SHINDENGEN

Schottky Rectifiers (SBD)

Single

DE3S6M

60V 3A

FEATURES

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

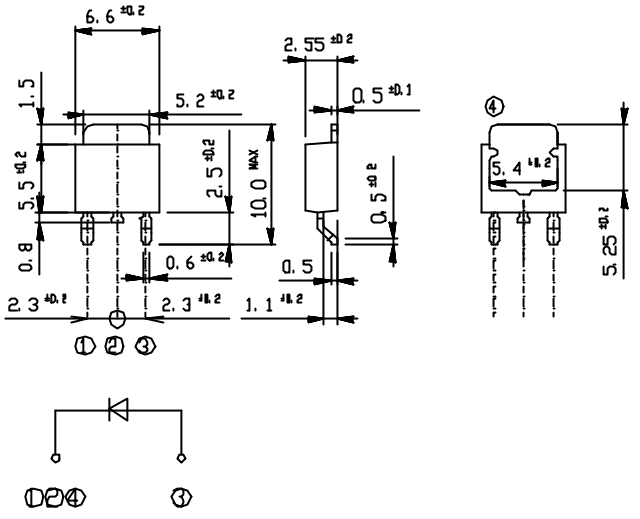
APPLICATION

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

OUTLINE DIMENSIONS

Case : E-pack

Unit : mm



RATINGS

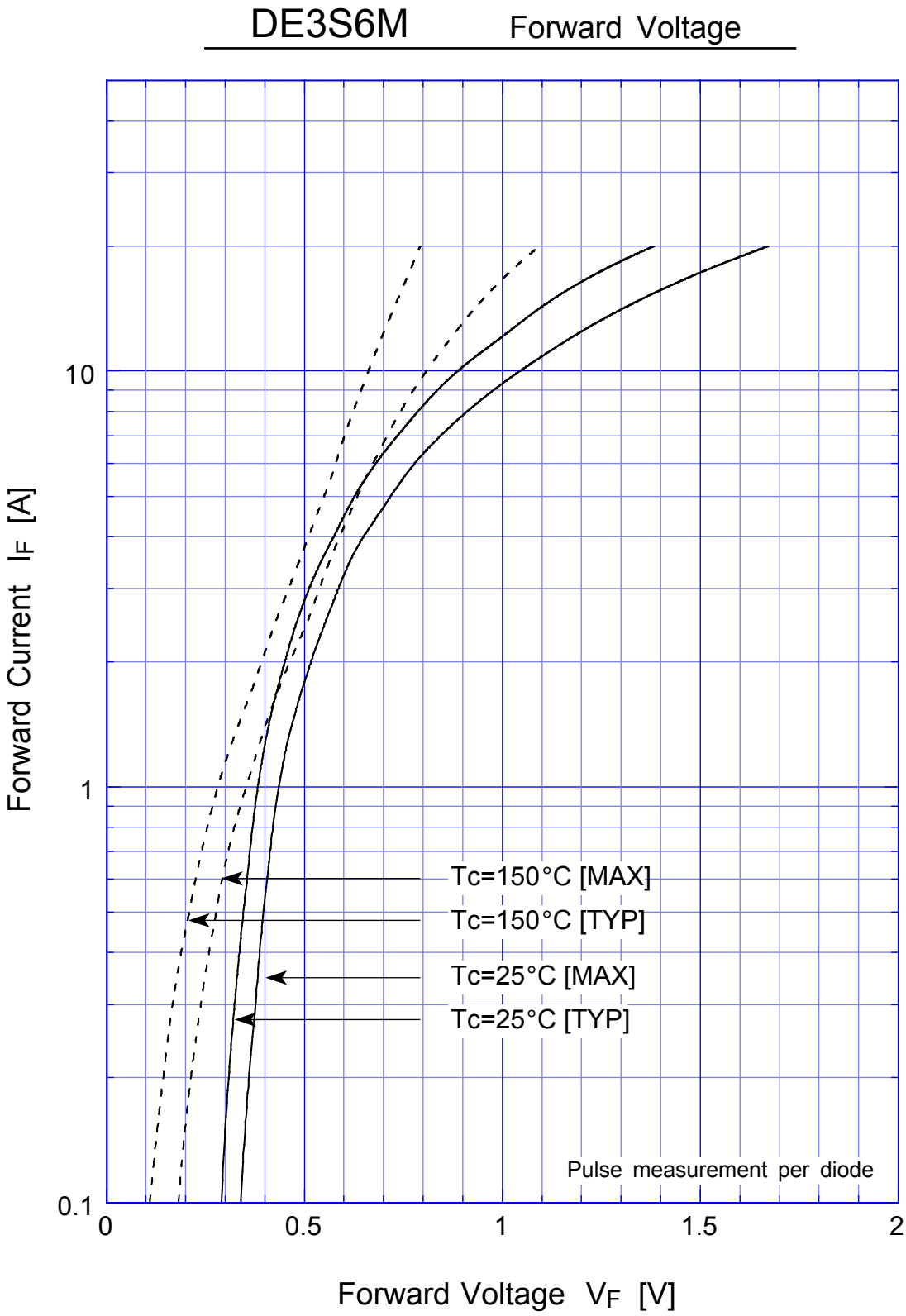
●Absolute Maximum Ratings (If not specified Tc=25°C)

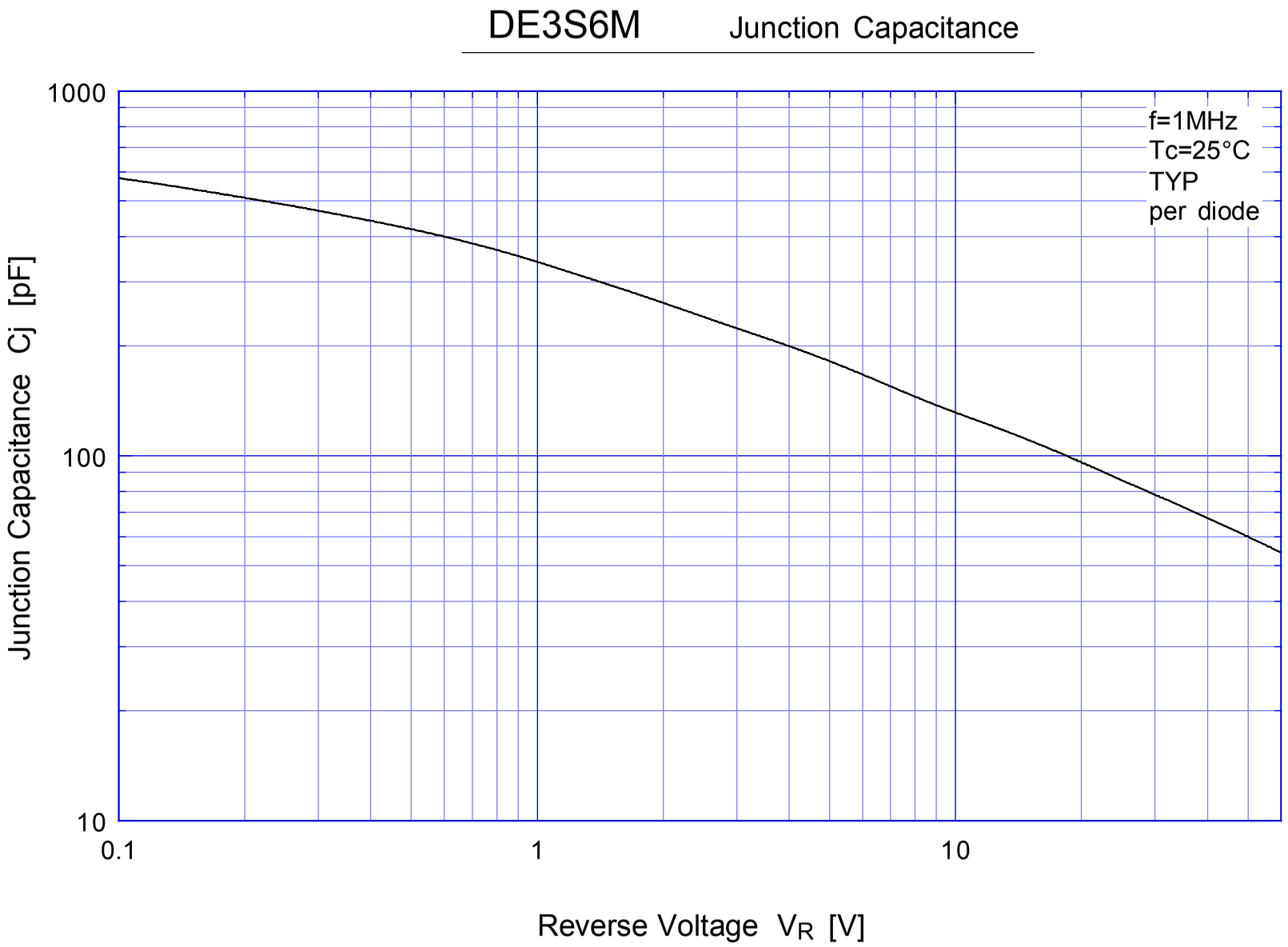
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-40～150	°C
Operating Junction Temperature	Tj		150	°C
Maximum Reverse Voltage	V_{RM}		60	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	65	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load Ta=31°C On alumina substrate	2.5	A
		50Hz sine wave, R-load Tc=117°C	3	
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=125°C	80	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Tj=25°C	330	W

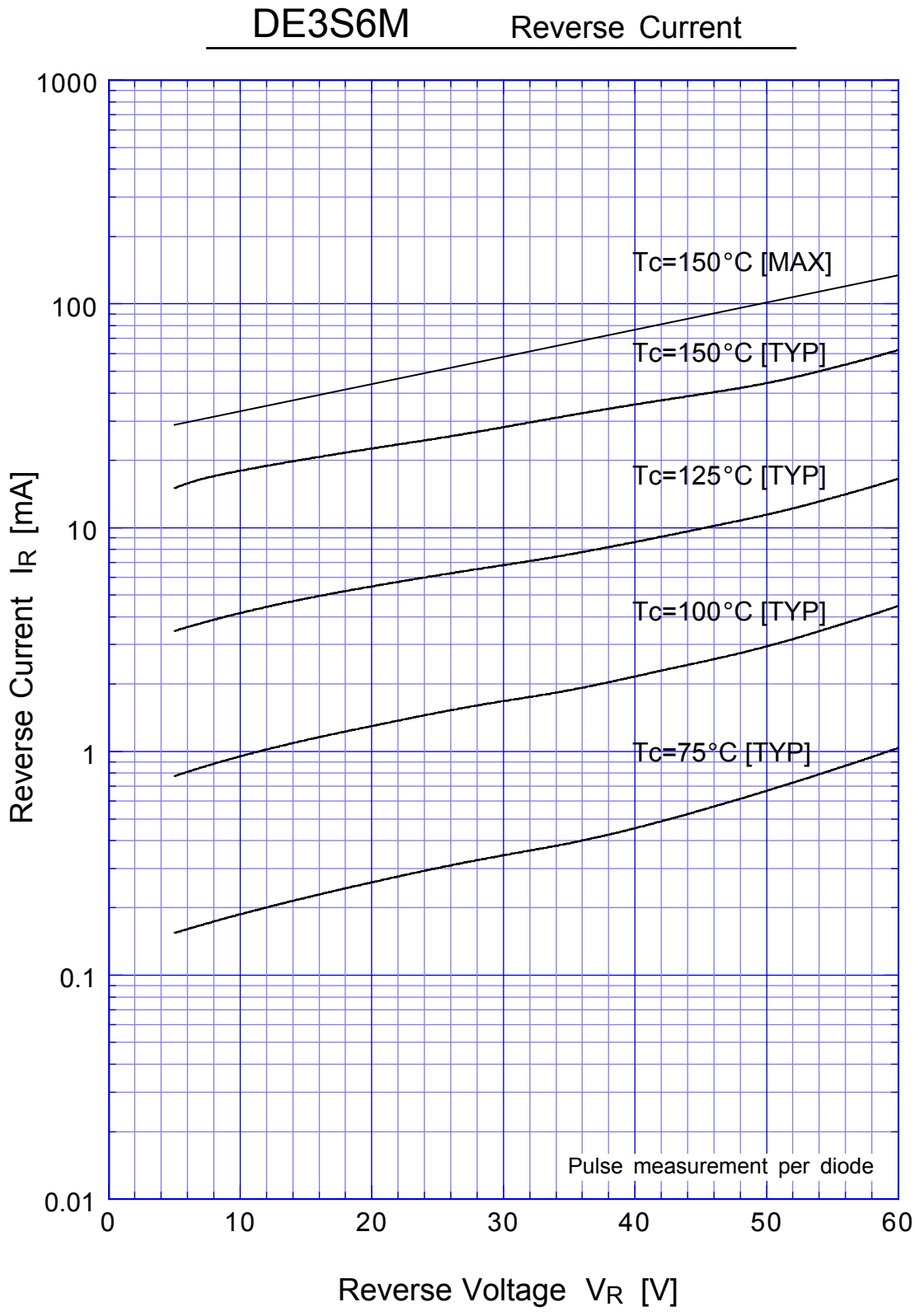
●Electrical Characteristics (If not specified Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=3A, Pulse measurement	Max.0.58	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement	Max.2.5	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V	Typ.130	pF
Thermal Resistance	θjc	junction to case	Max.12	°C/W
	θja	junction to ambient	Max.55	

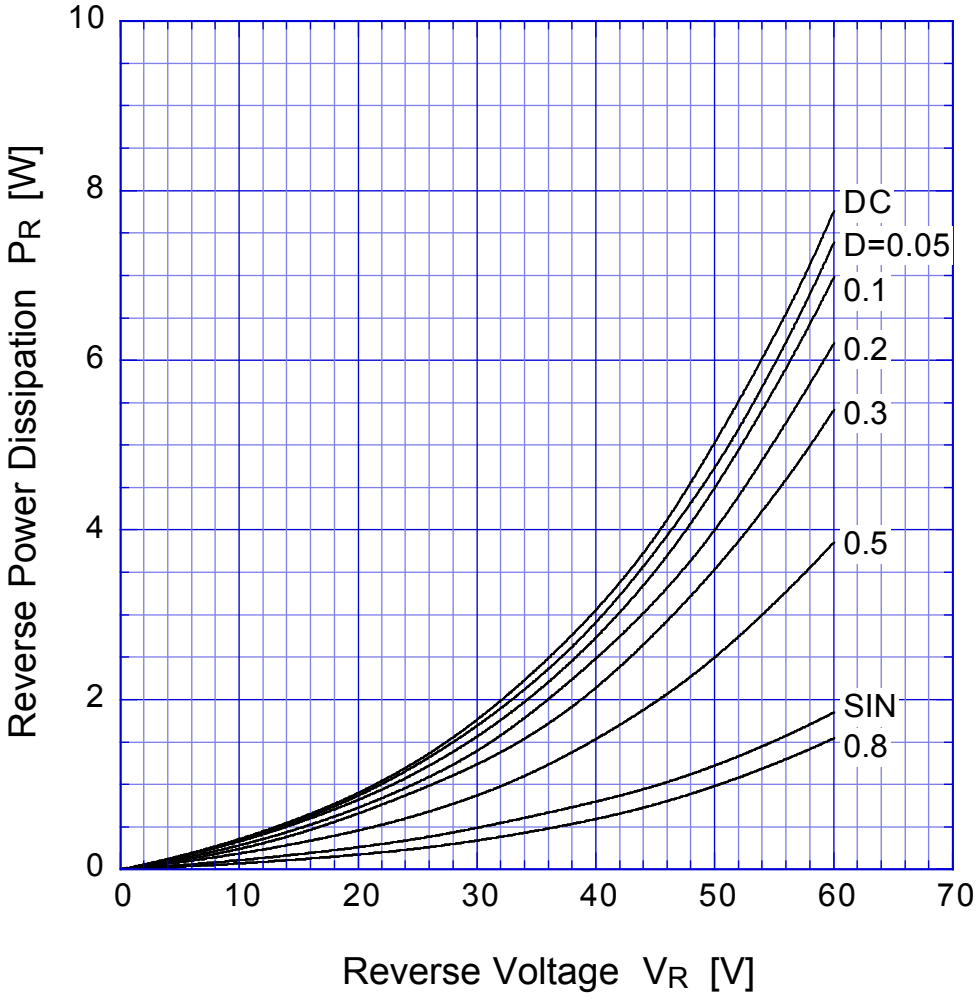
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DE3S6M
Forward Voltage
Forward Current IF [A]
10
1
0.1
0
0.5
1
1.5
2
Forward Voltage VF [V]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=25°C [MAX]
Tc=25°C [TYP]
Pulse measurement per diode

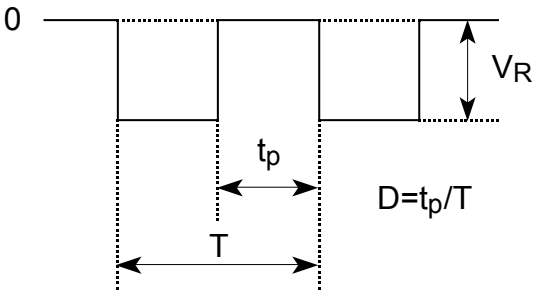

DE3S6M
Junction Capacitance
f=1MHz
Tc=25°C
TYP
per diode
1000
100
10
0.1
1
10
Junction Capacitance Cj [pF]
Reverse Voltage VR [V]


DE3S6M
Reverse Current
1000
100
10
1
0.1
0.01
Reverse Current IR [mA]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=125°C [TYP]
Tc=100°C [TYP]
Tc=75°C [TYP]
Pulse measurement per diode
0
10
20
30
40
50
60
Reverse Voltage VR [V]

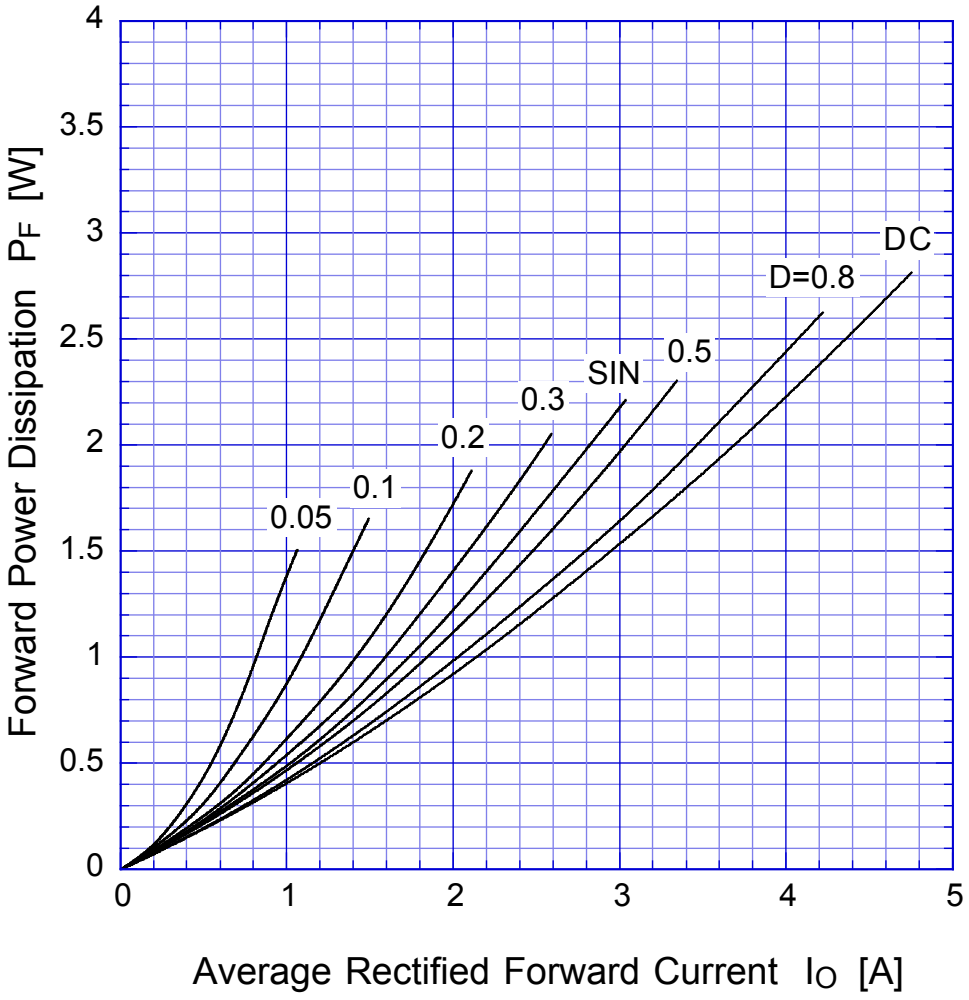
DE3S6M Reverse Power Dissipation



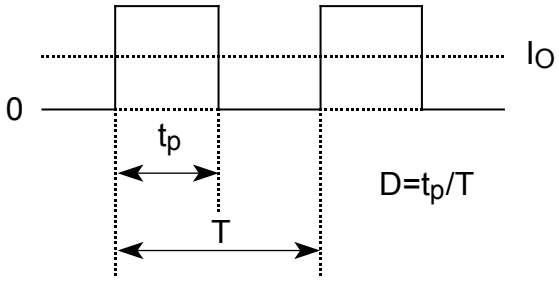
Tj = 150°C



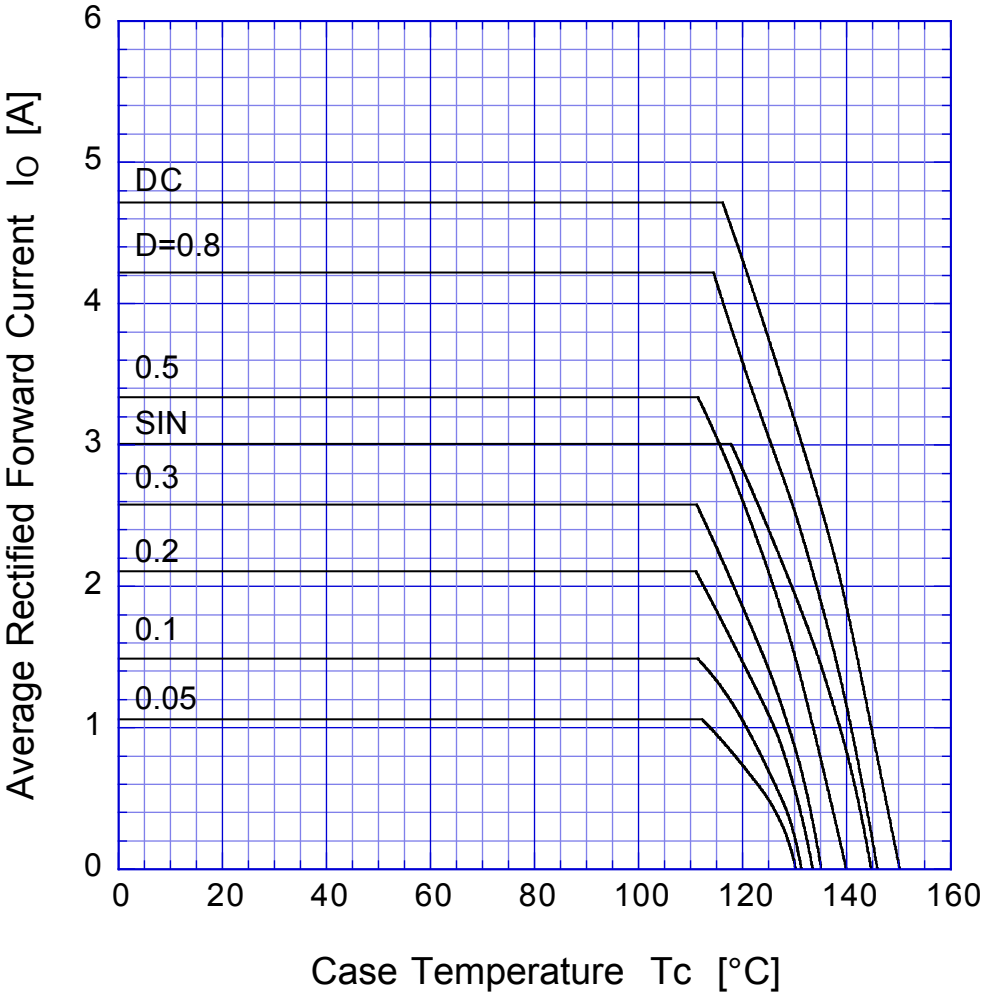
DE3S6M Forward Power Dissipation



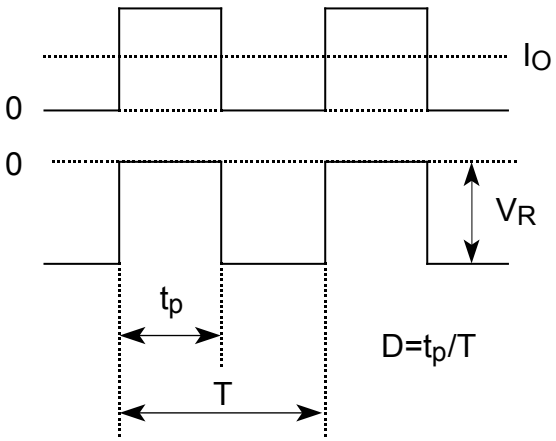
Tj = 150°C



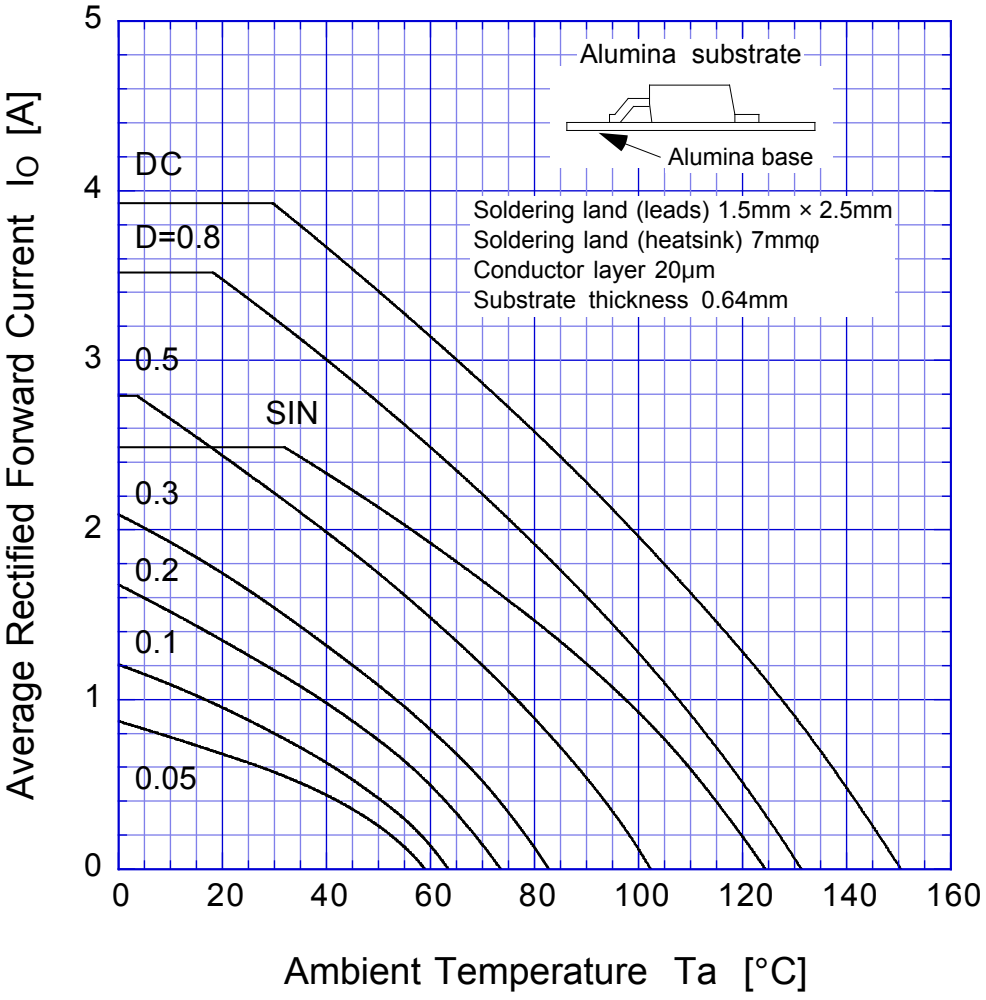
DE3S6M Derating Curve



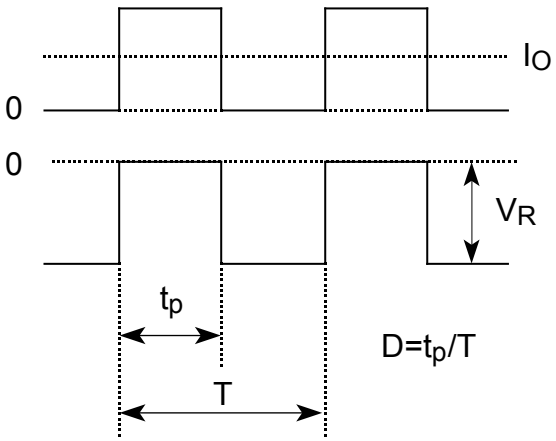
V_R = 30V



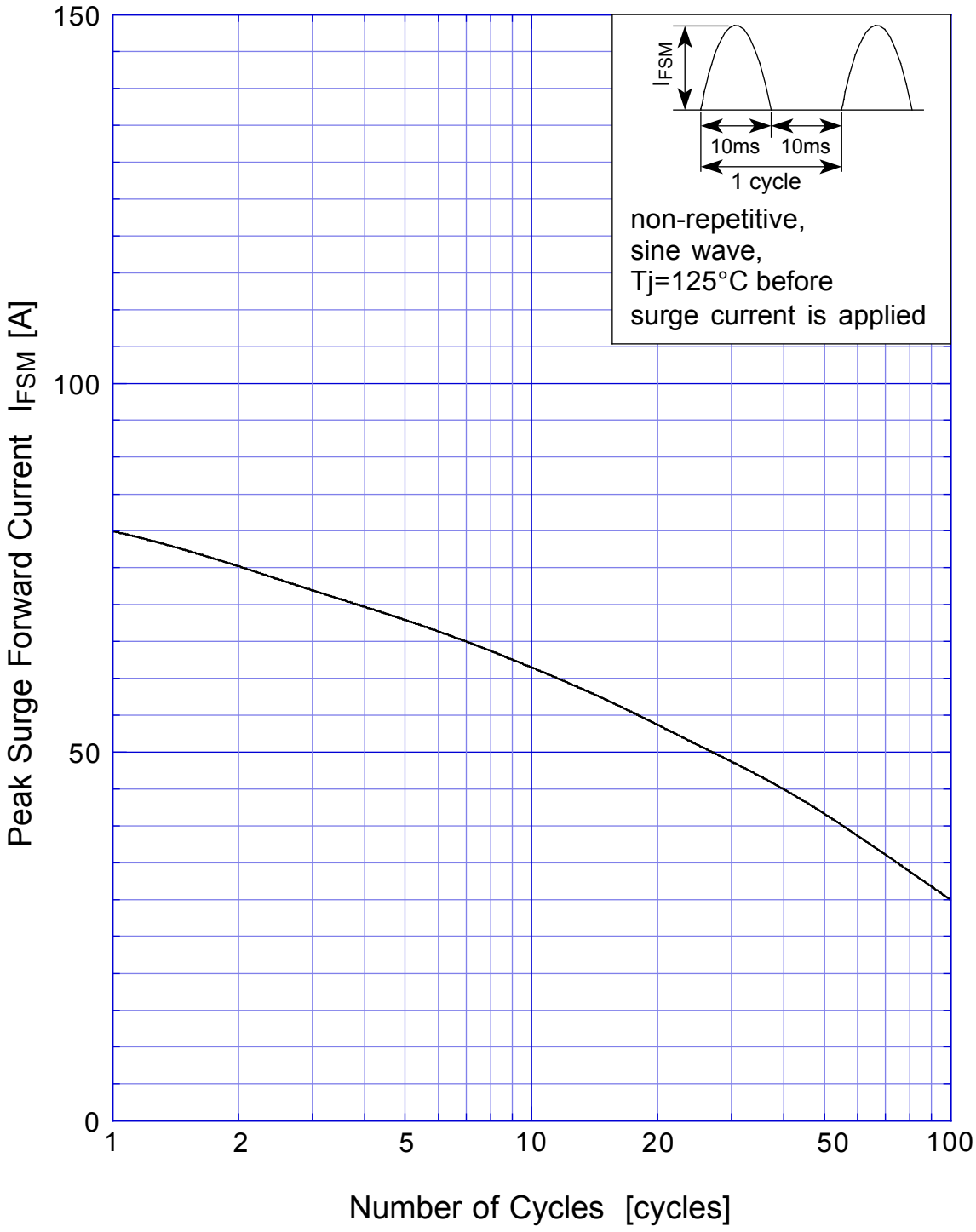
DE3S6M Derating Curve



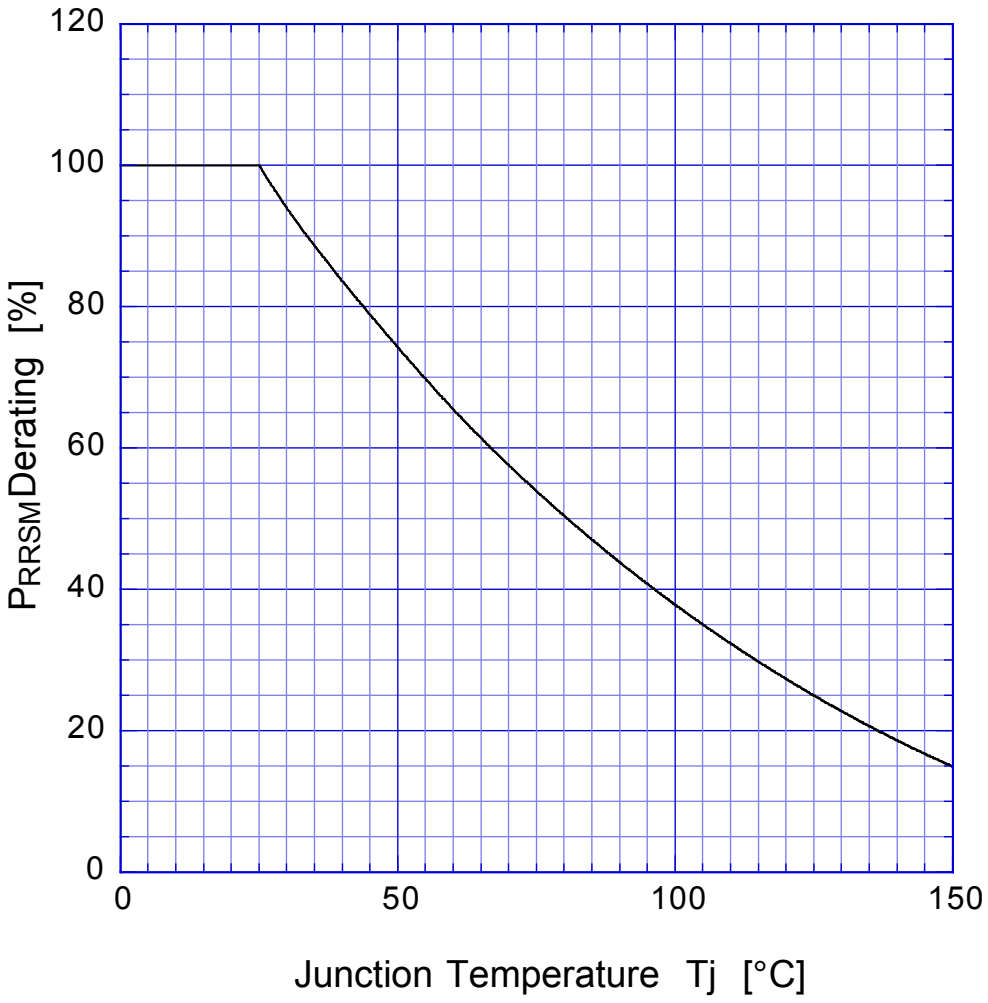
V_R = 30V

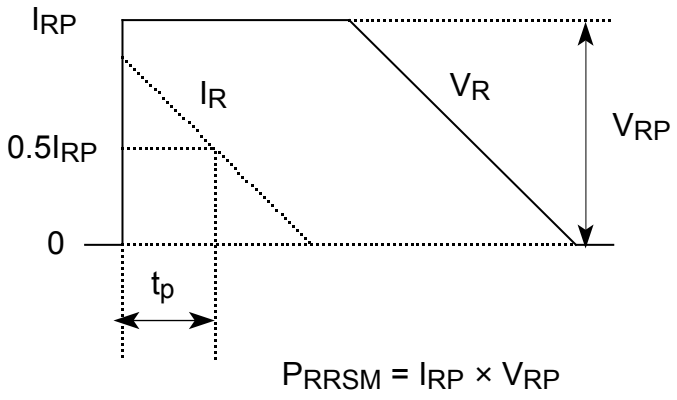


DE3S6M Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability

