SHINDENGEN

Schottky Rectifiers (SBD)

Dual

SF10SC9

90V 10A

FEATURES

- Tj150°C
- P_{RRSM} avalanche guaranteed
- Fully Isolated Molding
- Dielectric strength 2kV guaranteed

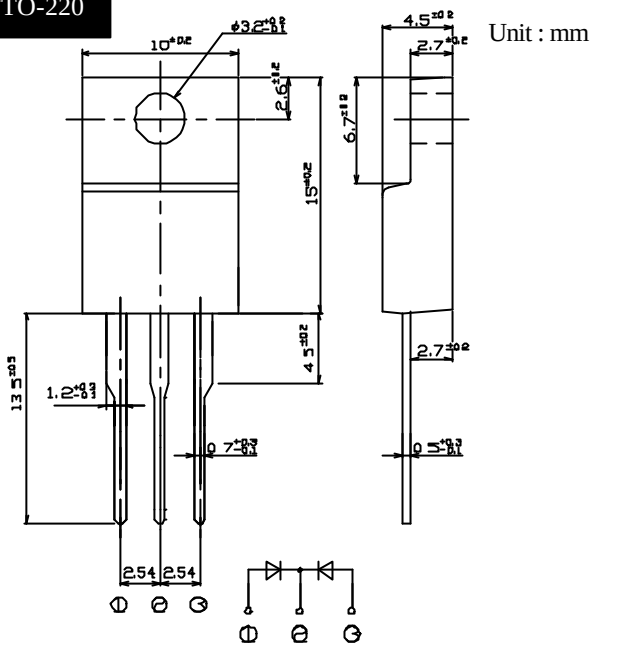
APPLICATION

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

OUTLINE DIMENSIONS

Case : FTO-220

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}		90	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	100	V
Average Rectified Forward Current	Io	50Hz sine wave, R-load, Rating for each diode Io/2, Tc=120°C	10	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=125°C	100	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Rating of per diode, Tj=25°C	330	W
Dielectric Strength	Vdis	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque :0.3N·m)	0.5	N·m

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

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=5A, Pulse measurement, Rating of per diode	Max.0.75	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement, Rating of per diode	Max.3	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V, Rating of per diode	Typ.185	pF
Thermal Resistance	θjc	junction to case	Max.2.3	°C/W

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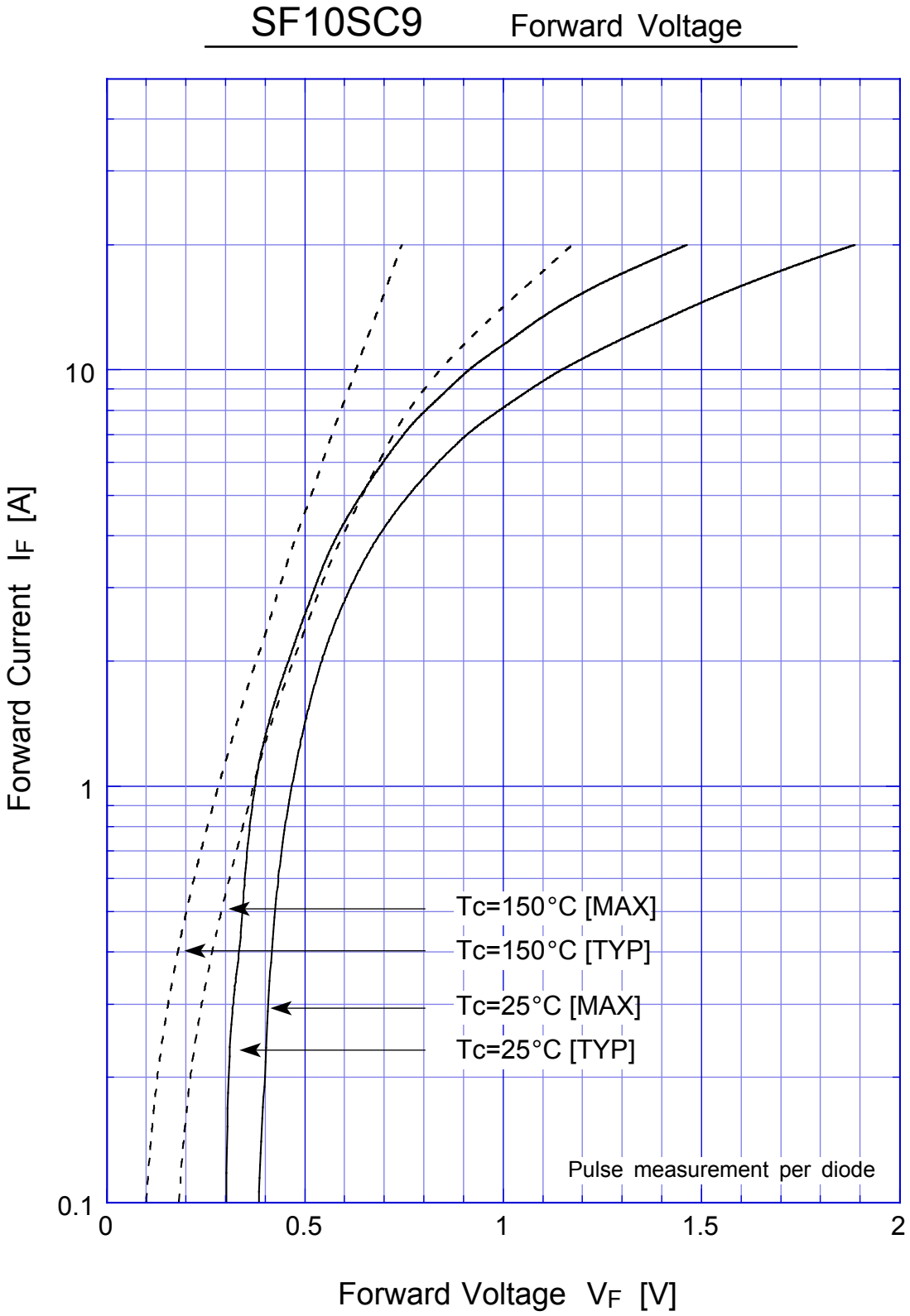
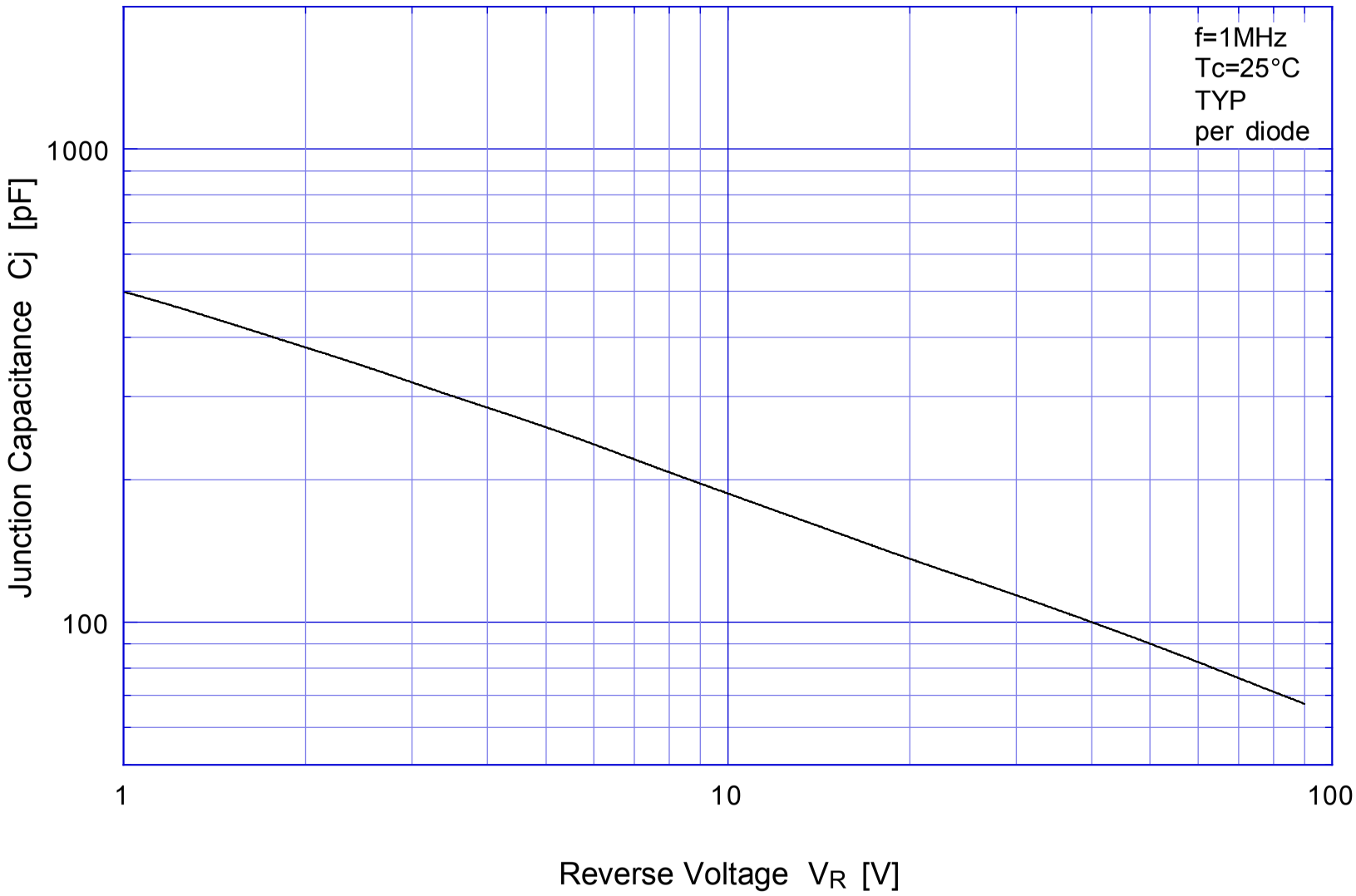
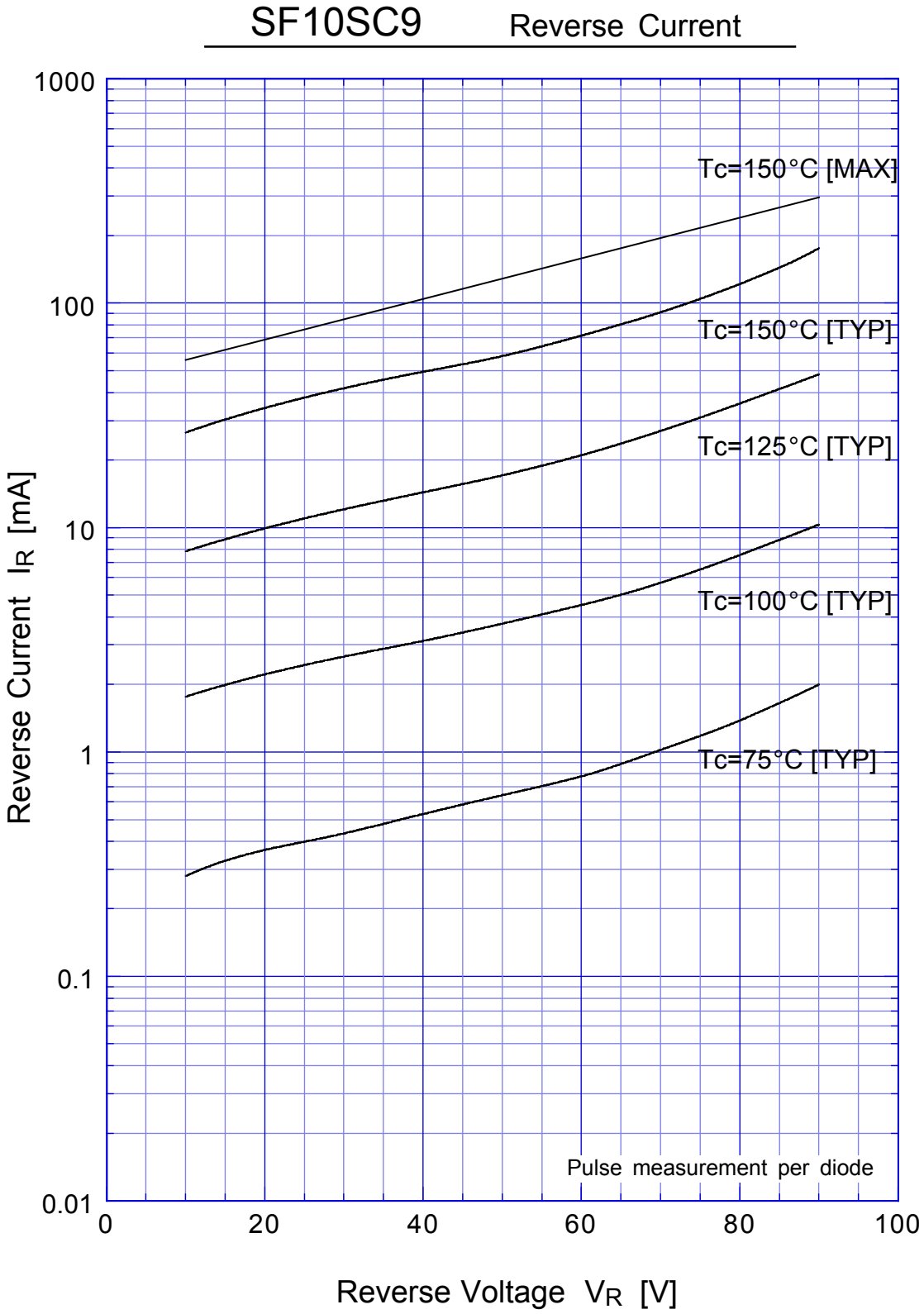
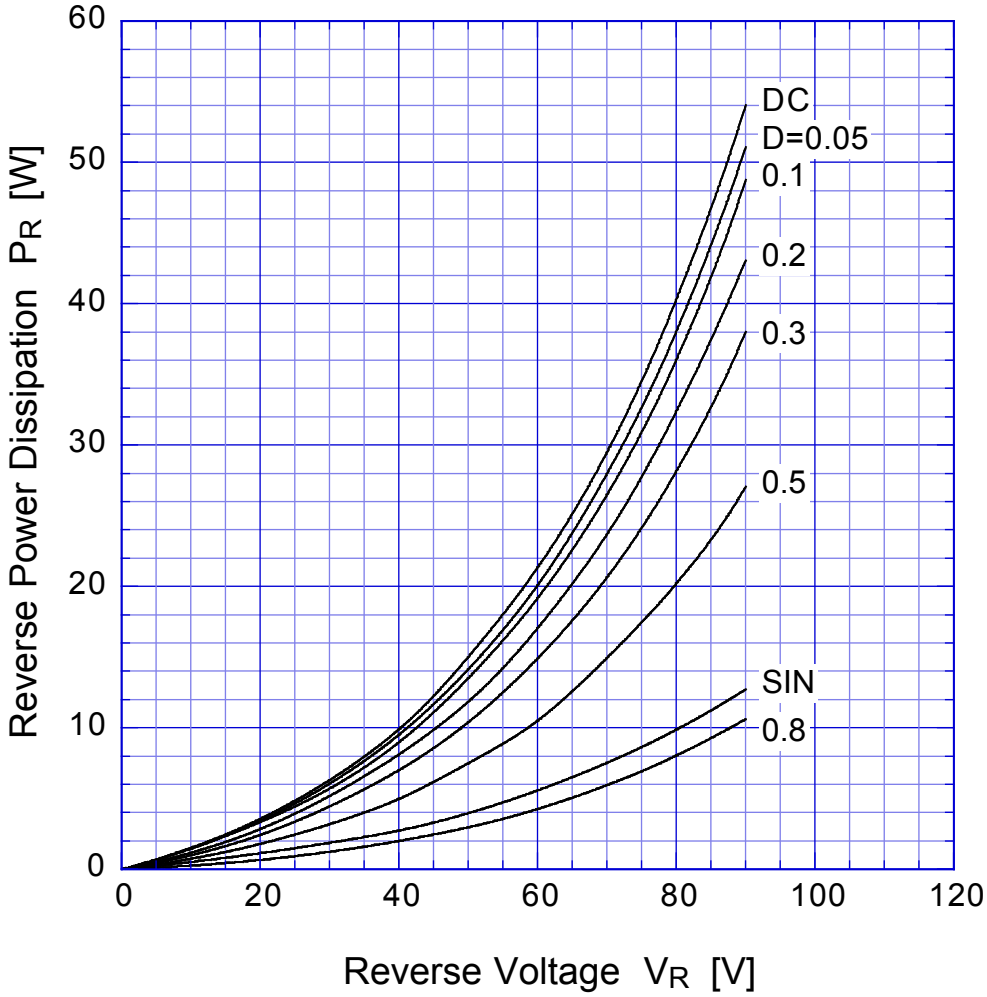

SF10SC9 Forward Voltage
Forward Current IF [A]
10
1
0.1
0
0.5
1
1.5
2
Forward Voltage VF [V]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=25°C [MAX]
Tc=25°C [TYP]
Pulse measurement per diode

SF10SC9 Junction Capacitance

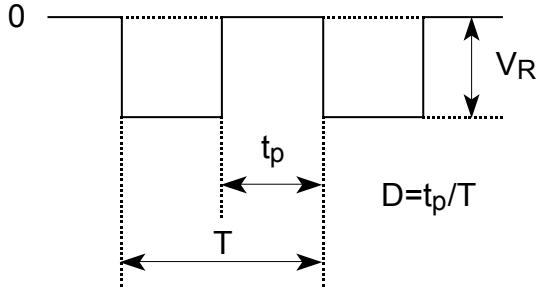



SF10SC9
Reverse Current
1000
100
10
1
0.1
0.01
Reverse Current IR [mA]
0
20
40
60
80
100
Reverse Voltage VR [V]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=125°C [TYP]
Tc=100°C [TYP]
Tc=75°C [TYP]
Pulse measurement per diode

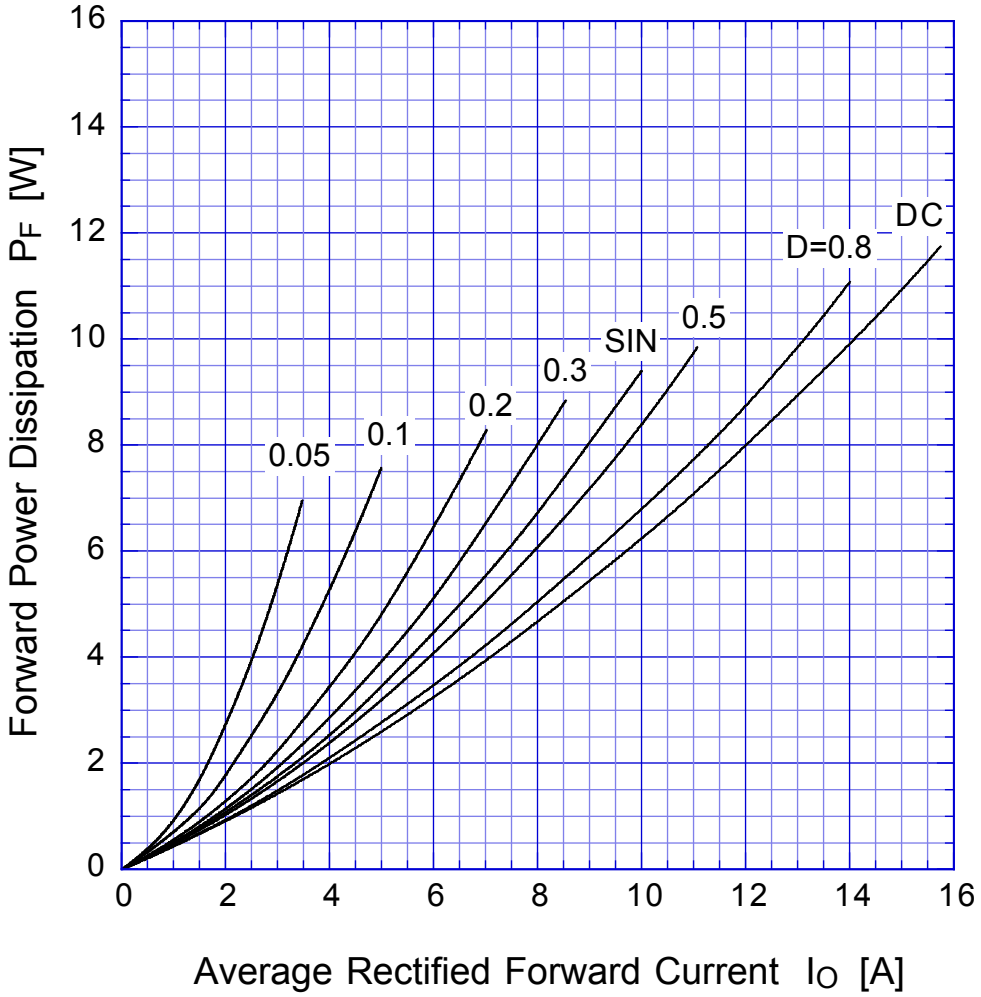
SF10SC9 Reverse Power Dissipation



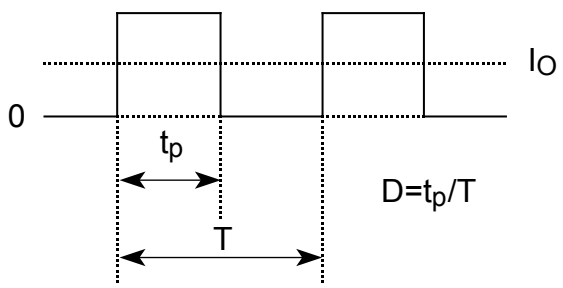
Tj = 150°C



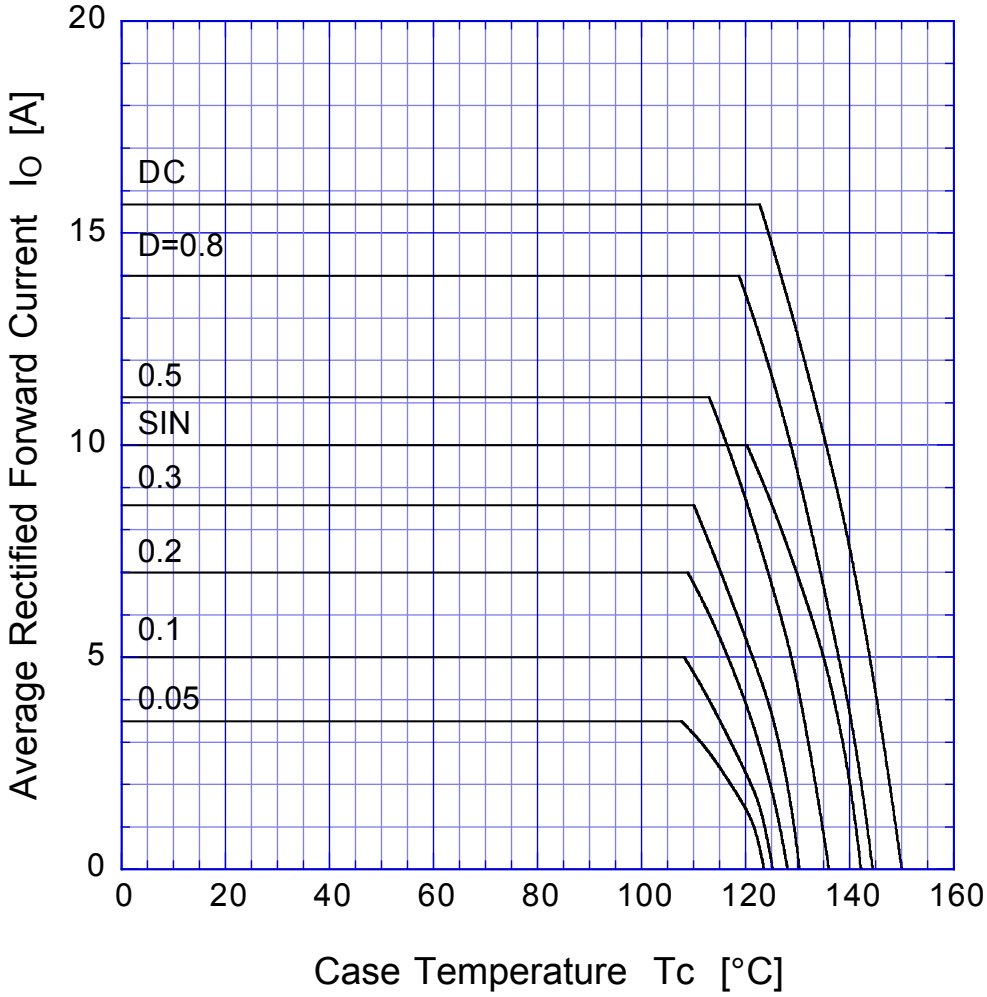
SF10SC9 Forward Power Dissipation



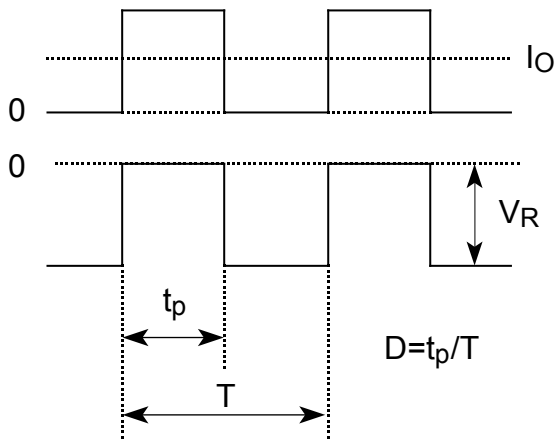
Tj = 150°C

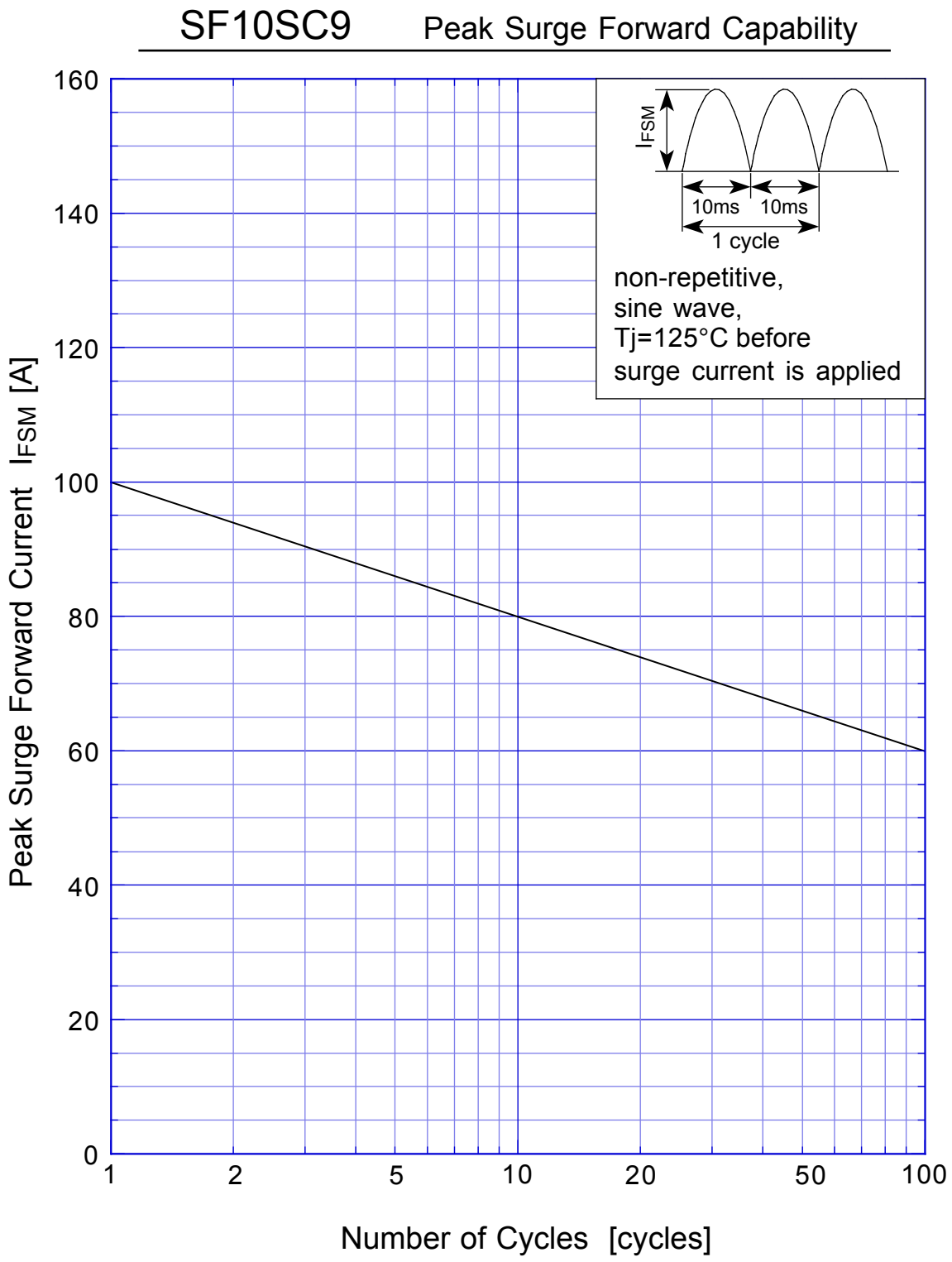


SF10SC9 Derating Curve

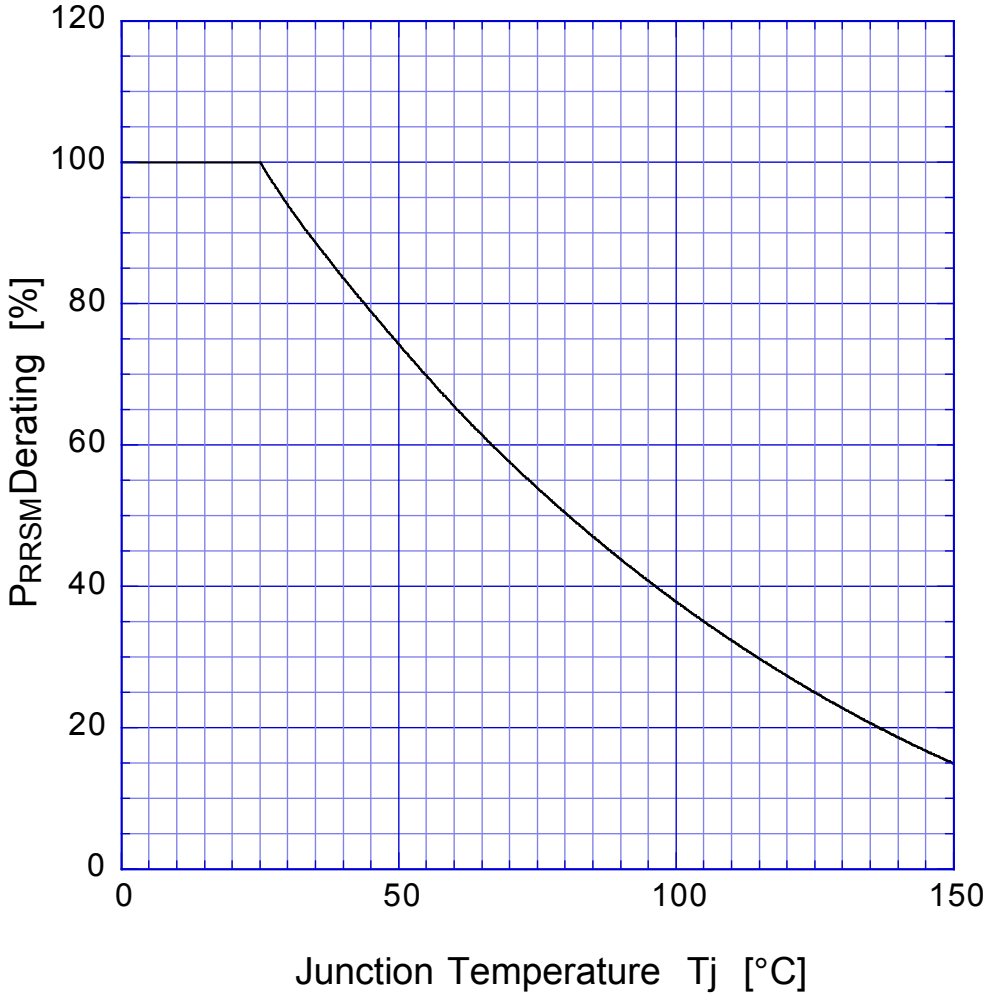


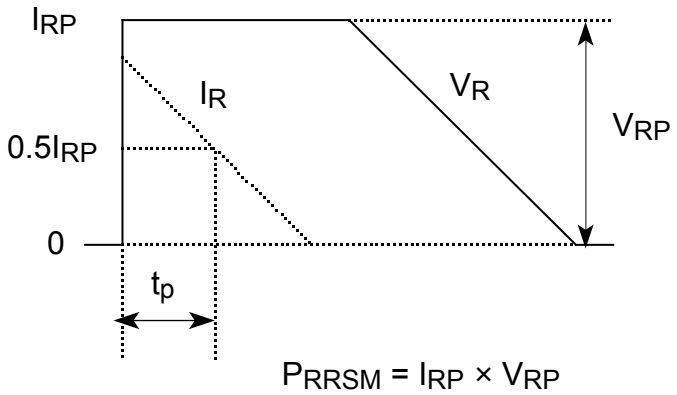
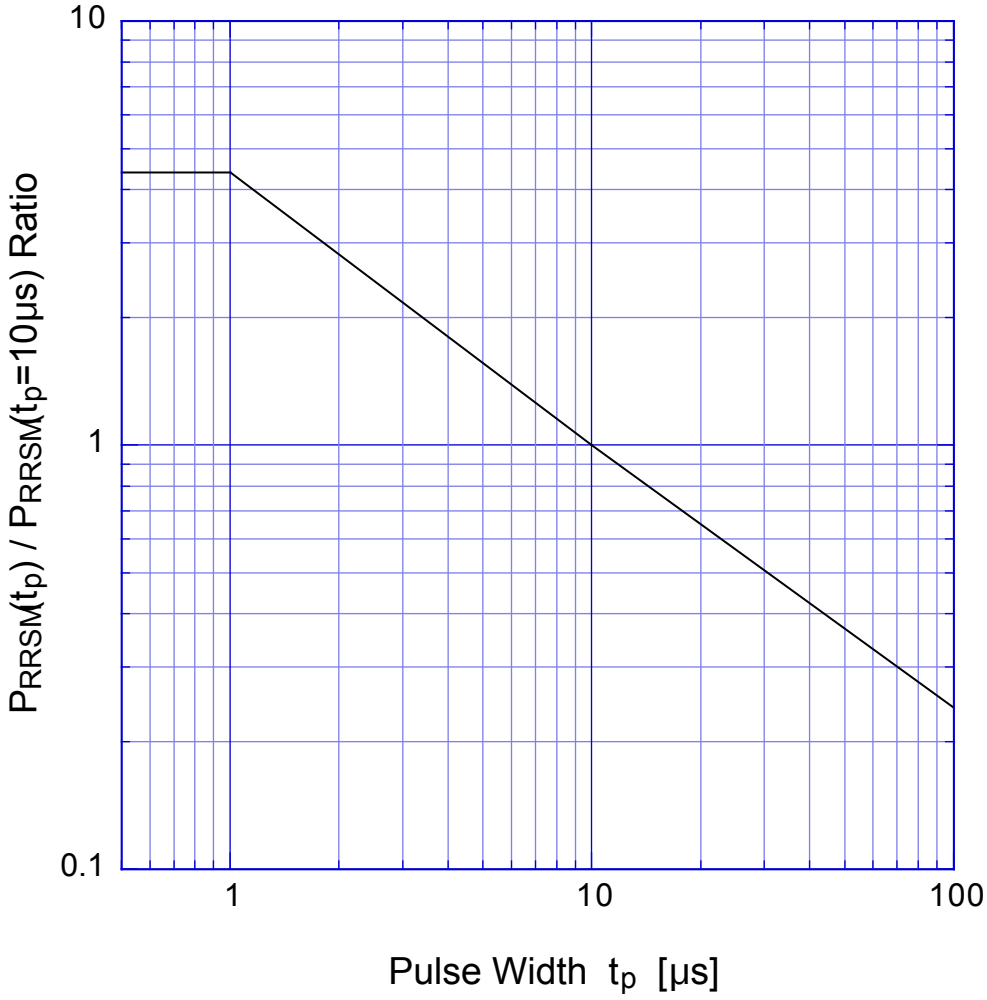
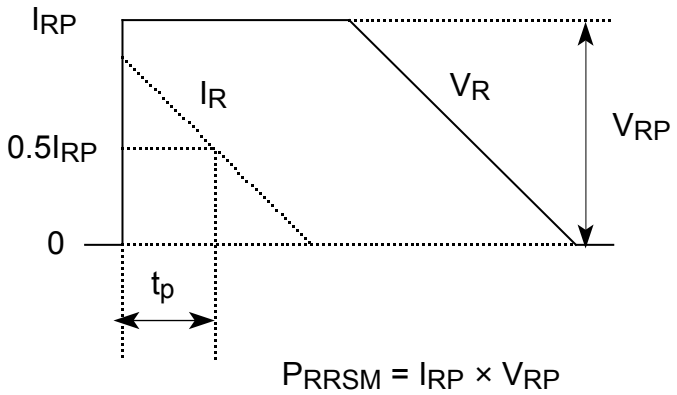
V_R = 45V




SF10SC9
Peak Surge Forward Capability
Peak Surge Forward Current IFSM [A]
160
140
120
100
80
60
40
20
0
1
2
5
10
20
50
100
Number of Cycles [cycles]
IFSM
10ms
10ms
1 cycle
non-repetitive,
sine wave,
Tj=125°C before
surge current is applied

SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability