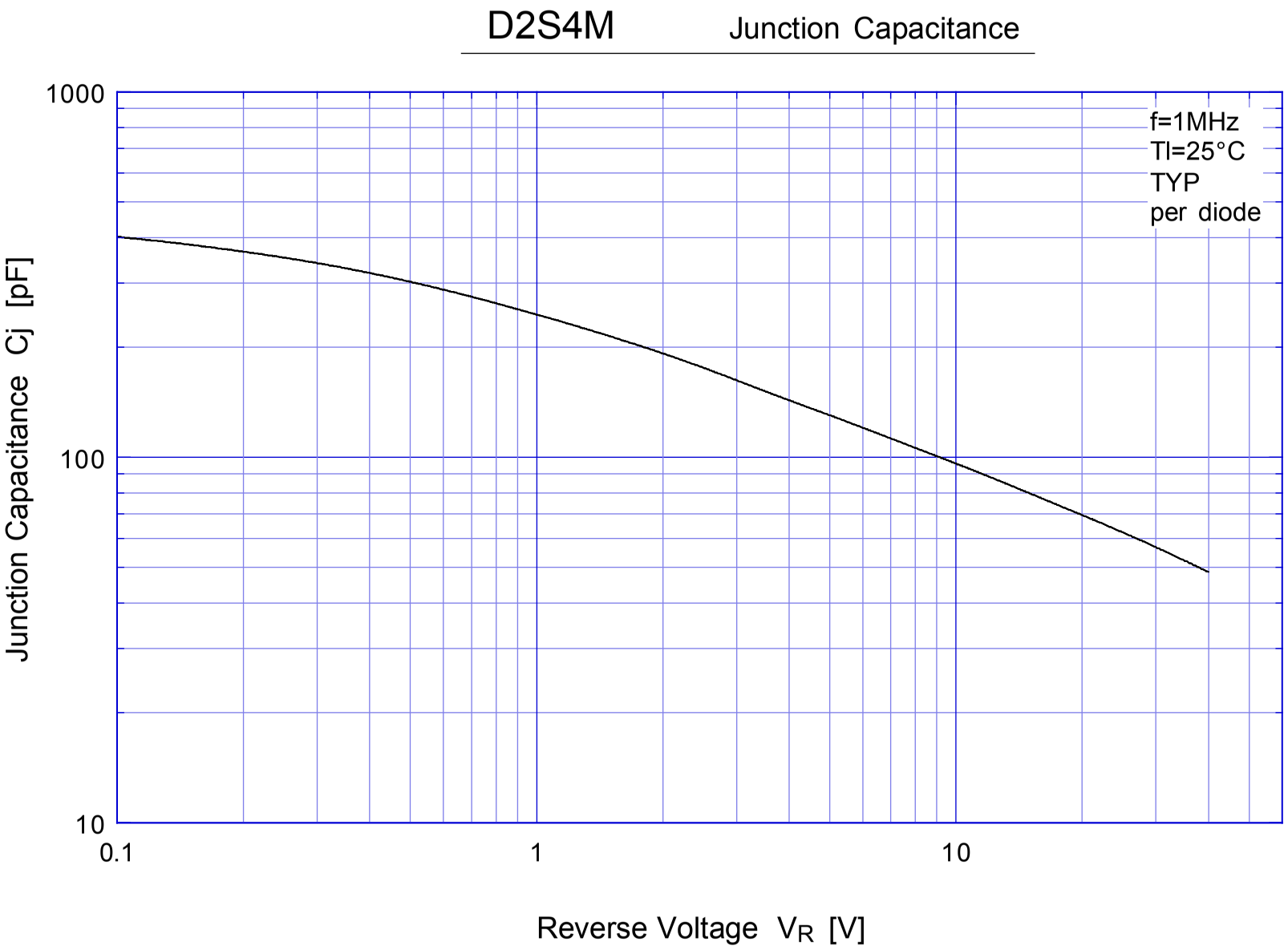
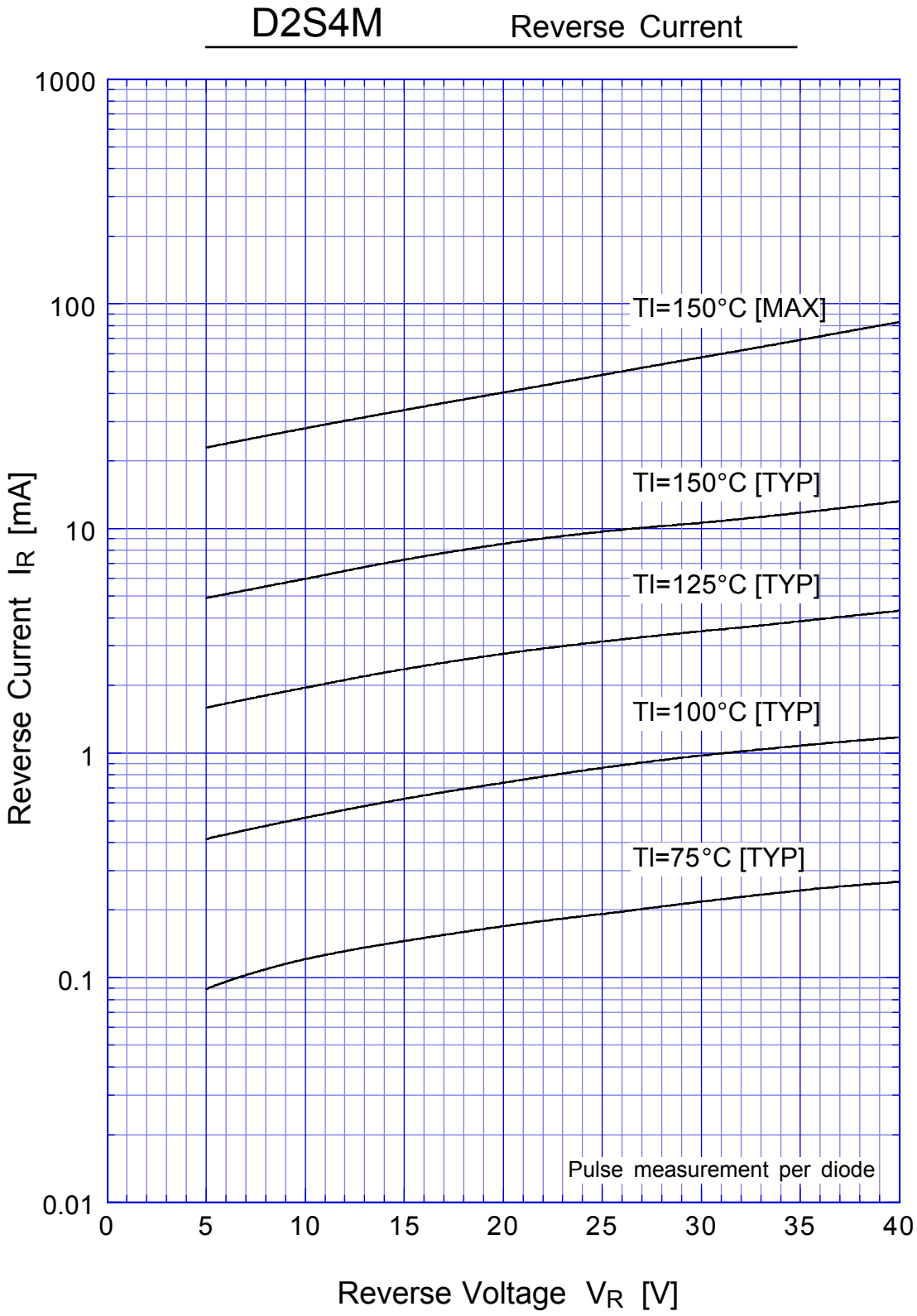
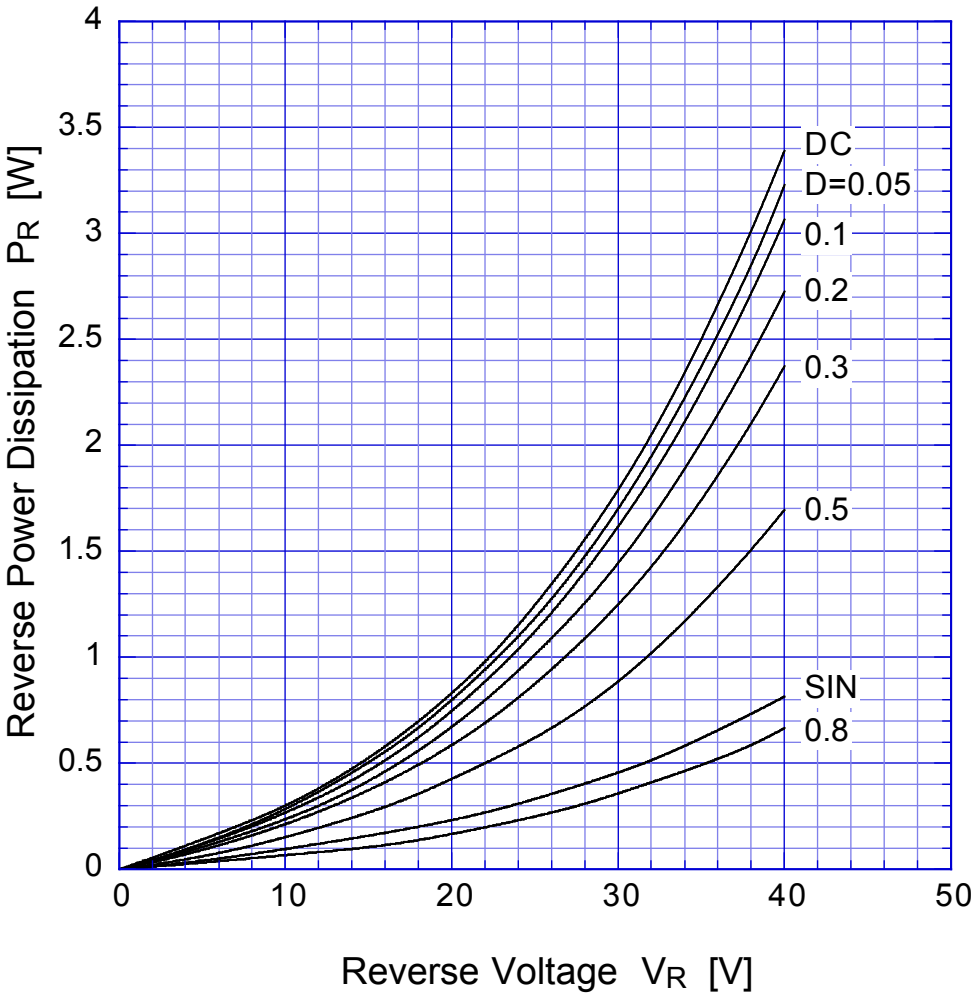

D2S4M
Forward Voltage
Forward Current IF [A]
10
1
0.1
0
0.2
0.4
0.6
0.8
1
1.2
Forward Voltage VF [V]
Tl=150°C [MAX]
Tl=150°C [TYP]
Tl=25°C [MAX]
Tl=25°C [TYP]
Pulse measurement per diode

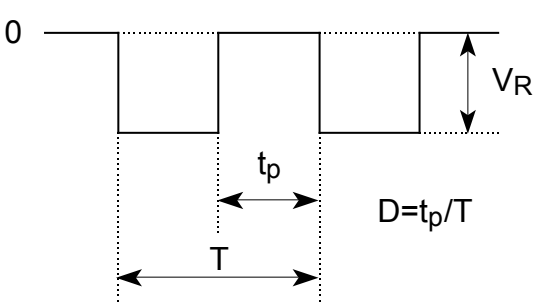

D2S4M
Junction Capacitance
1000
100
10
0.1
1
10
f=1MHz
Tl=25°C
TYP
per diode
Junction Capacitance Cj [pF]
Reverse Voltage VR [V]


D2S4M
Reverse Current
1000
100
10
1
0.1
0.01
Reverse Current IR [mA]
TI=150°C [MAX]
TI=150°C [TYP]
TI=125°C [TYP]
TI=100°C [TYP]
TI=75°C [TYP]
Pulse measurement per diode
0
5
10
15
20
25
30
35
40
Reverse Voltage VR [V]

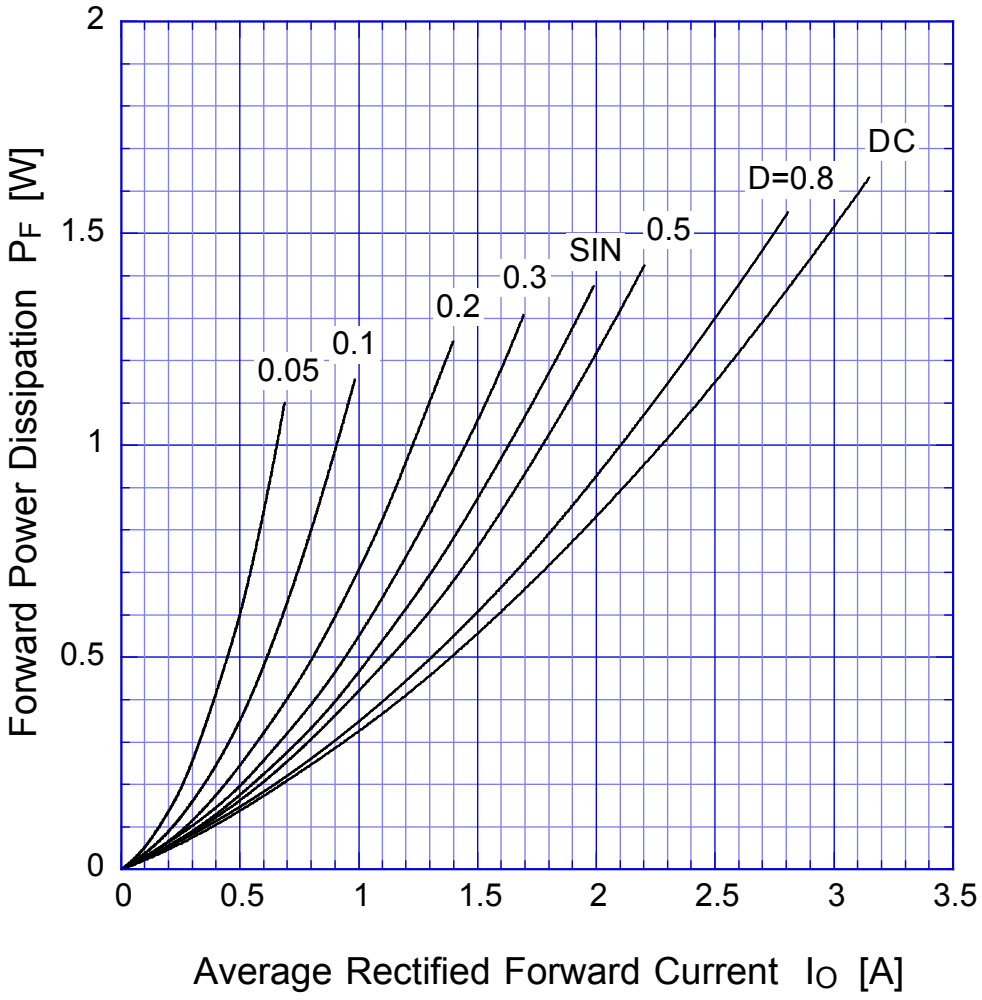
# D2S4M Reverse Power Dissipation



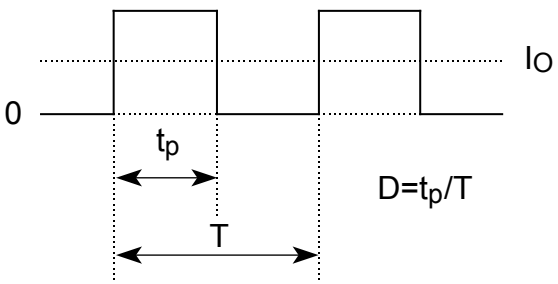

Tj = 150°C



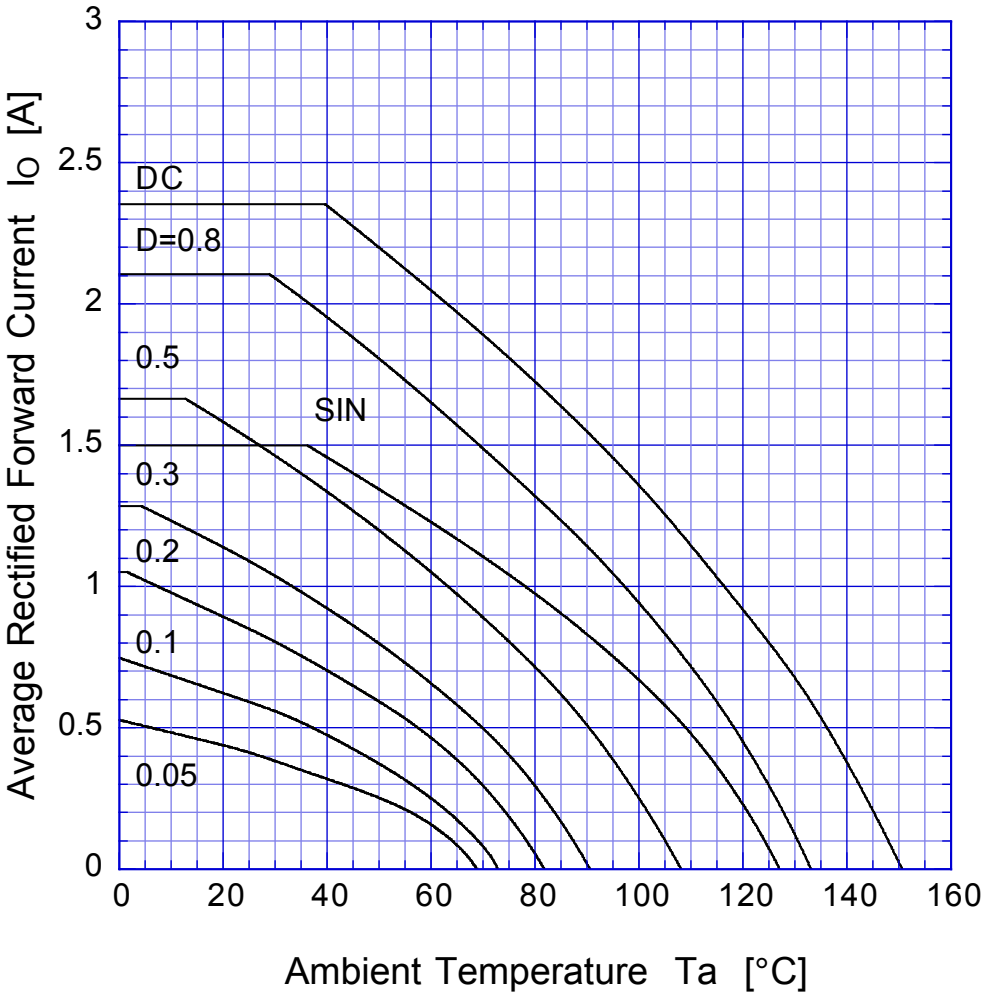
# D2S4M Forward Power Dissipation

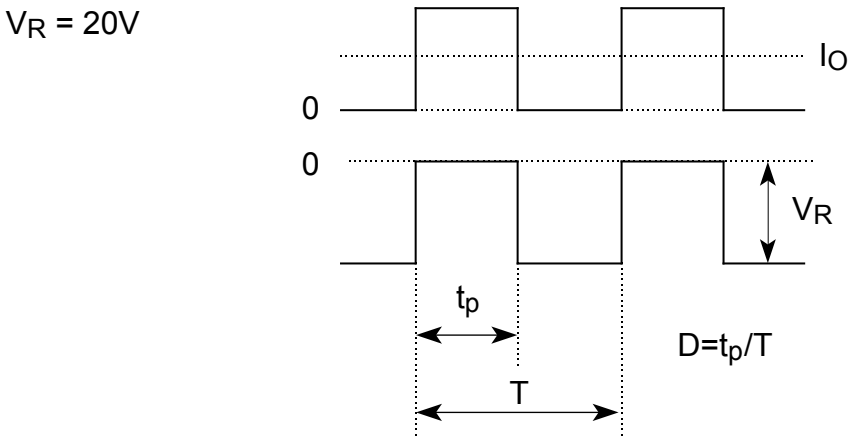



Tj = 150°C



# D2S4M Derating Curve



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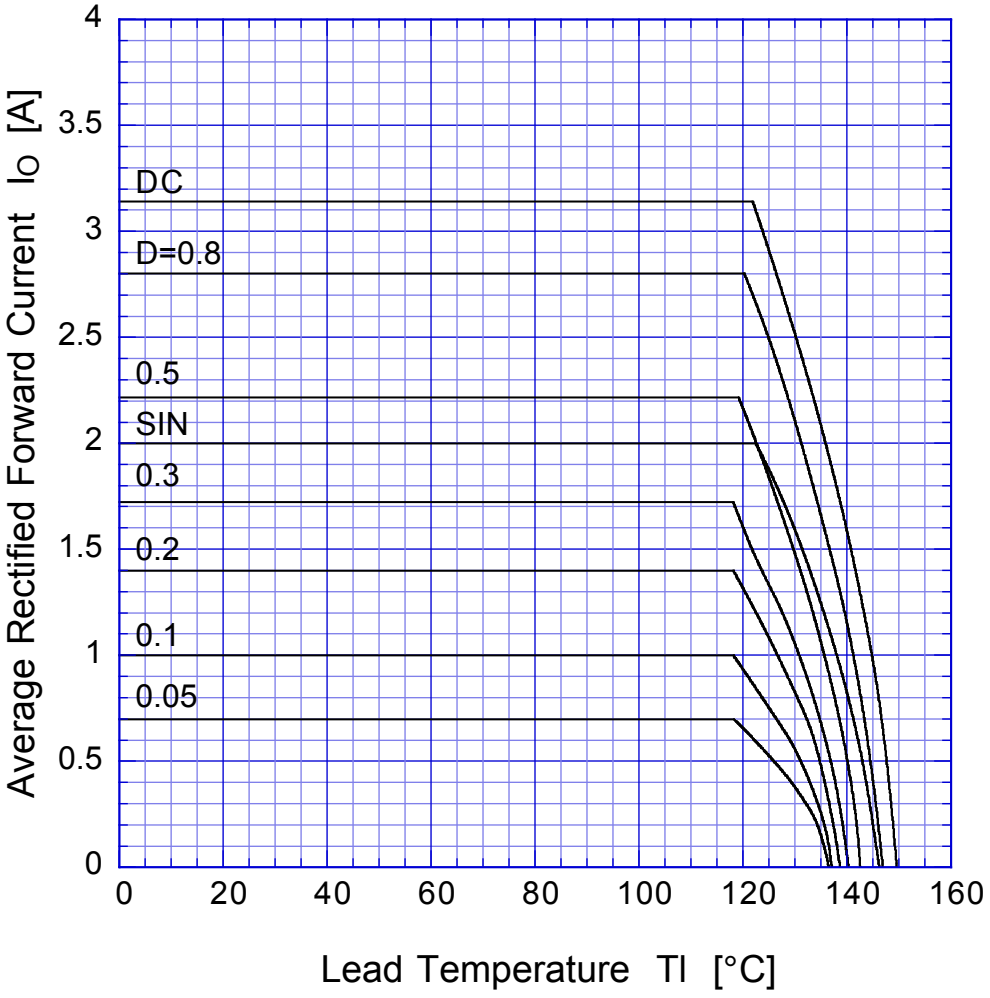
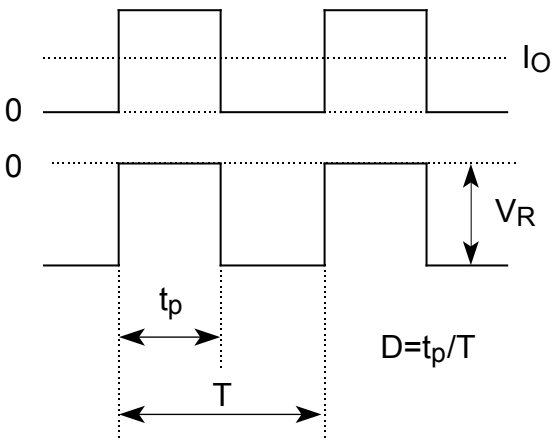
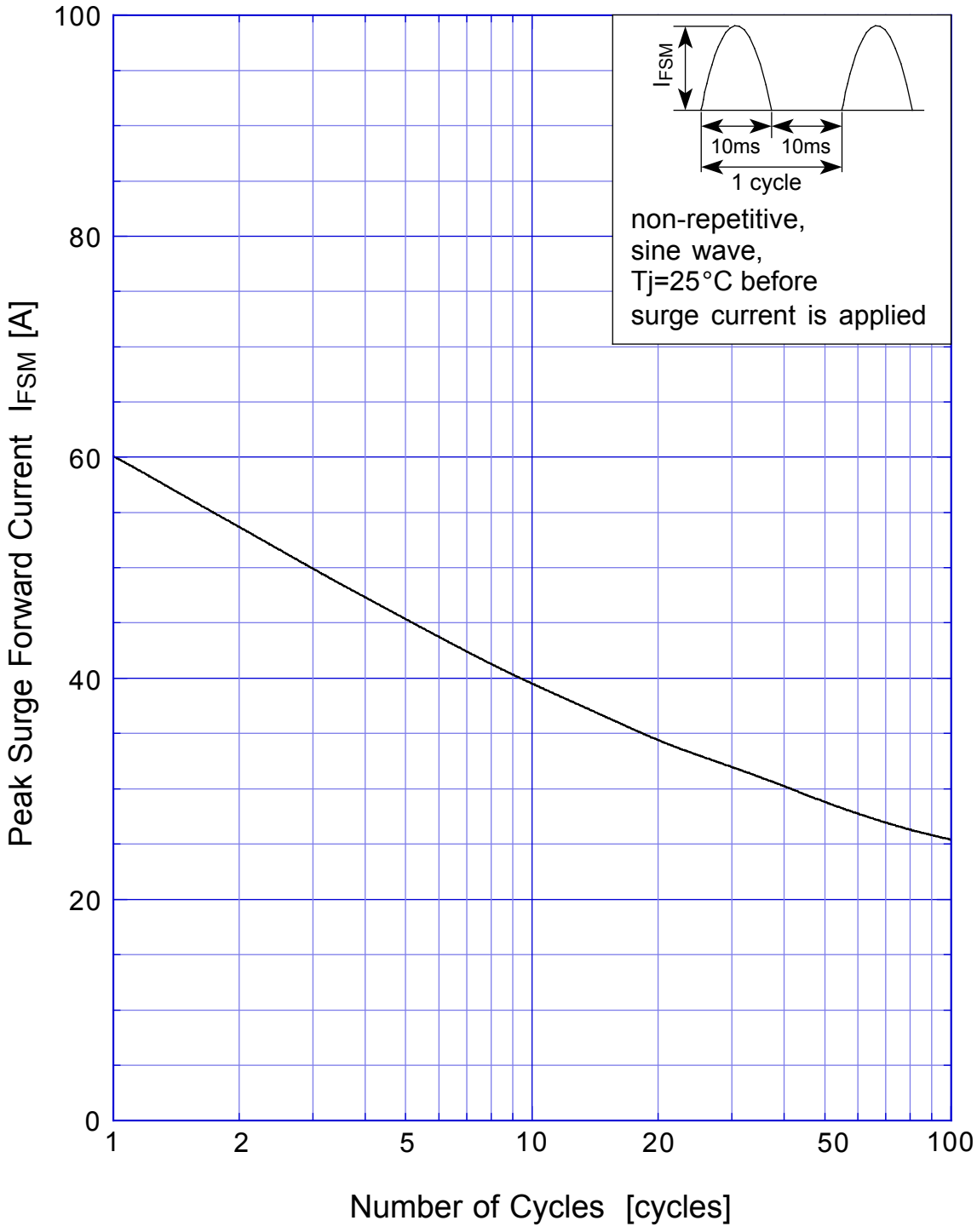


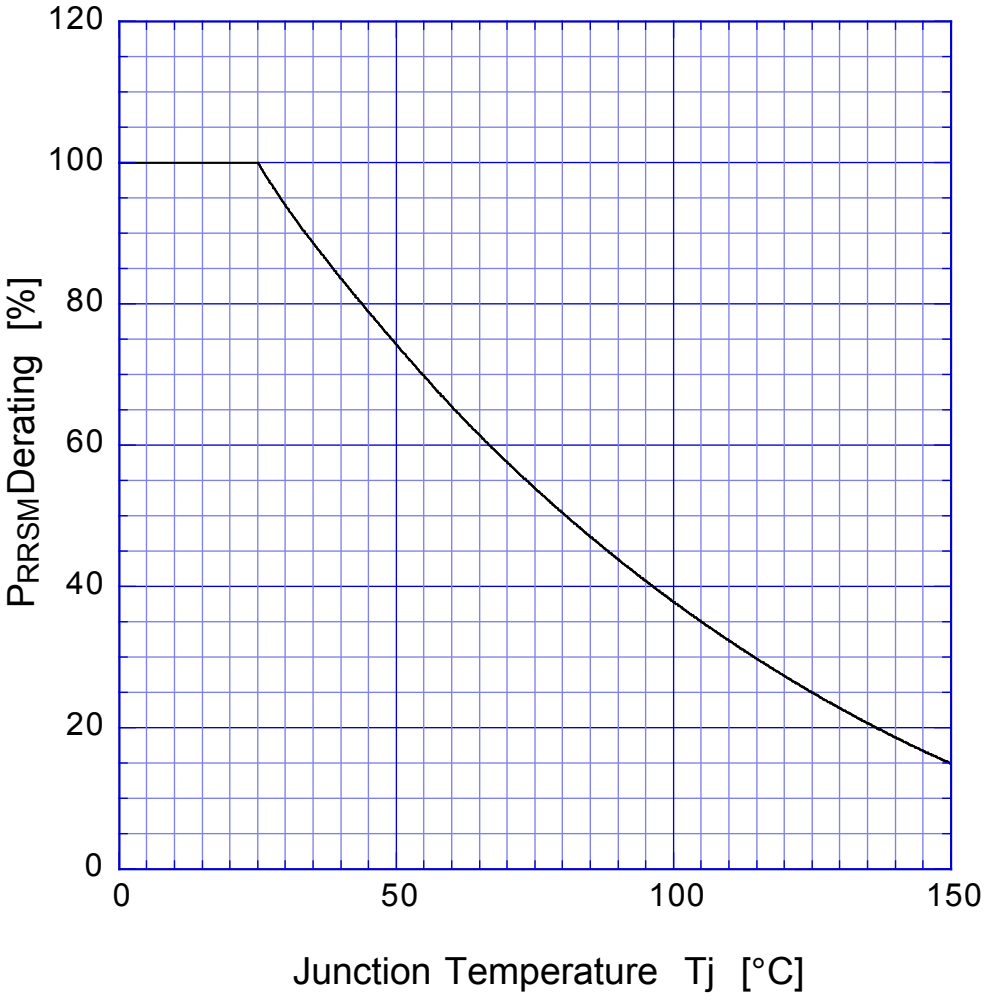

$V_R$ = 20V

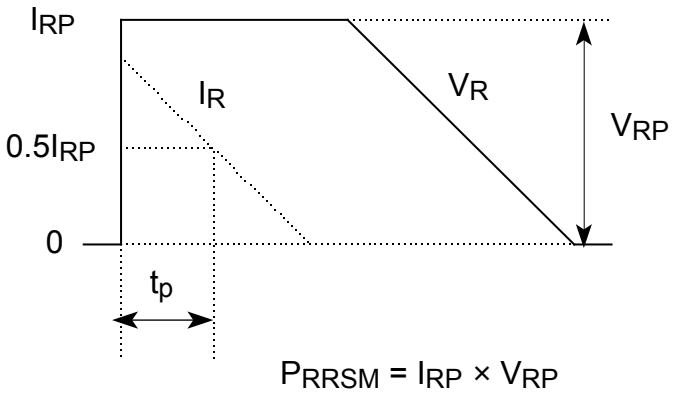
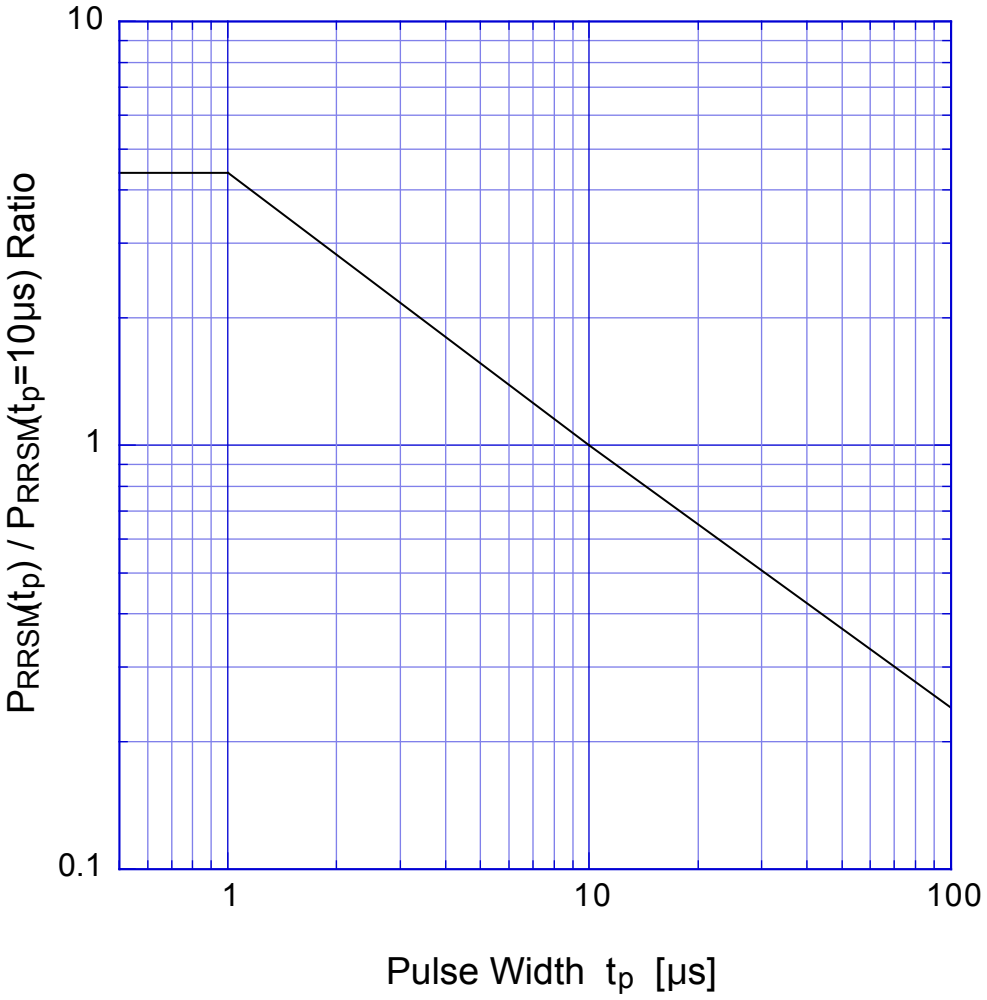
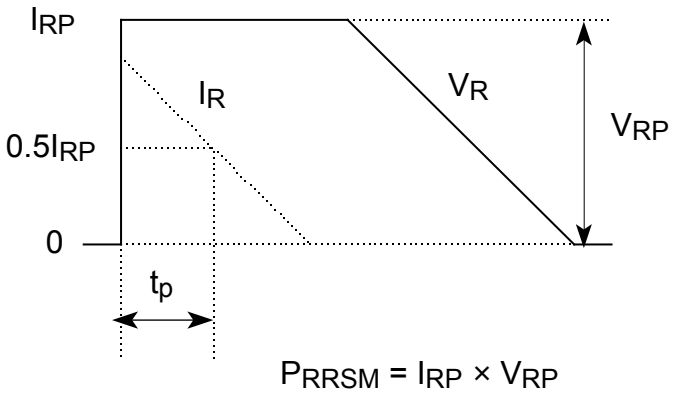


# D2S4M Peak Surge Forward Capability



## SBD Repetitive Surge Reverse Power Derating Curve






## SBD Repetitive Surge Reverse Power Capability