SHINDENGEN

Schottky Barrier Diode

Single Diode

D5S4M

40V 5A

FEATURES

- Tj150℃
- P_{RRSM} avalanche guaranteed
- Fully Isolated Molding

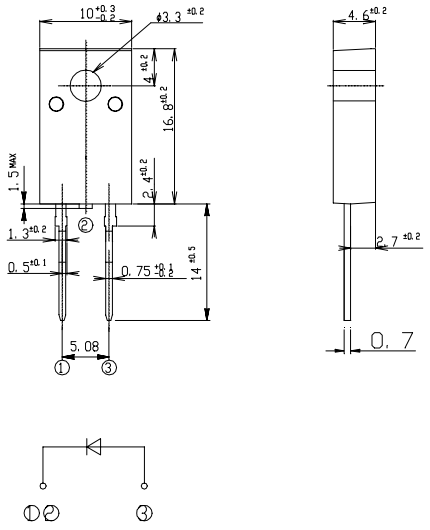
APPLICATION

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

OUTLINE DIMENSIONS

Case : ITO-220

Unit : mm



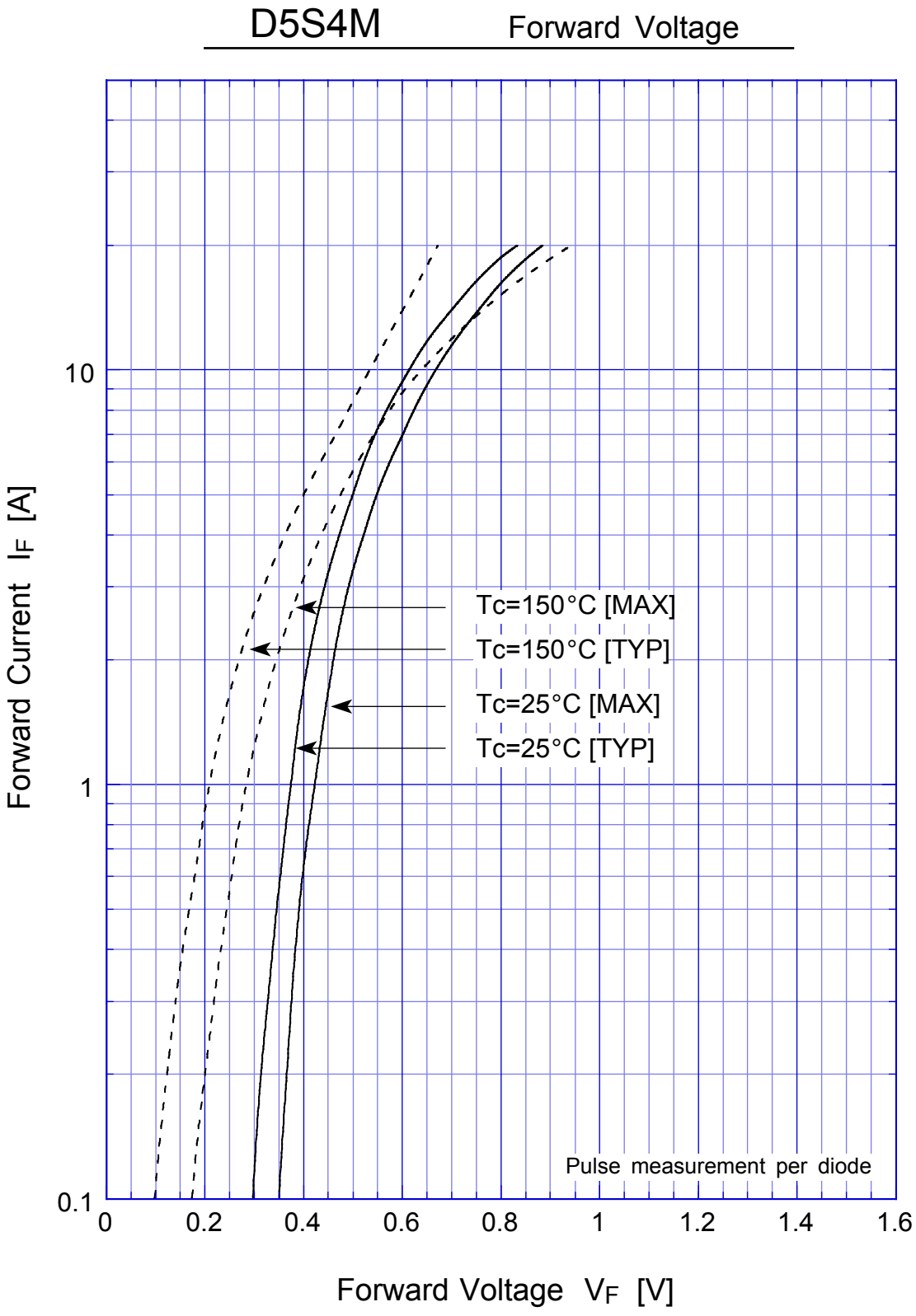
RATINGS

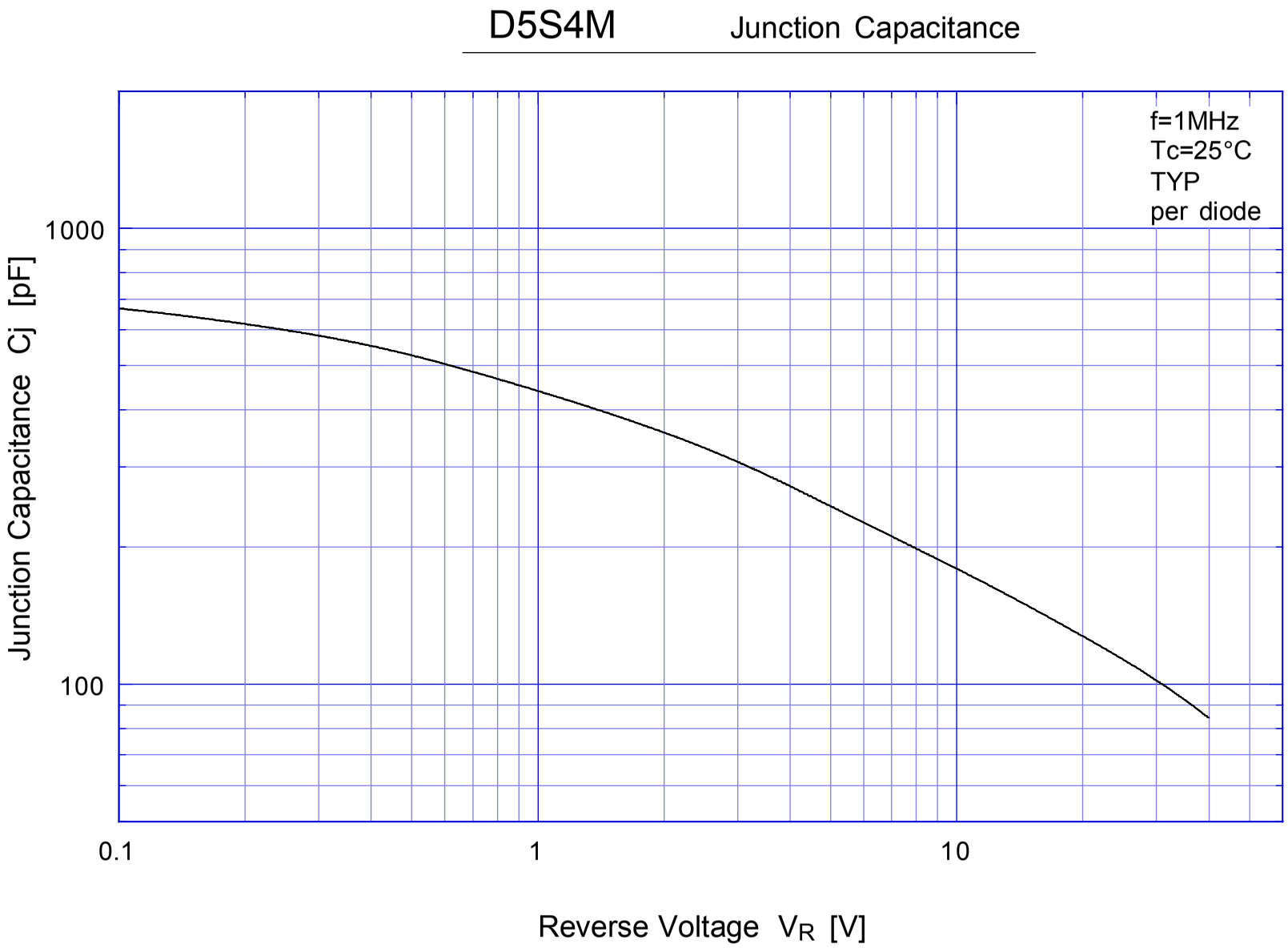
●Absolute Maximum Ratings (If not specified Tc=25℃)

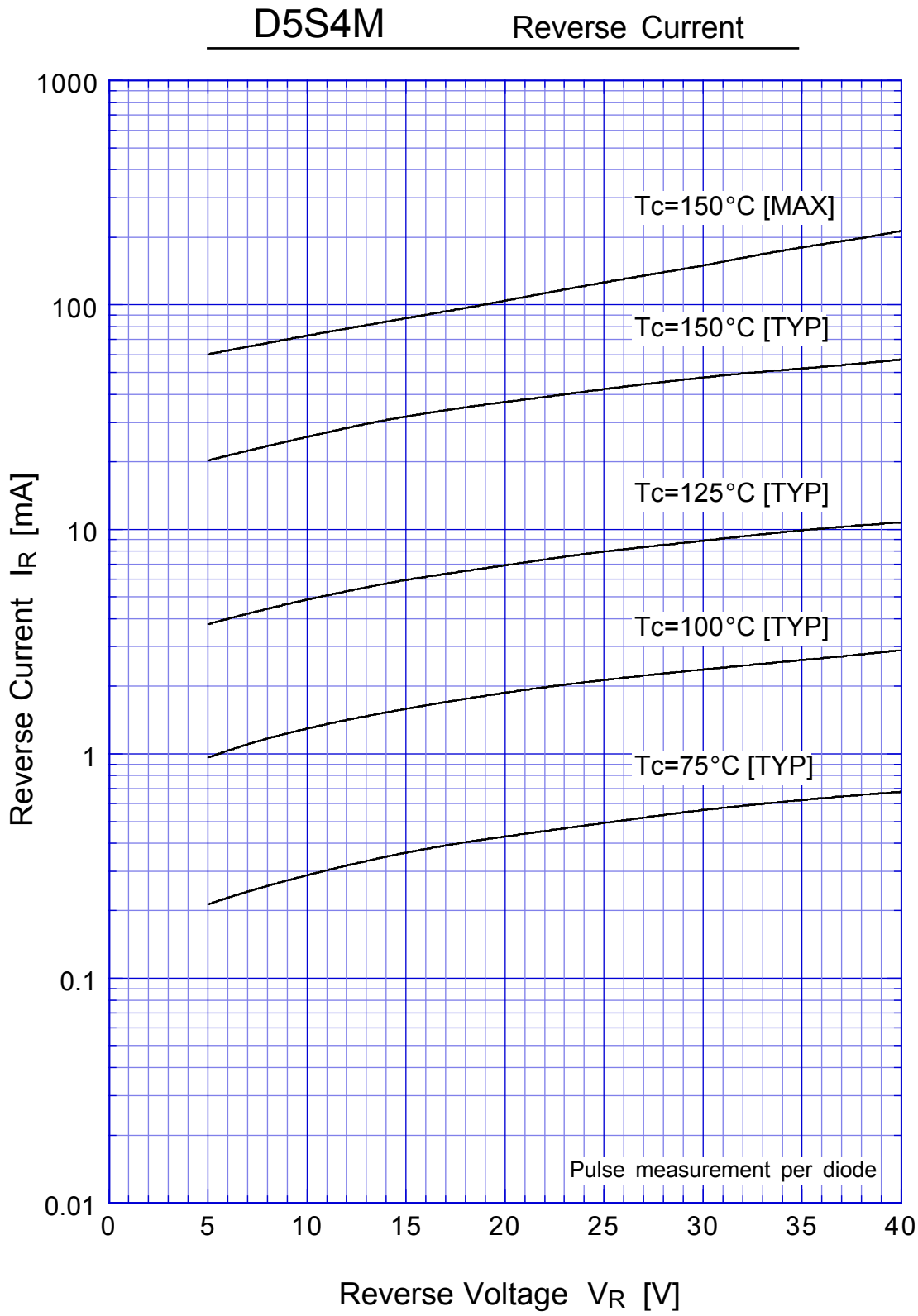
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		−40～150	℃
Operating Junction Temperature	Tj		150	℃
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty1/40	45	V
Average Rectified Forward Current	I_O	50Hz sine wave,R-load, Tc=131℃	5	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave,Non-repetitive 1 cycle peak value, Tj=125℃	100	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Tj=25℃	330	W
Dielectric Strength	Vdis	Terminals to case, AC 1 minute	1.5	kV
Mounting Torque	TOR	(Recommended torque:0.3N･m)	0.5	N･m

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

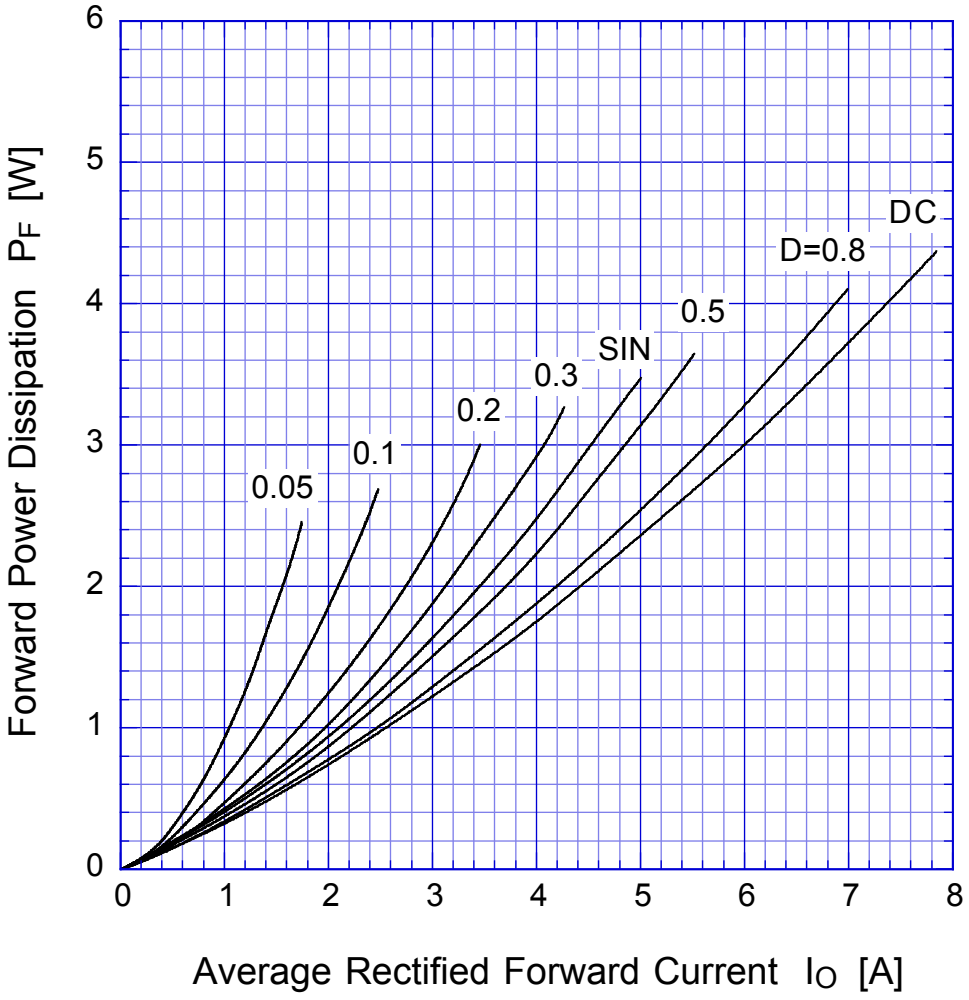
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=5A, Pulse measurement	Max.0.55	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement	Max. 3.5	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V	Typ.180	pF
Thermal Resistance	θ jc	junction to case	Max.4.5	℃/W
	θ cf	case to heatsink	Max.1.5	


D5S4M
Forward Voltage
Forward Current IF [A]
10
1
0.1
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
Forward Voltage VF [V]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=25°C [MAX]
Tc=25°C [TYP]
Pulse measurement per diode

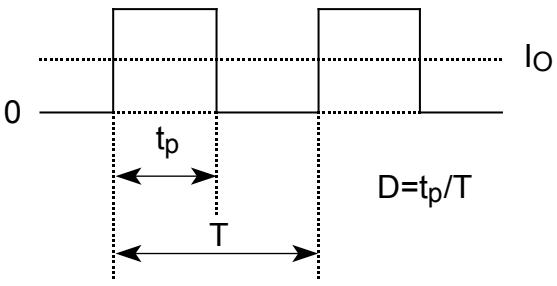

D5S4M
Junction Capacitance
f=1MHz
Tc=25°C
TYP
per diode
1000
100
Junction Capacitance Cj [pF]
0.1
1
10
Reverse Voltage VR [V]


D5S4M
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
5
10
15
20
25
30
35
40
Reverse Voltage VR [V]

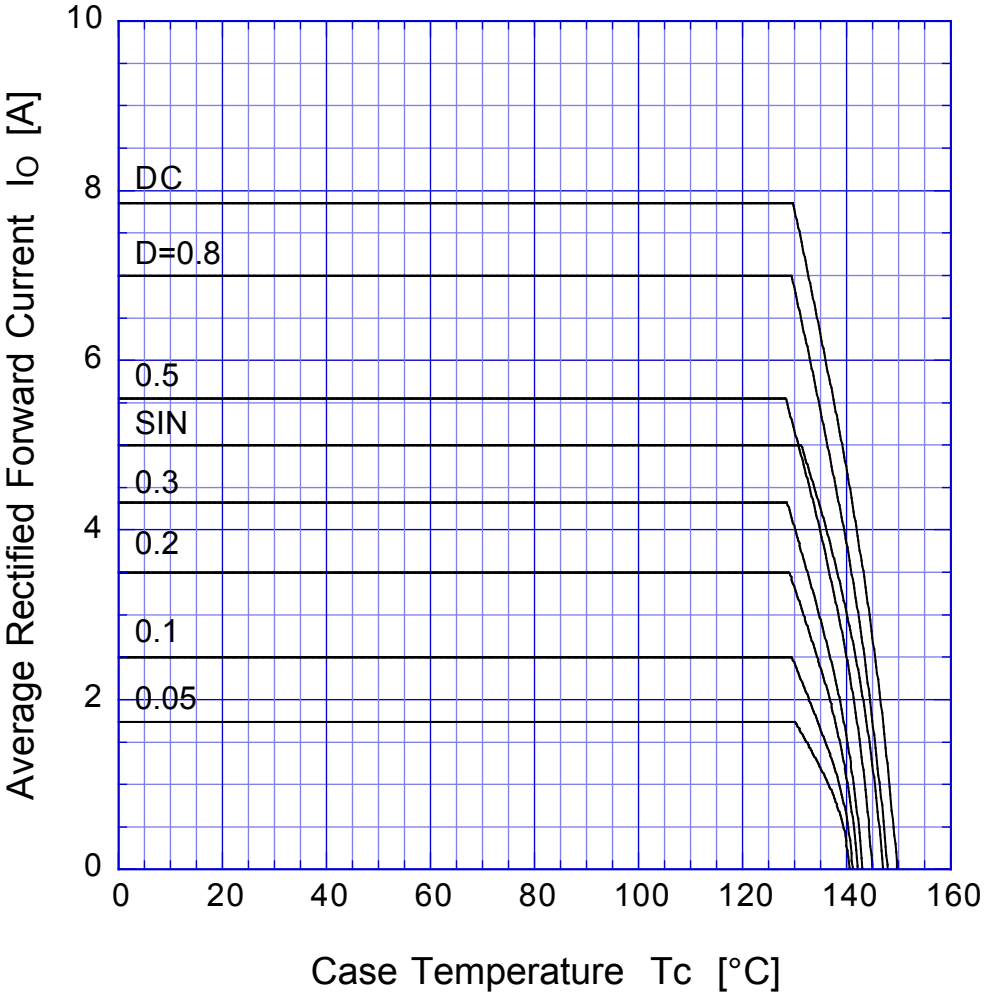
D5S4M Forward Power Dissipation



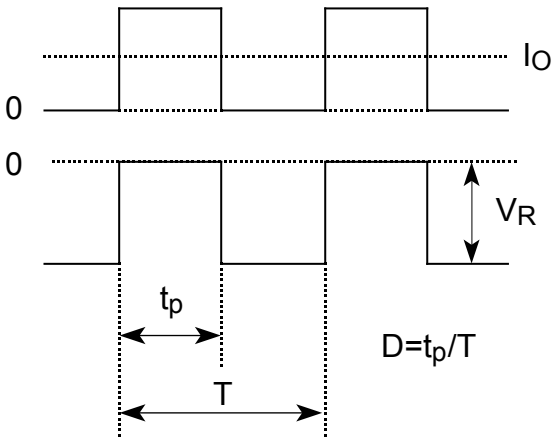
Tj = 150°C



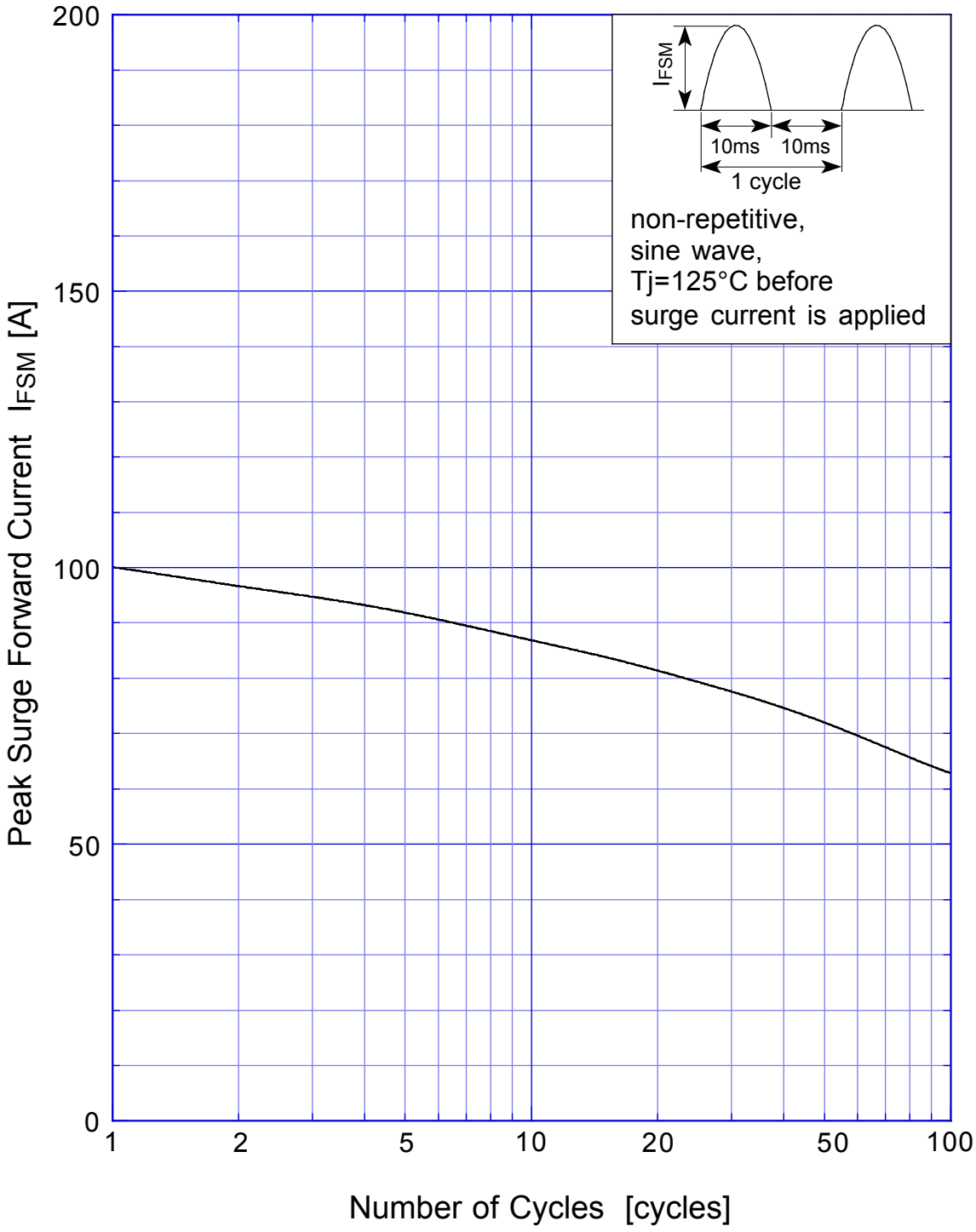
D5S4M Derating Curve



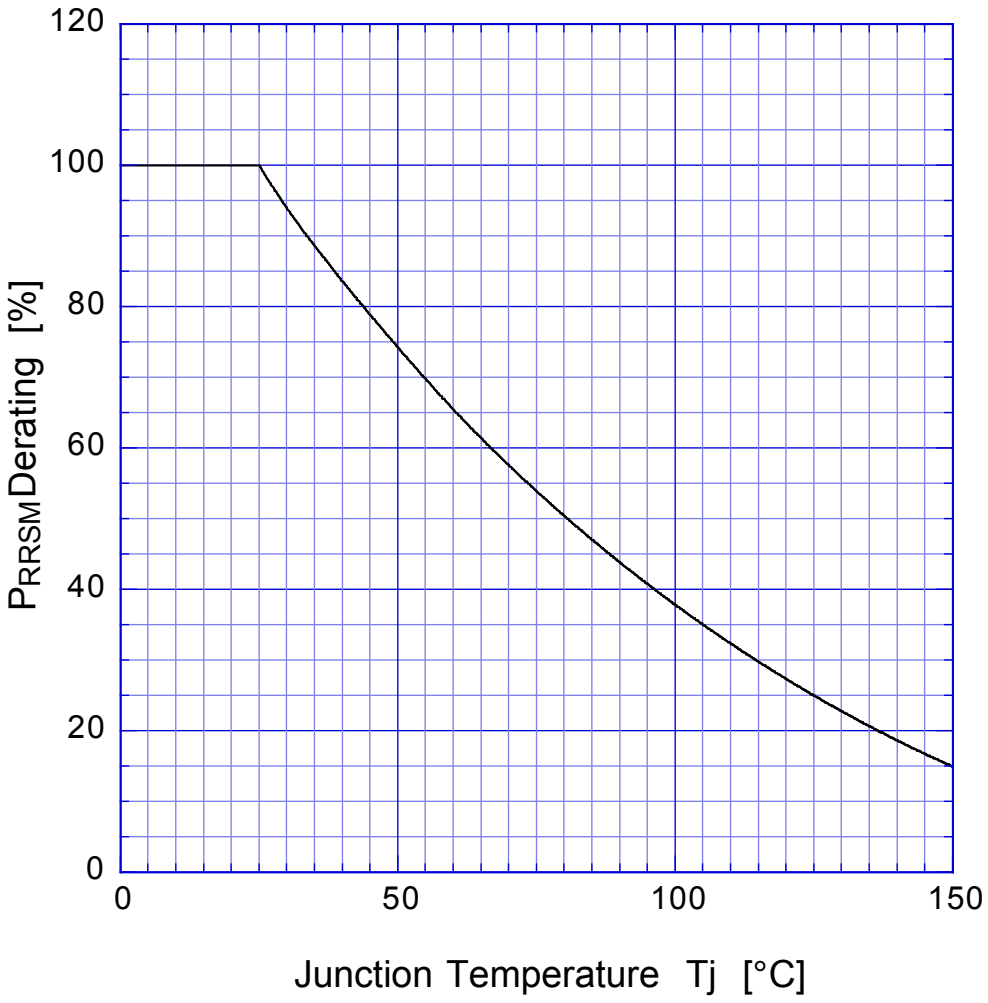
V_R = 20V

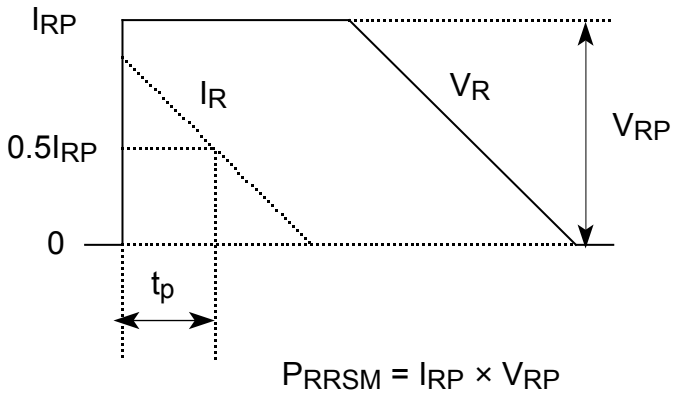


D5S4M Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability