SHINDENGEN

Schottky Rectifiers (SBD)

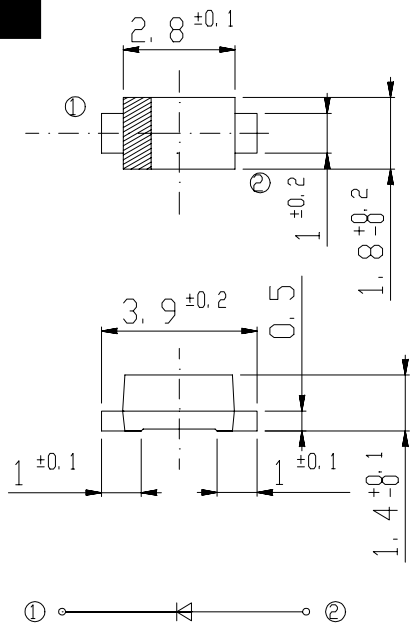
Single

M1FS6

60V 1.2A

Case : M1F

Unit : mm



FEATURES

- Small SMT
- Tj150℃
- Low V_F=0.45V
- P_{RRSM} avalanche guaranteed

APPLICATION

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

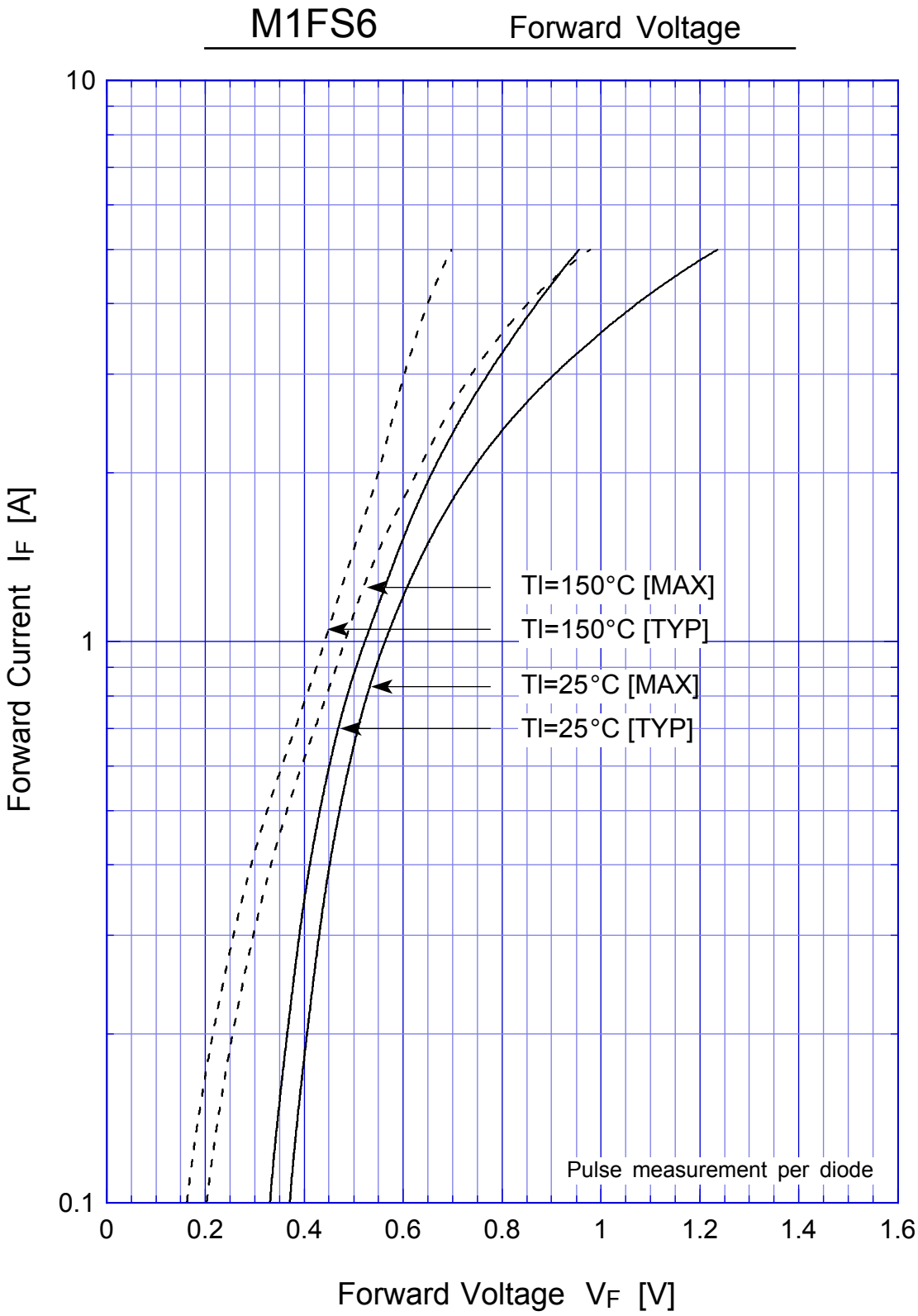
RATINGS

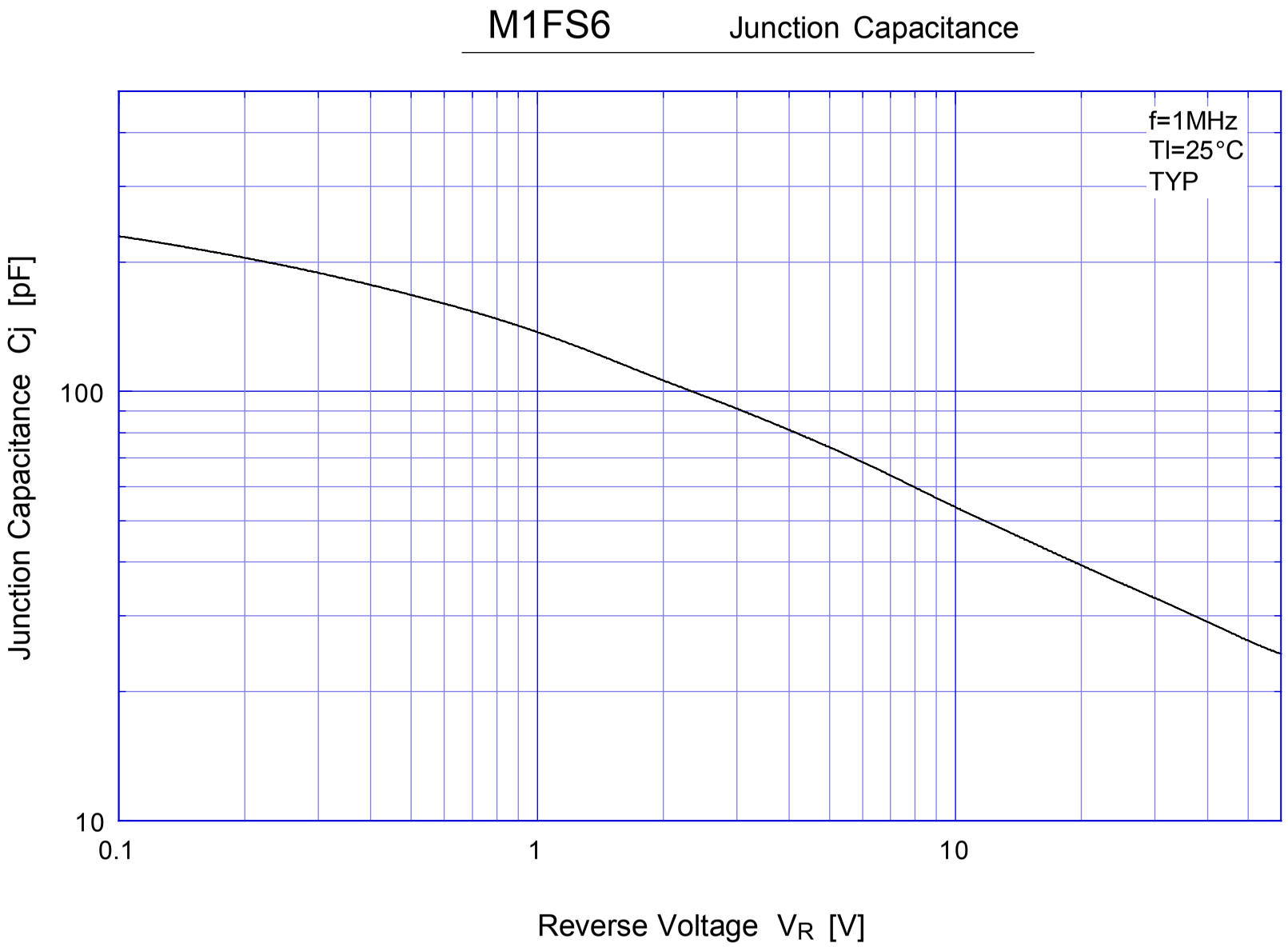
●Absolute Maximum Ratings (If not specified Tl=25℃)

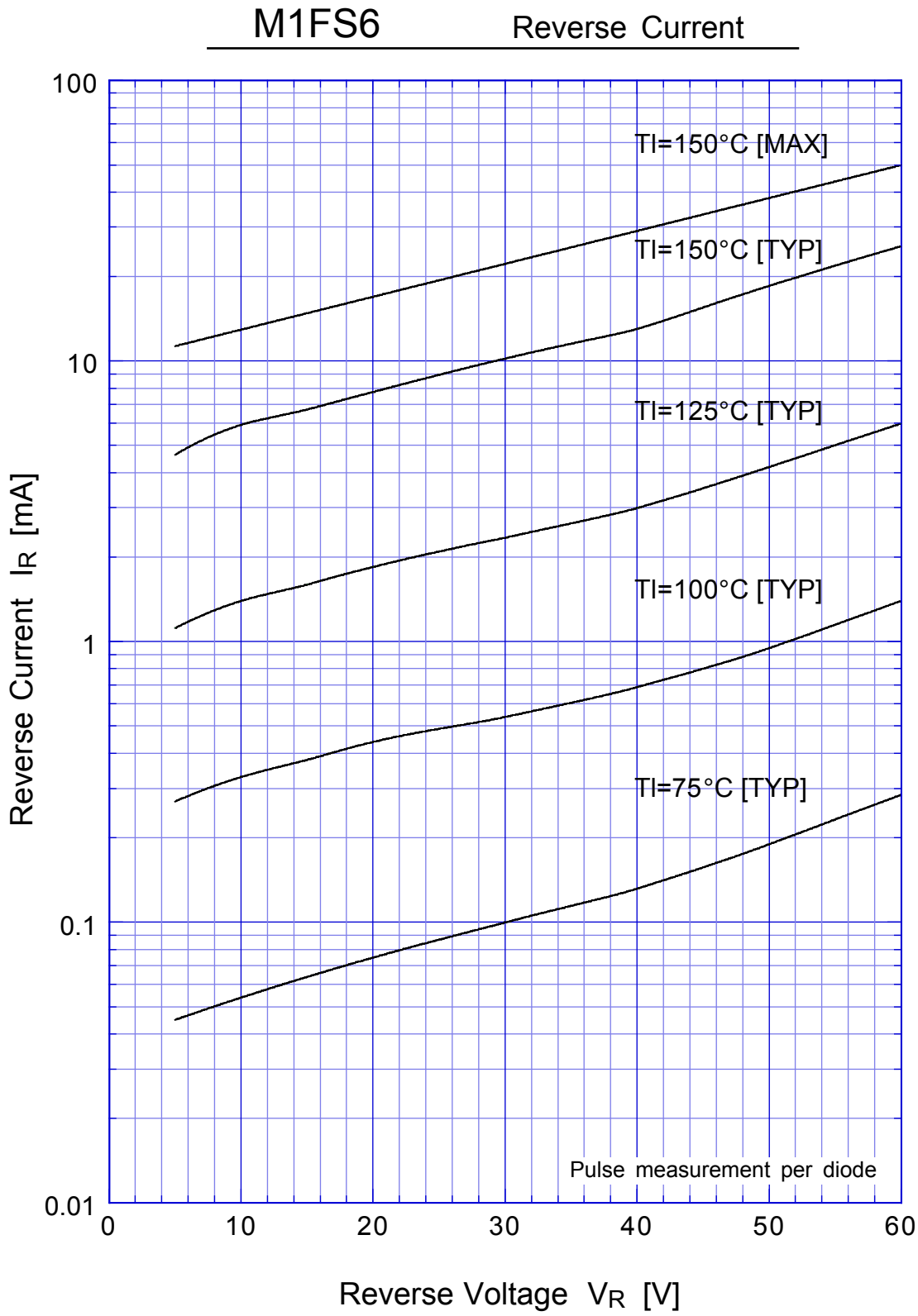
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		−55～150	℃
Operating Junction Temperature	Tj		150	℃
Maximum Reverse Voltage	V_{RM}		60	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	65	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load Ta=25℃ On alumina substrate	1.2	A
		50Hz sine wave, R-load Ta=25℃ On glass-epoxy substrate	0.75	
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25℃	40	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10 μ s, Tj=25℃	60	W

●Electrical Characteristics (If not specified Tl=25℃)

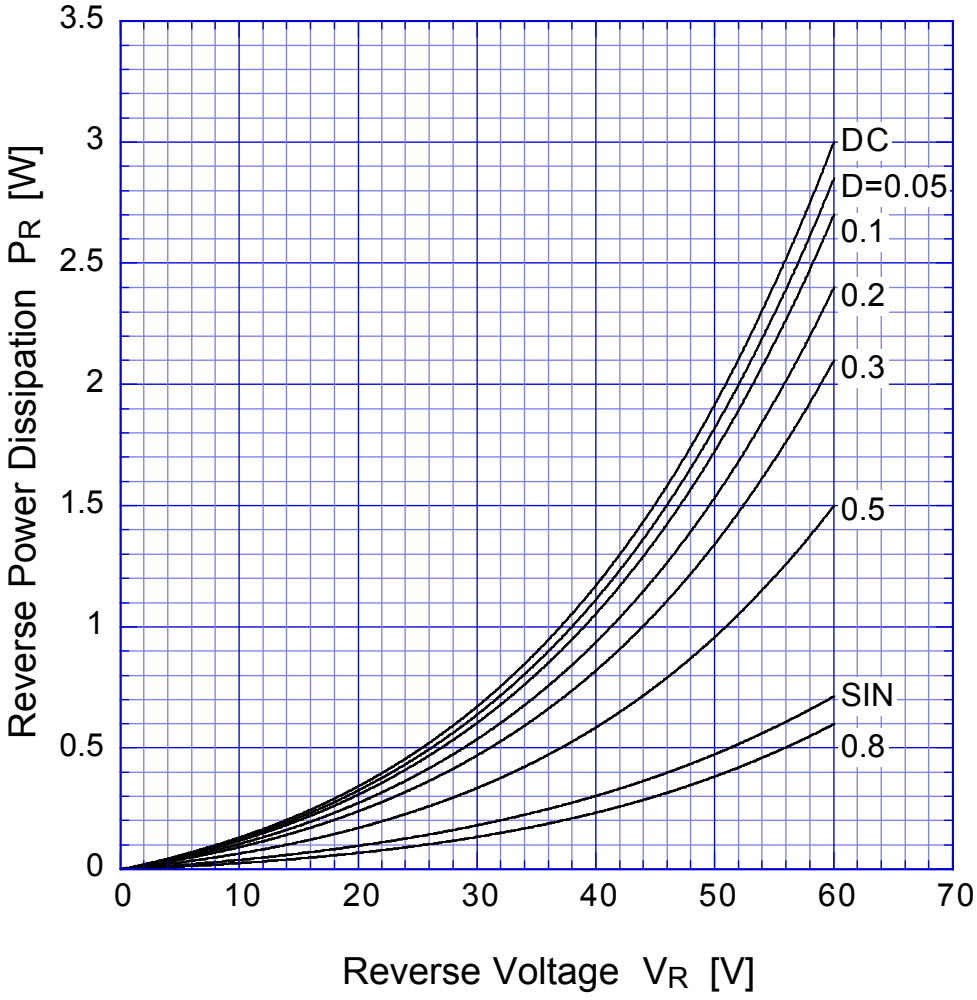
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=1.1A, Pulse measurement	Max.0.58	V
Reverse Current	I_R	V_R=60V, Pulse measurement	Max.1.0	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V	Typ.53	pF
Thermal Resistance	θ jl	junction to lead	Max.20	℃/W
	θ ja	junction to ambient On alumina substrate	Max.108	
		junction to ambient On glass-epoxy substrate	Max.186	


M1FS6
Forward Voltage
10
1
0.1
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
Forward Current IF [A]
Forward Voltage VF [V]
Tl=150°C [MAX]
Tl=150°C [TYP]
Tl=25°C [MAX]
Tl=25°C [TYP]
Pulse measurement per diode

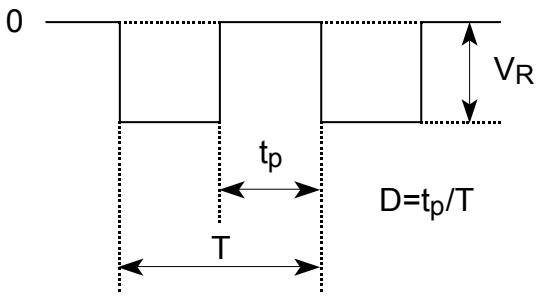

M1FS6
Junction Capacitance
f=1MHz
Tl=25°C
TYP
Junction Capacitance Cj [pF]
100
10
0.1
1
10
Reverse Voltage VR [V]


M1FS6
Reverse Current
100
10
1
0.1
0.01
0
10
20
30
40
50
60
TI=150°C [MAX]
TI=150°C [TYP]
TI=125°C [TYP]
TI=100°C [TYP]
TI=75°C [TYP]
Pulse measurement per diode
Reverse Current IR [mA]
Reverse Voltage VR [V]

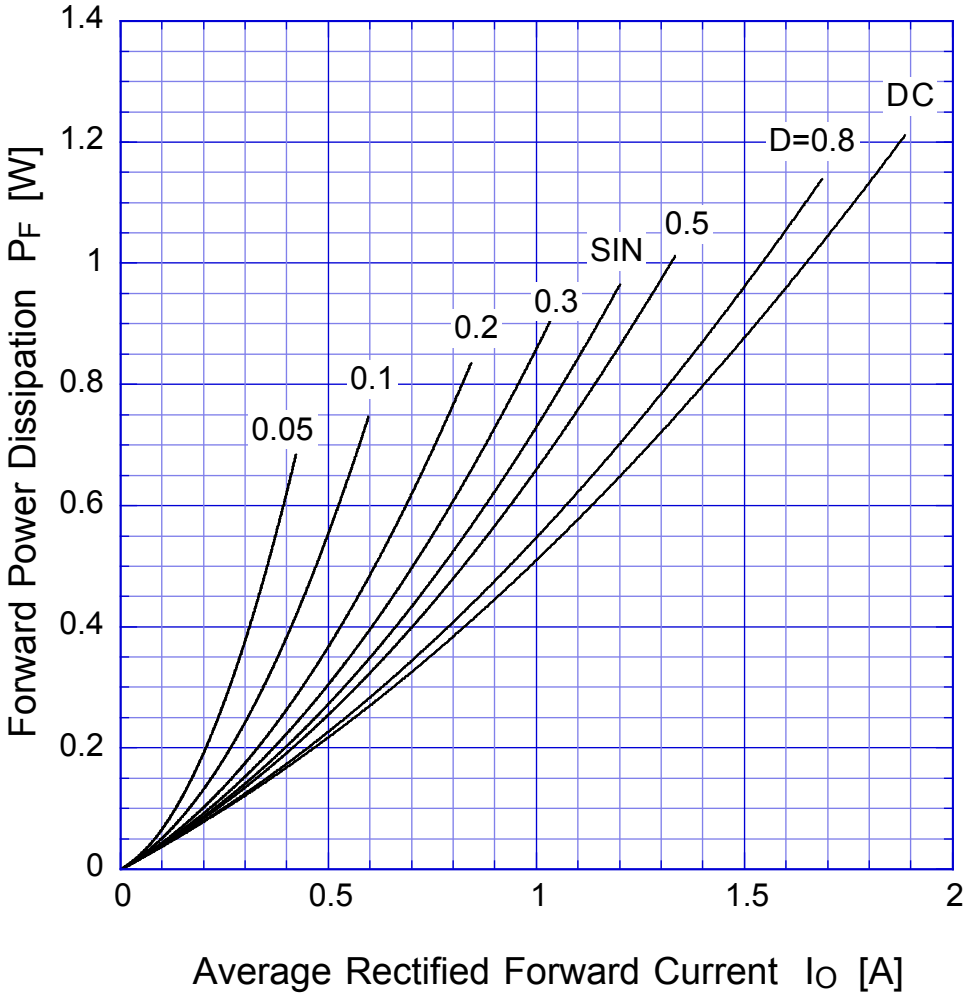
M1FS6 Reverse Power Dissipation



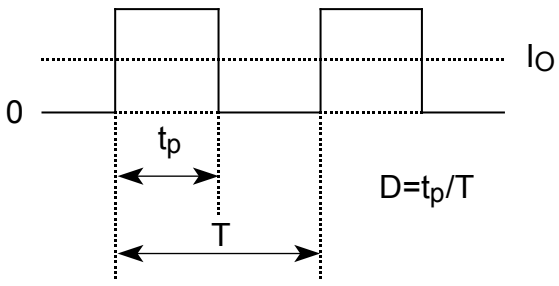
Tj = 150°C



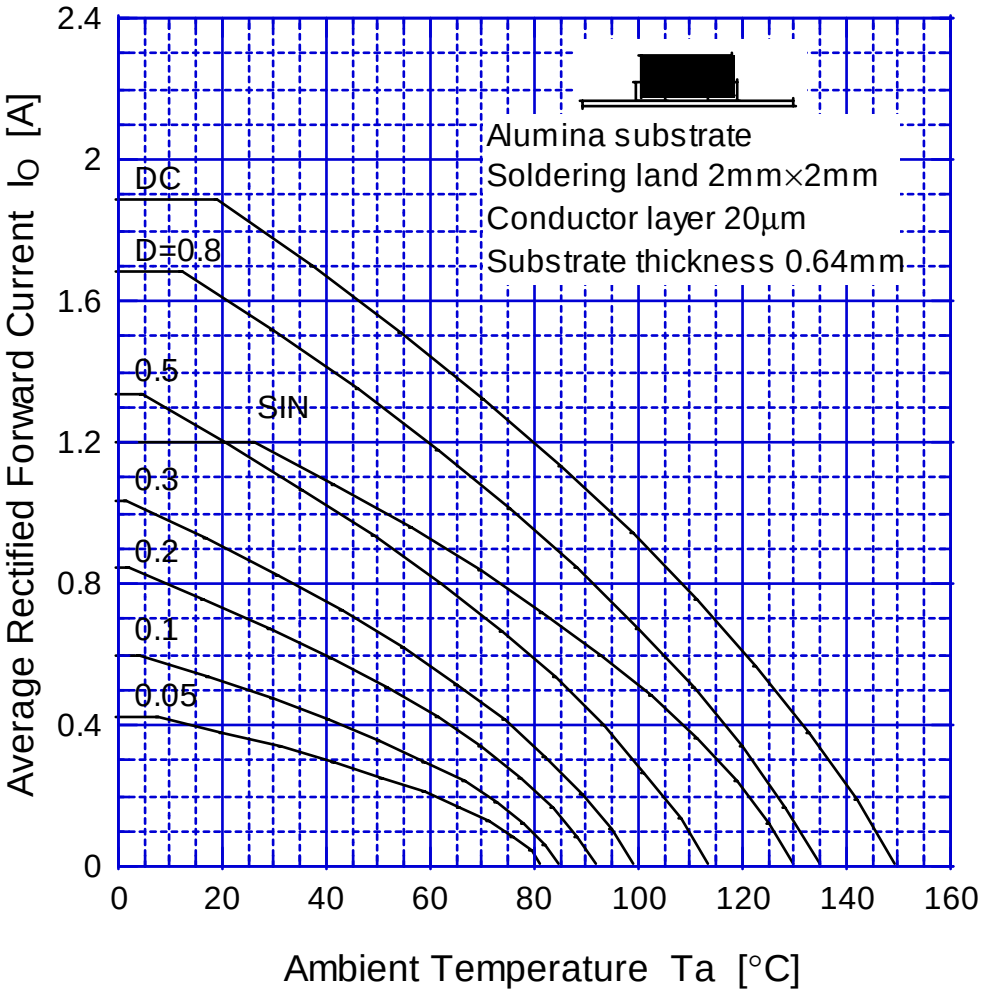
M1FS6 Forward Power Dissipation



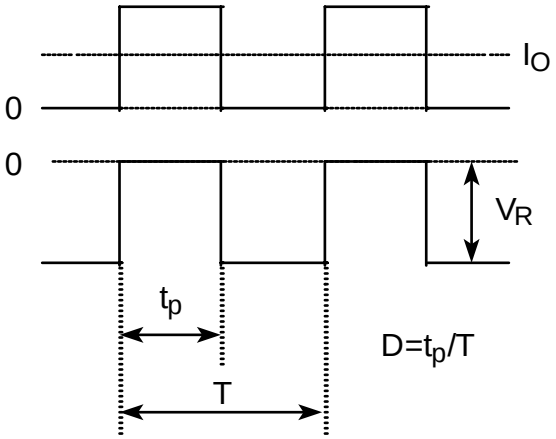
Tj = 150°C



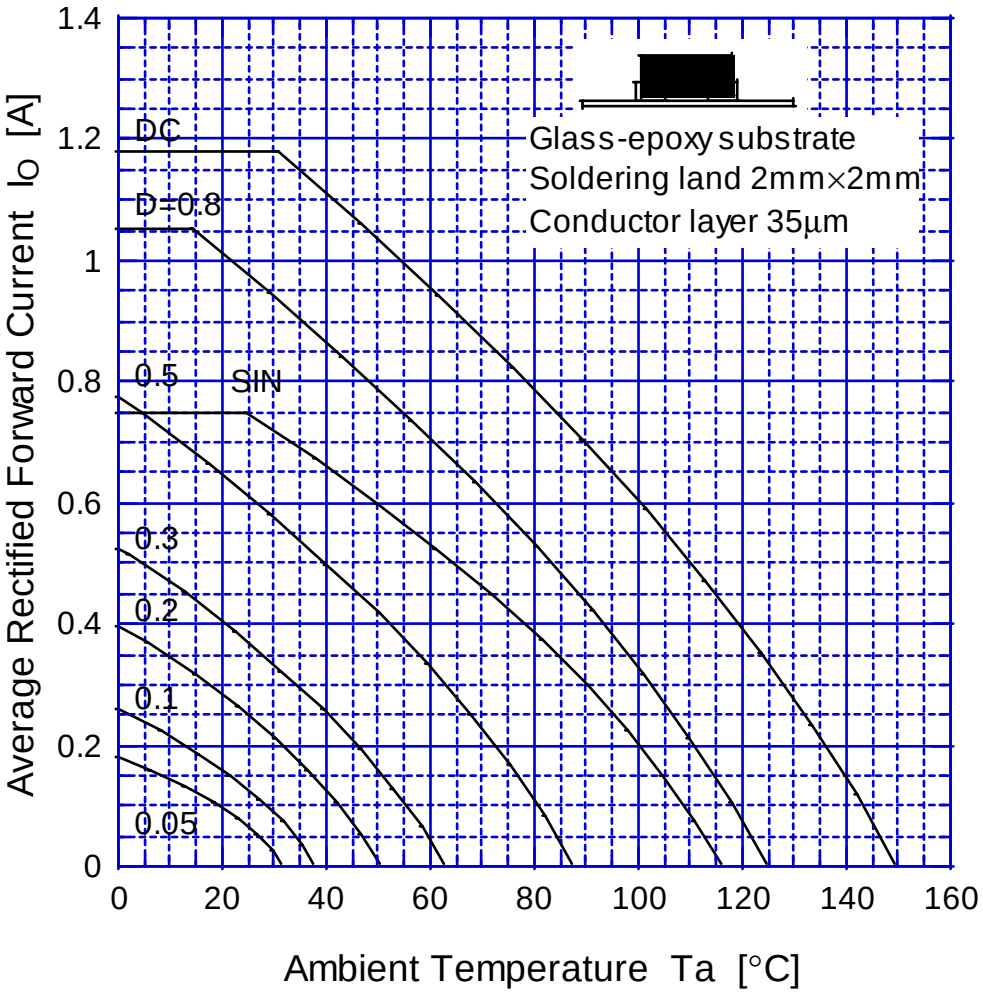
M1FS6 Derating Curve



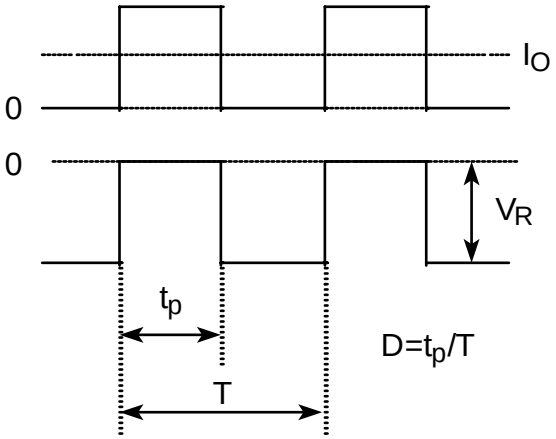
V_R = 30V



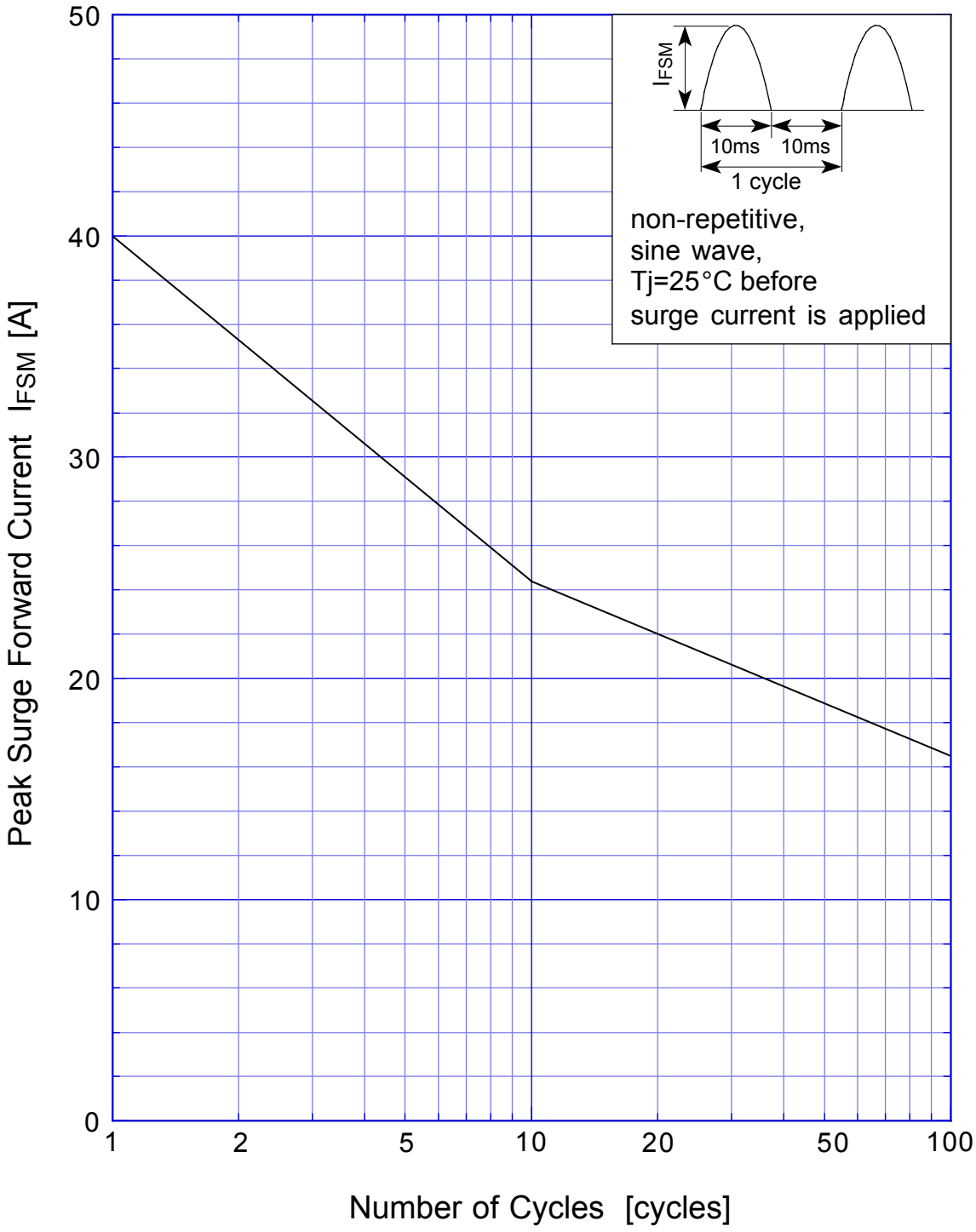
M1FS6 Derating Curve



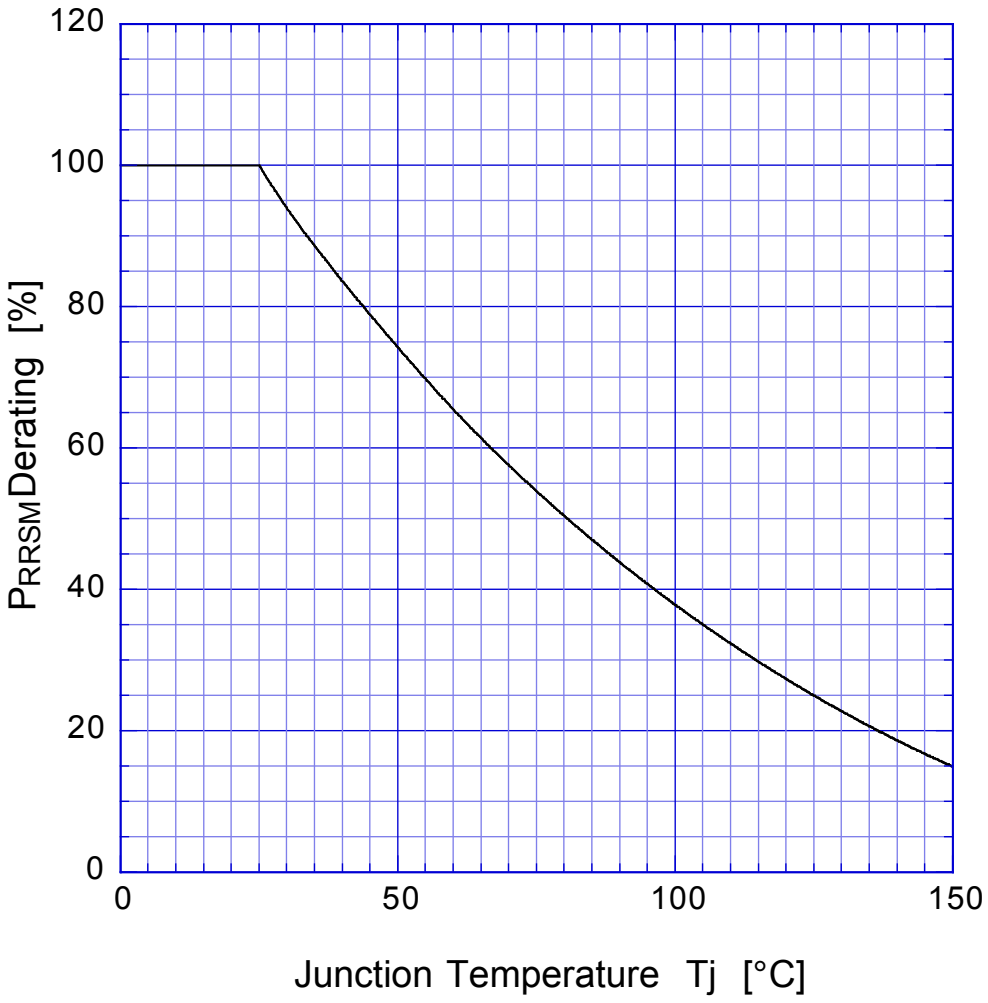
V_R = 30V

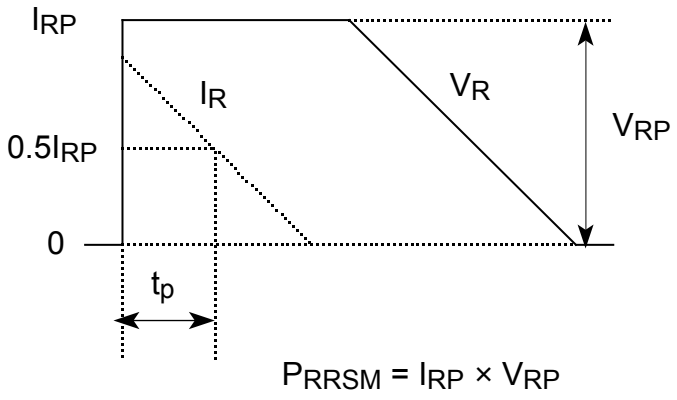


M1FS6 Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability