SHINDENGEN

Schottky Rectifiers (SBD)

Dual

DF30SC3ML

30V 30A

FEATURES

- SMT
- Tj150℃
- Low V_F=0.45V
- P_{RRSM} avalanche guaranteed
- High current capacity with Small Package

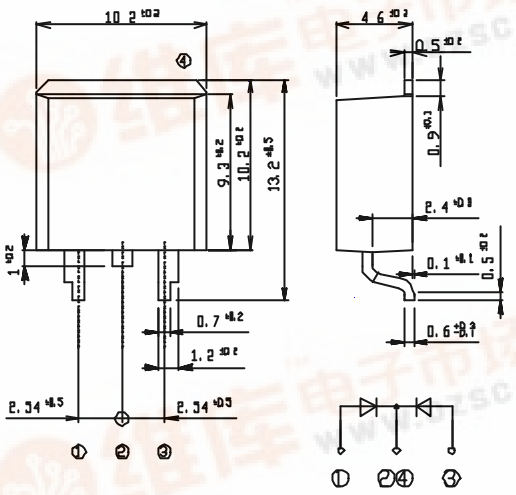
APPLICATION

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

OUTLINE DIMENSIONS

Case：STO-220

Unit : mm



RATINGS

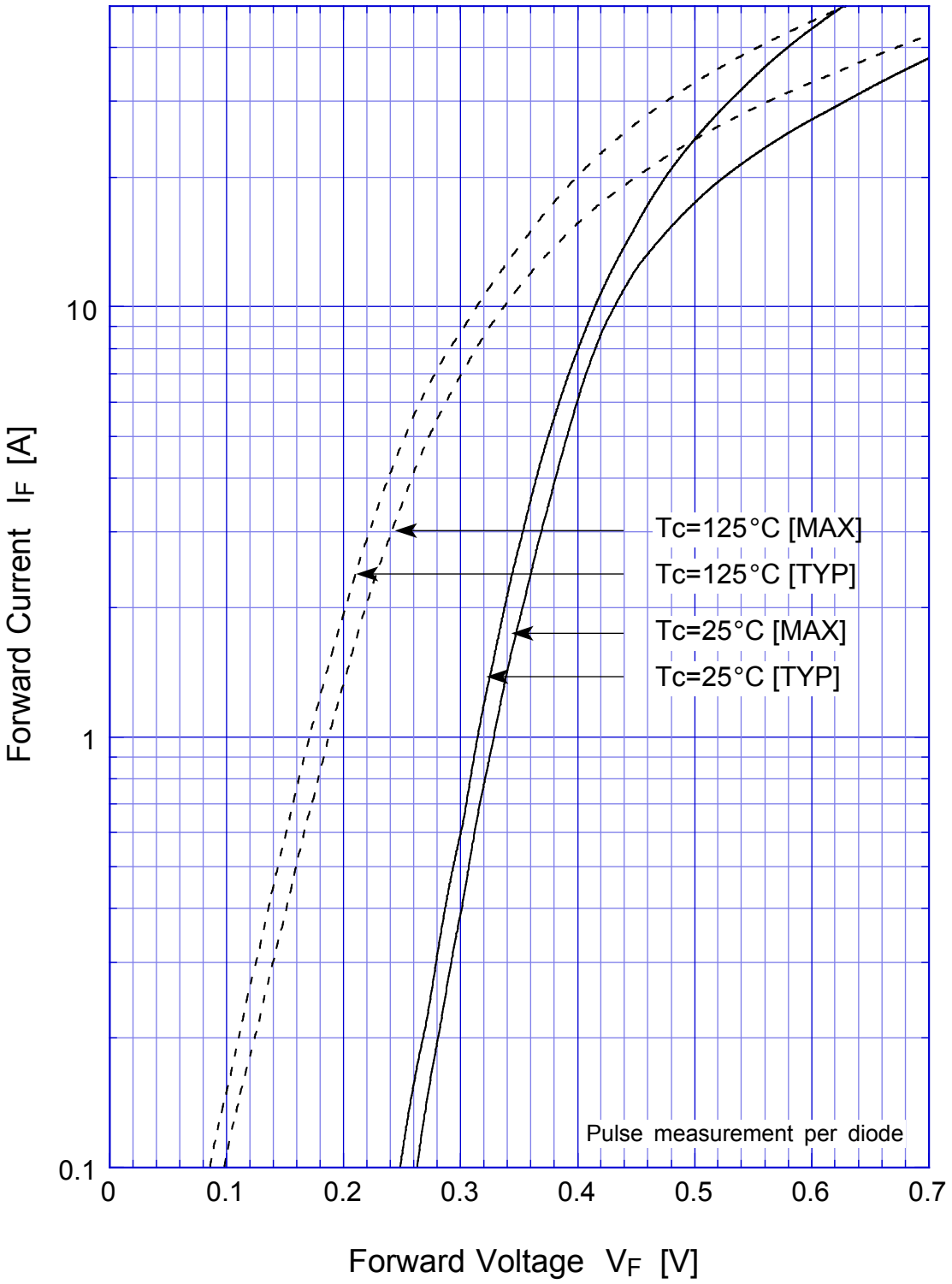
●Absolute Maximum Ratings (If not specified Tc=25℃)

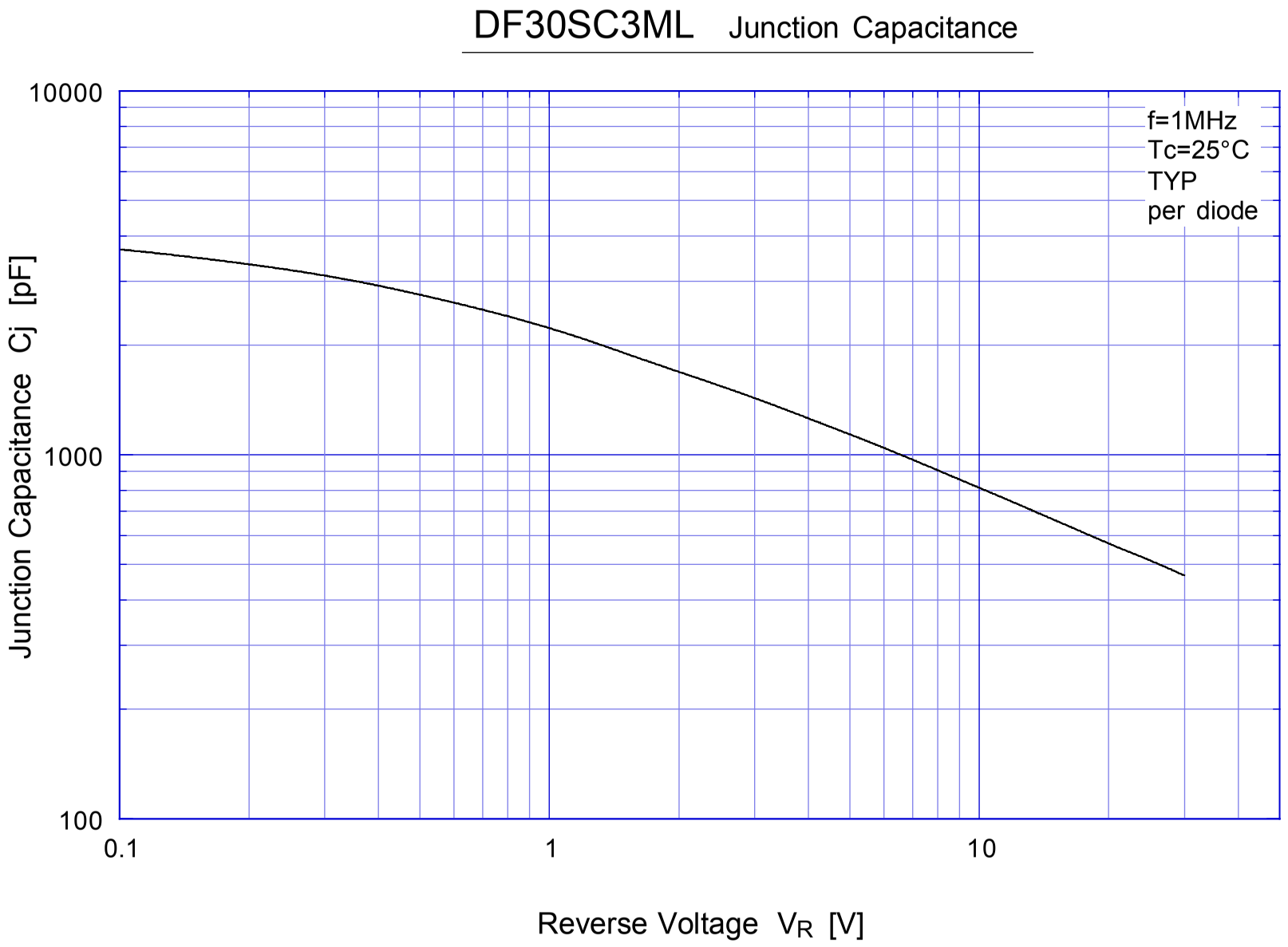
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-55～150	℃
Operating Junction Temperature	Tj		150	℃
Maximum Reverse Voltage	V_{RM}		30	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	35	V
Average Rectified Forward Current	Io	50Hz sine wave, R-load, Rating for each diode Io/2, Tc=119℃	30	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25℃	350	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Rating of per diode, Tj=25℃	1000	W

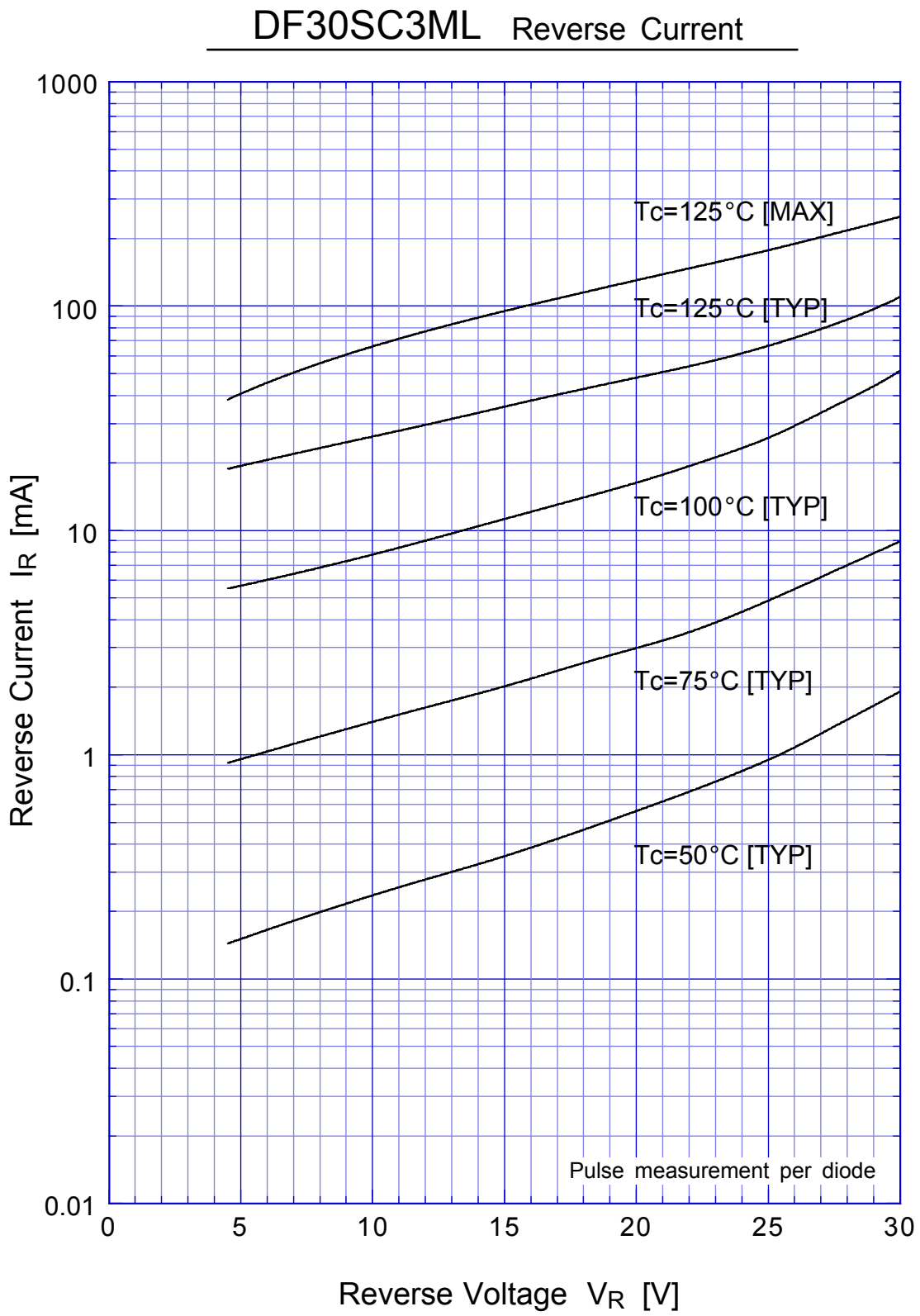
●Electrical Characteristics (If not specified Tc=25℃)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=12.5A, Pulse measurement, Rating of per diode	Max.0.45	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement, Rating of per diode	Max.10	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V, Rating of per diode	Typ.820	pF
Thermal Resistance	θjc	junction to case	Max.1.6	℃/W

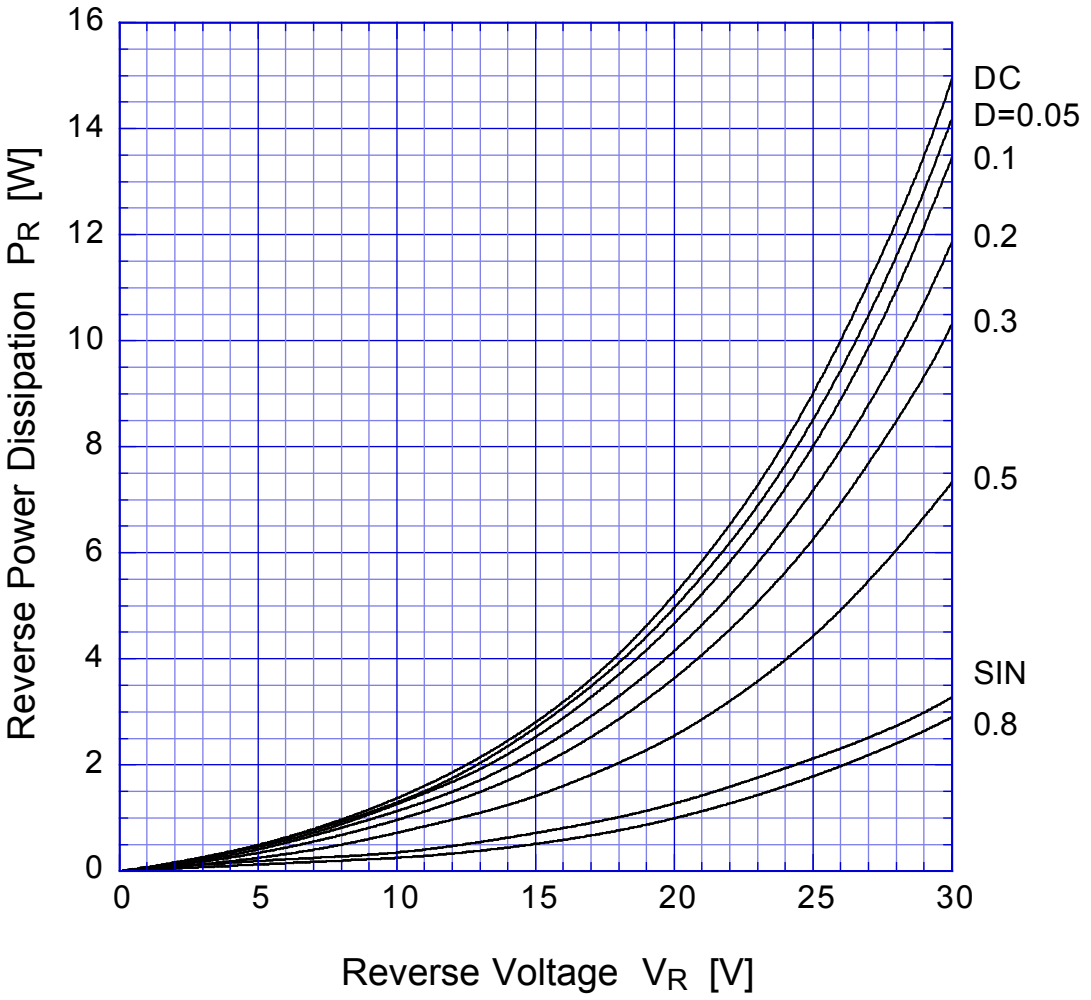
DF30SC3ML Forward Voltage

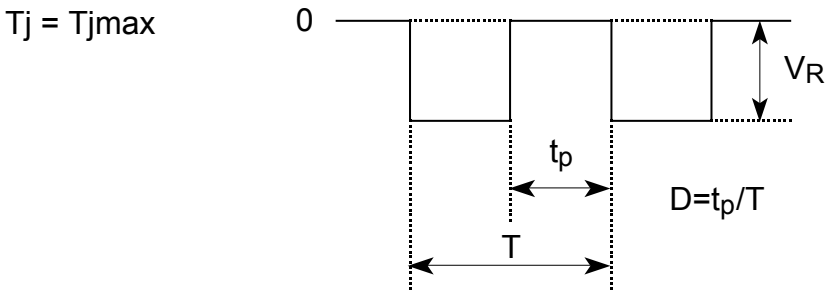



DF30SC3ML Junction Capacitance
10000
1000
100
0.1
1
10
Junction Capacitance Cj [pF]
Reverse Voltage VR [V]
f=1MHz
Tc=25°C
TYP
per diode

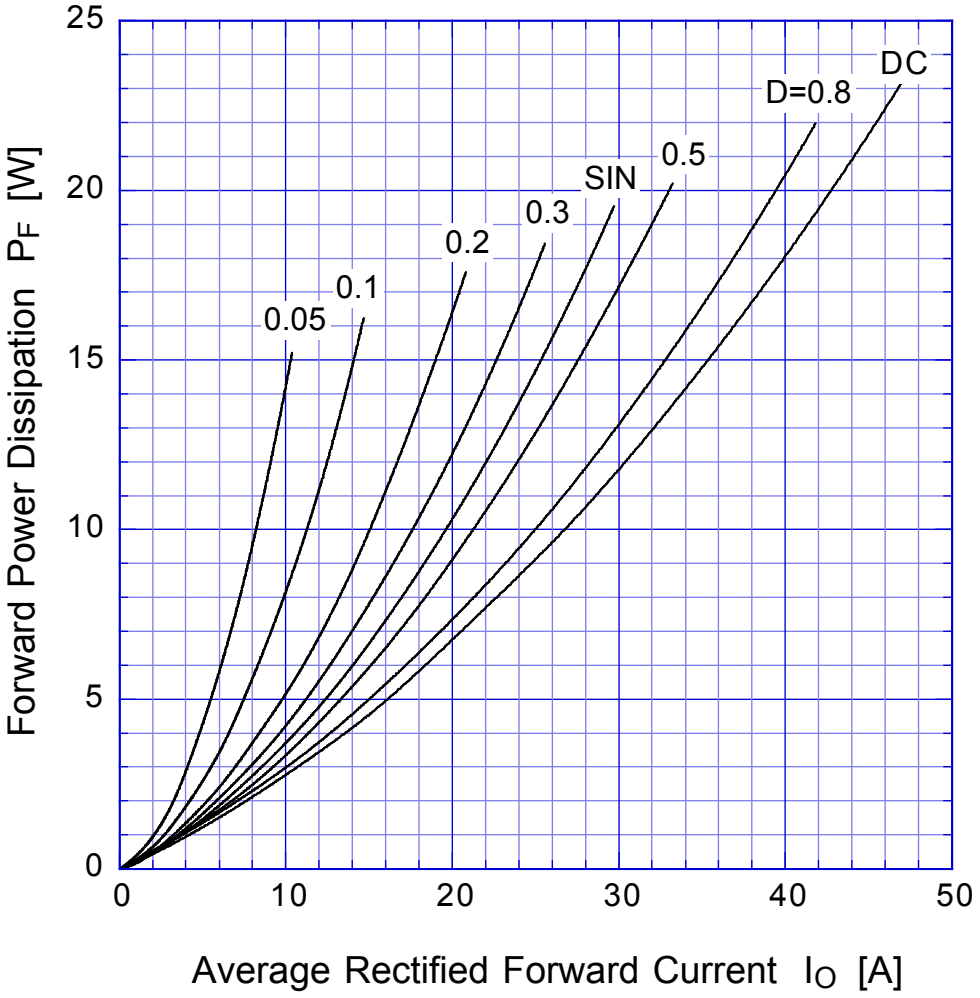

DF30SC3ML Reverse Current
1000
100
10
1
0.1
0.01
0
5
10
15
20
25
30
Tc=125°C [MAX]
Tc=125°C [TYP]
Tc=100°C [TYP]
Tc=75°C [TYP]
Tc=50°C [TYP]
Pulse measurement per diode
Reverse Current IR [mA]
Reverse Voltage VR [V]

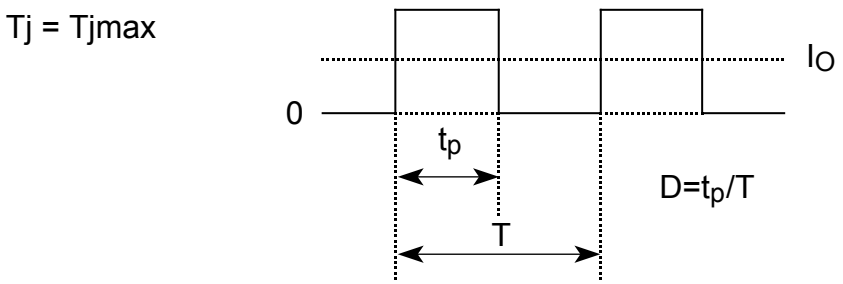
DF30SC3ML Reverse Power Dissipation



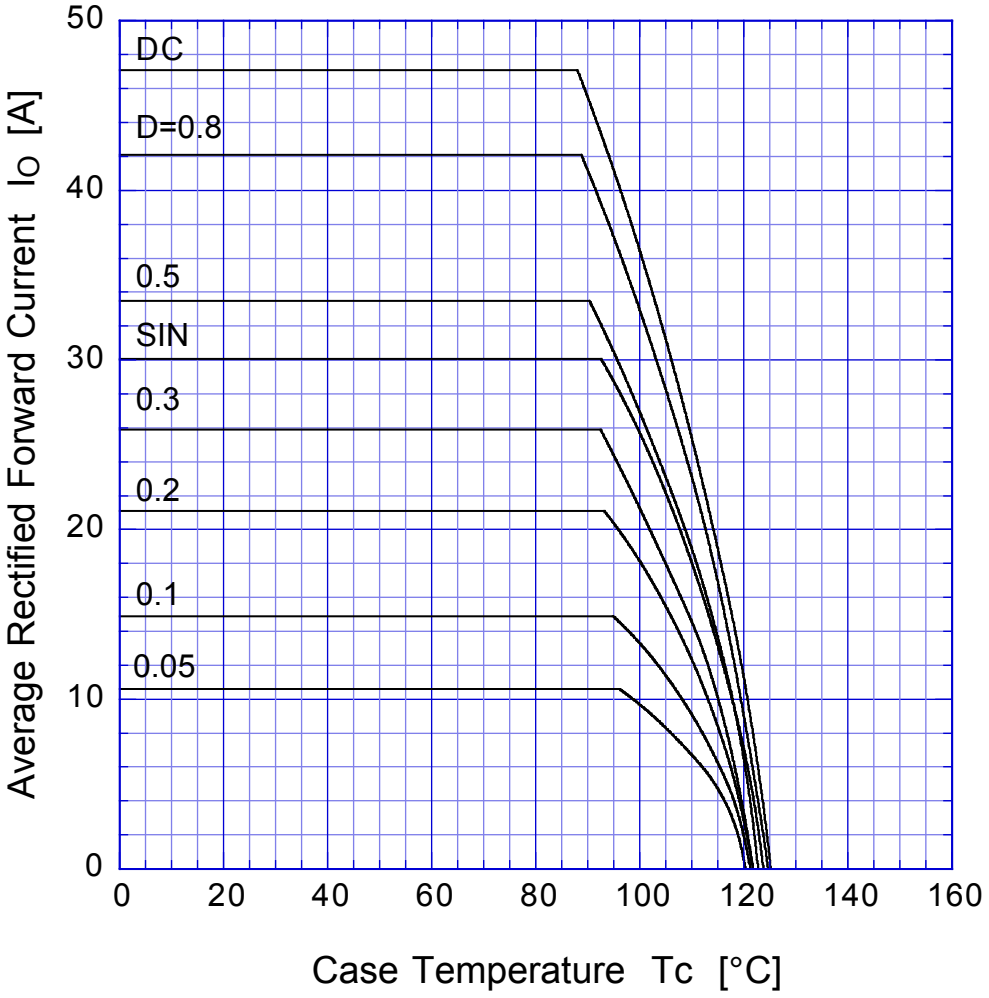


DF30SC3ML Forward Power Dissipation

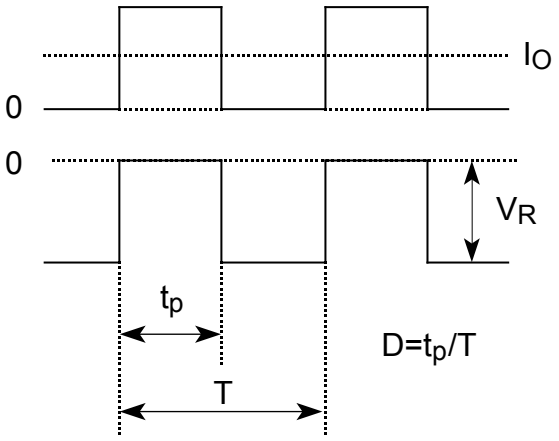




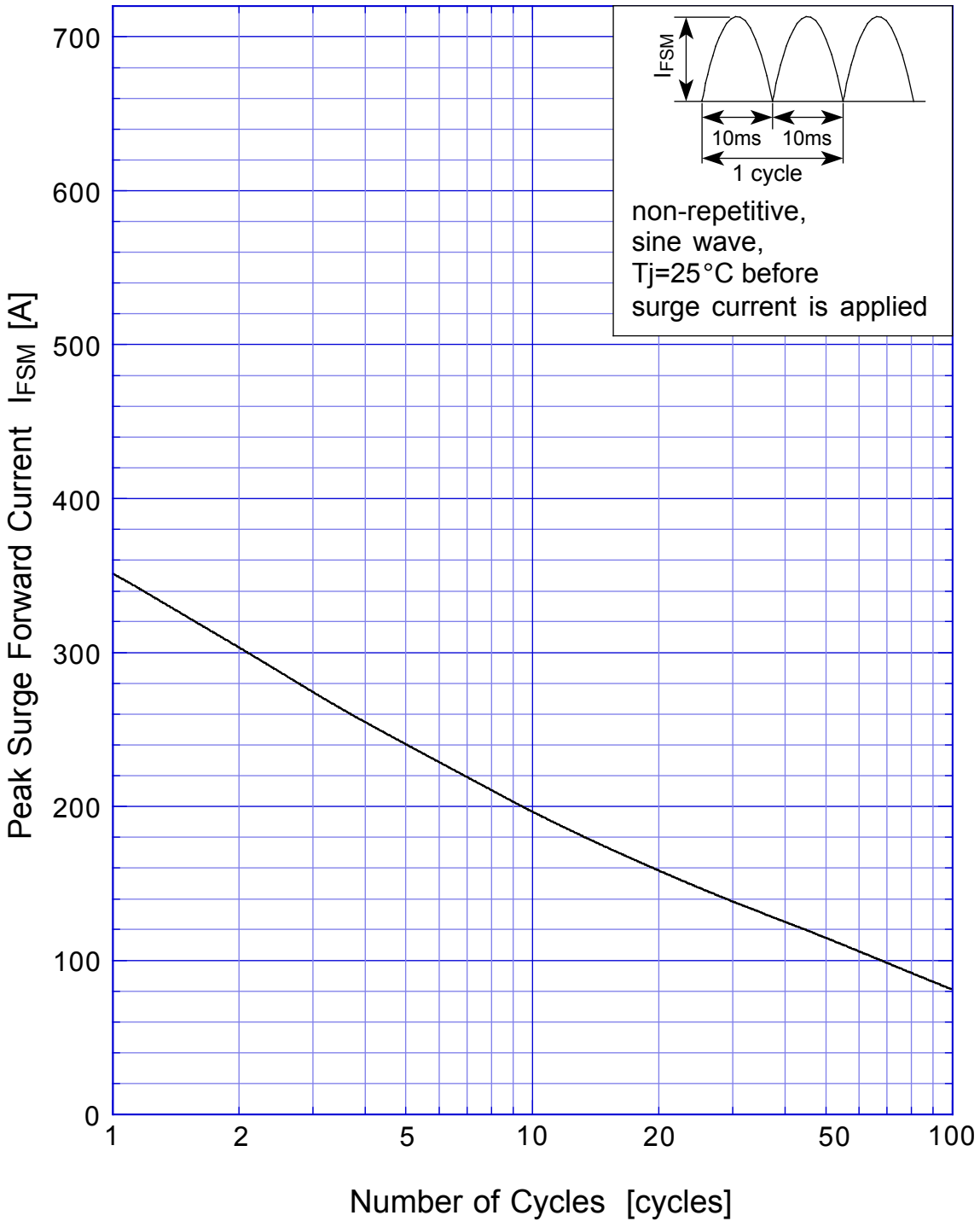
DF30SC3ML Derating Curve



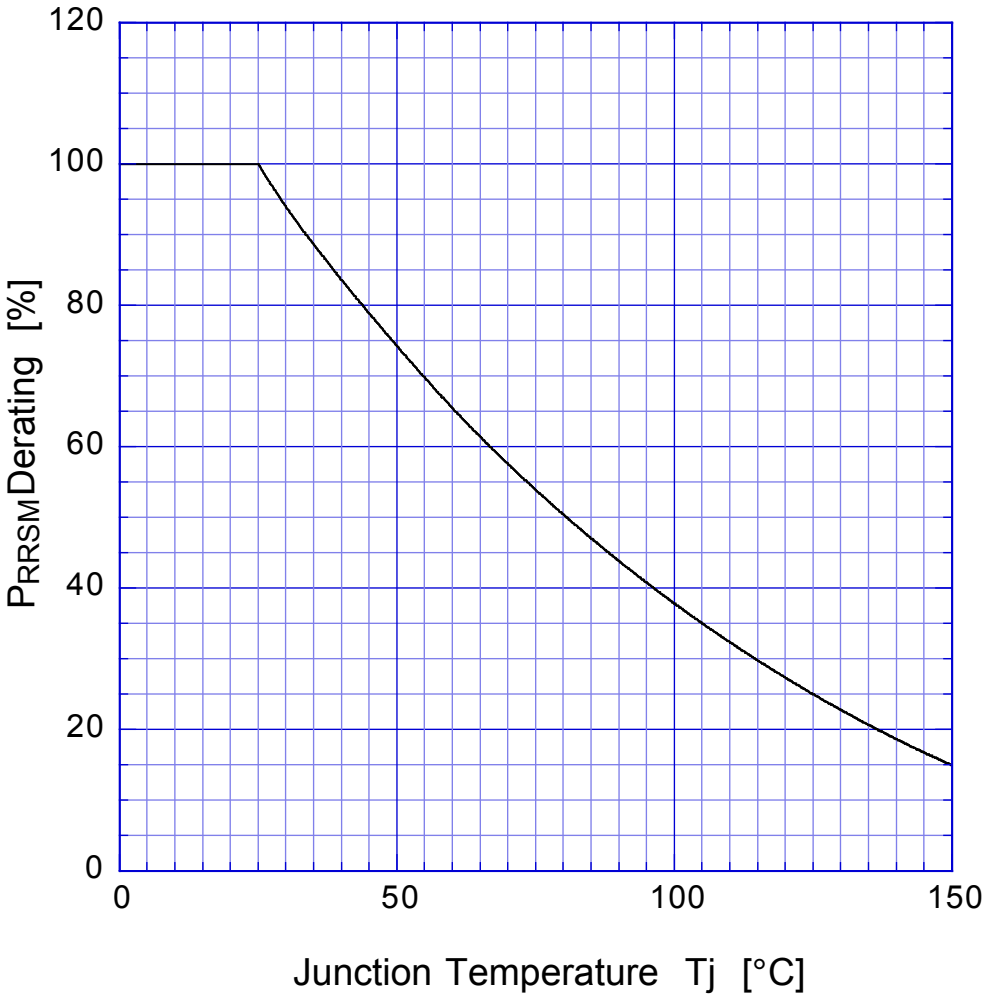
$V_R = V_{RM}/2$

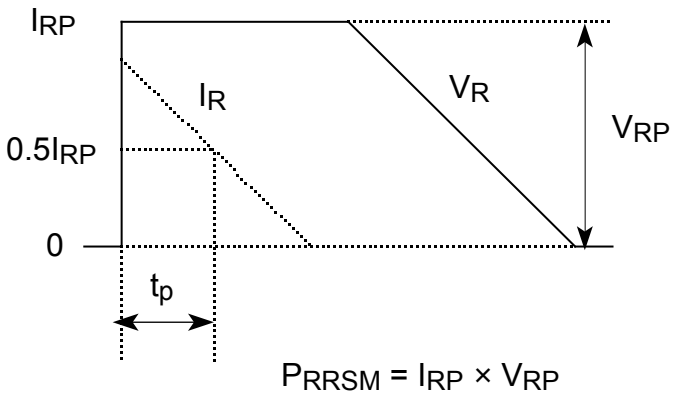


DF30SC3ML Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability