

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

### S20SC9M

**90V 20A**

#### FEATURES

T<sub>j</sub>150

P<sub>RRSM</sub> avalanche guaranteed

Small j<sub>c</sub>

High current capacity

#### APPLICATION

Switching power supply

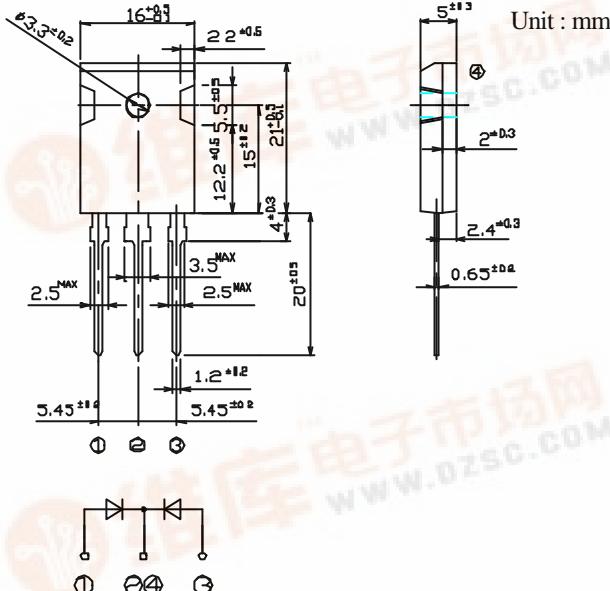
DC/DC converter

Home Appliances, Office Equipment

Telecommunication

#### OUTLINE DIMENSIONS

Case : MTO-3P



#### RATINGS

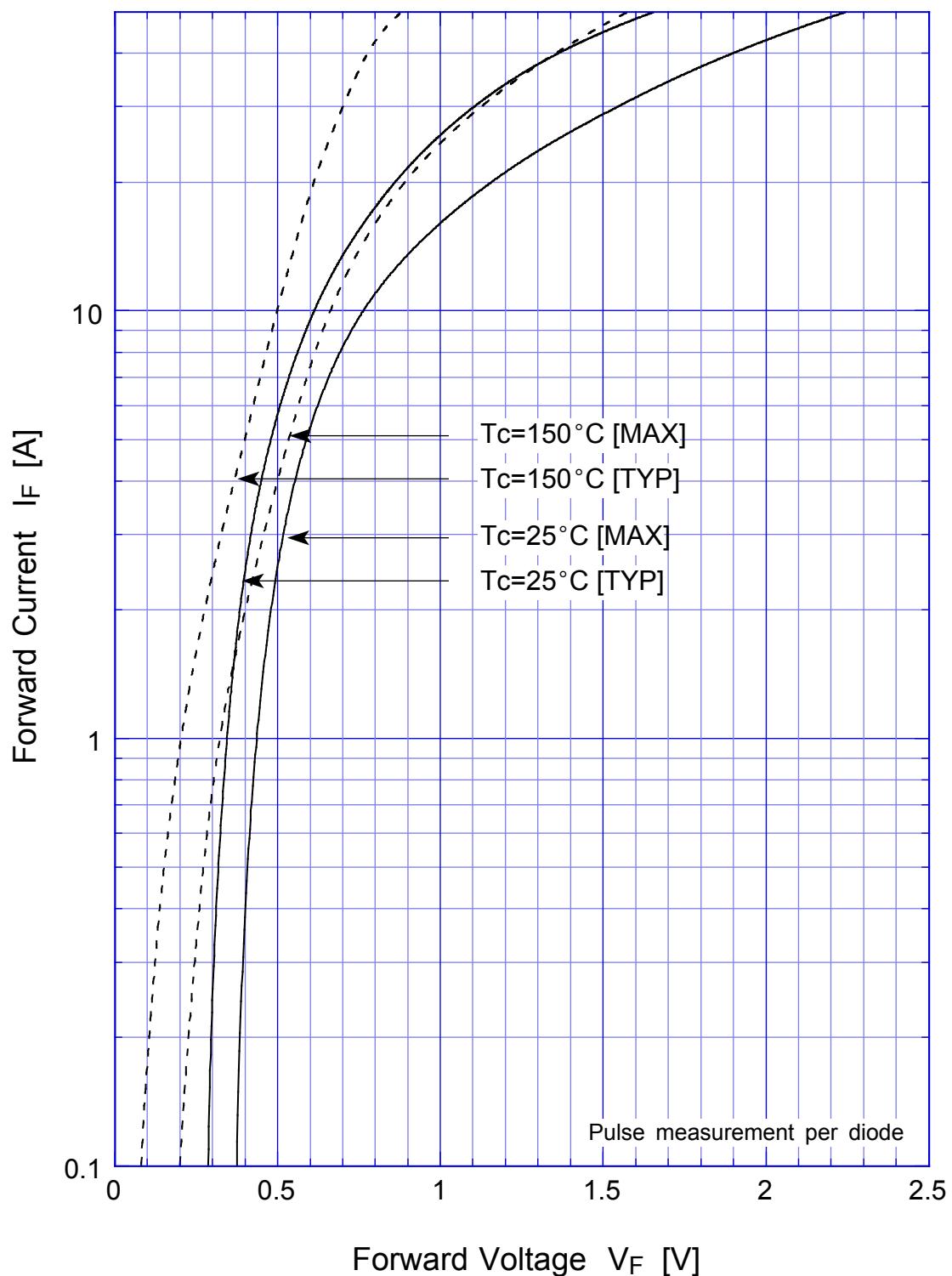
Absolute Maximum Ratings (If not specified T<sub>c</sub>=25 )

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T <sub>stg</sub>		-40 ~ 150	
Operating Junction Temperature	T <sub>j</sub>		150	
Maximum Reverse Voltage	V <sub>RM</sub>		90	V
Repetitive Peak Surge Reverse Voltage	V <sub>RRSM</sub>	Pulse width 0.5ms, duty 1/40	100	V
Average Rectified Forward Current	I <sub>o</sub>	50Hz sine wave, R-load, Rating for each diode I <sub>o</sub> /2, T <sub>c</sub> =125	20	A
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, T <sub>j</sub> =25	200	A
Repetitive Peak Surge Reverse Power	P <sub>RRSM</sub>	Pulse width 10 μs, Rating of per diode, T <sub>j</sub> =25	660	W
Mounting Torque	T <sub>OR</sub>	(Recommended torque 0.5N·m)	0.8	N·m

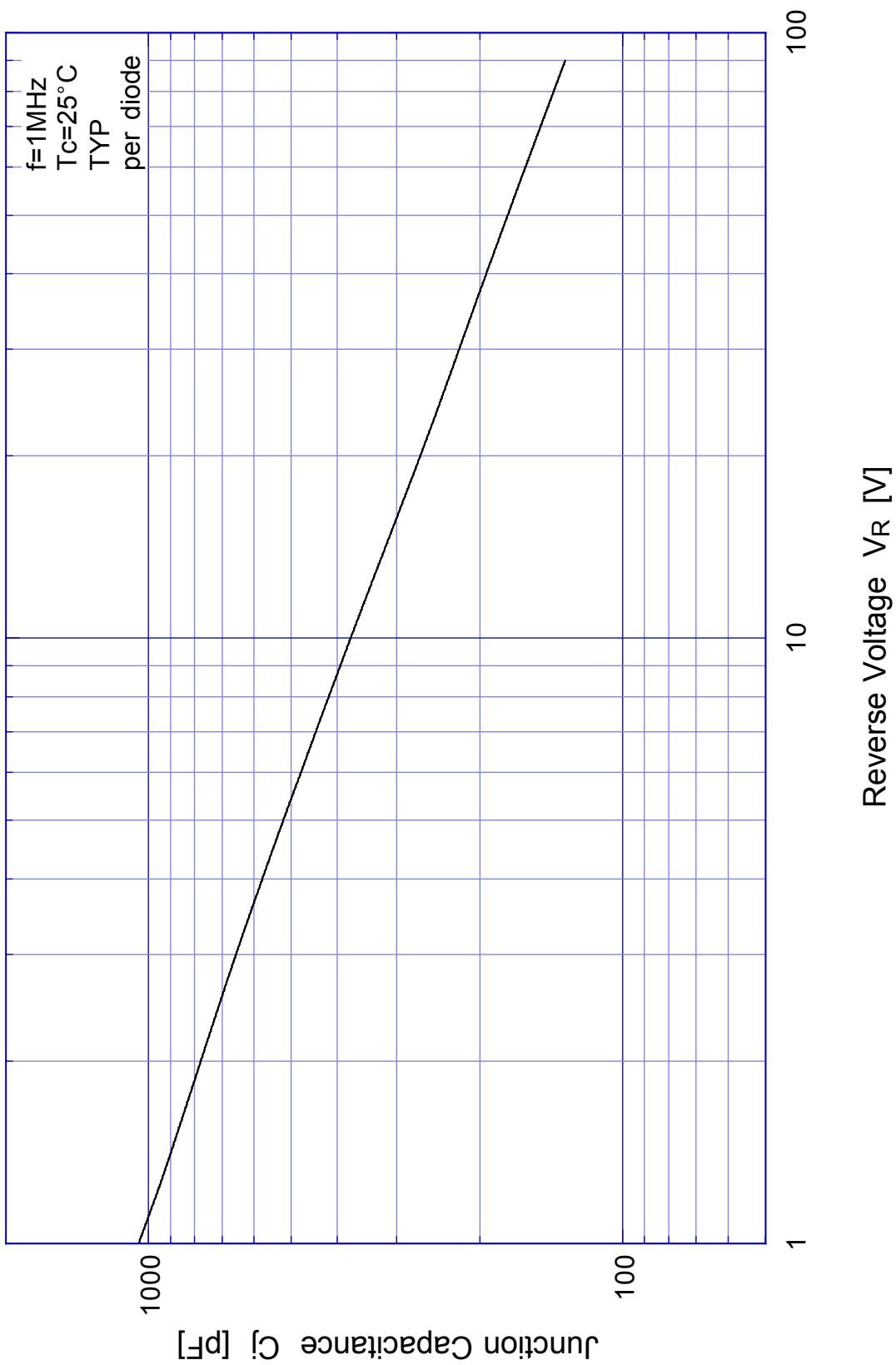
Electrical Characteristics (If not specified T<sub>c</sub>=25 )

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =10A, Pulse measurement, Rating of per diode	Max.0.75	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement, Rating of per diode	Max.10	mA
Junction Capacitance	C <sub>j</sub>	f=1MHz, V <sub>R</sub> =10V, Rating of per diode	Typ.370	pF
Thermal Resistance	j <sub>c</sub>	junction to case	Max.1.0	/W

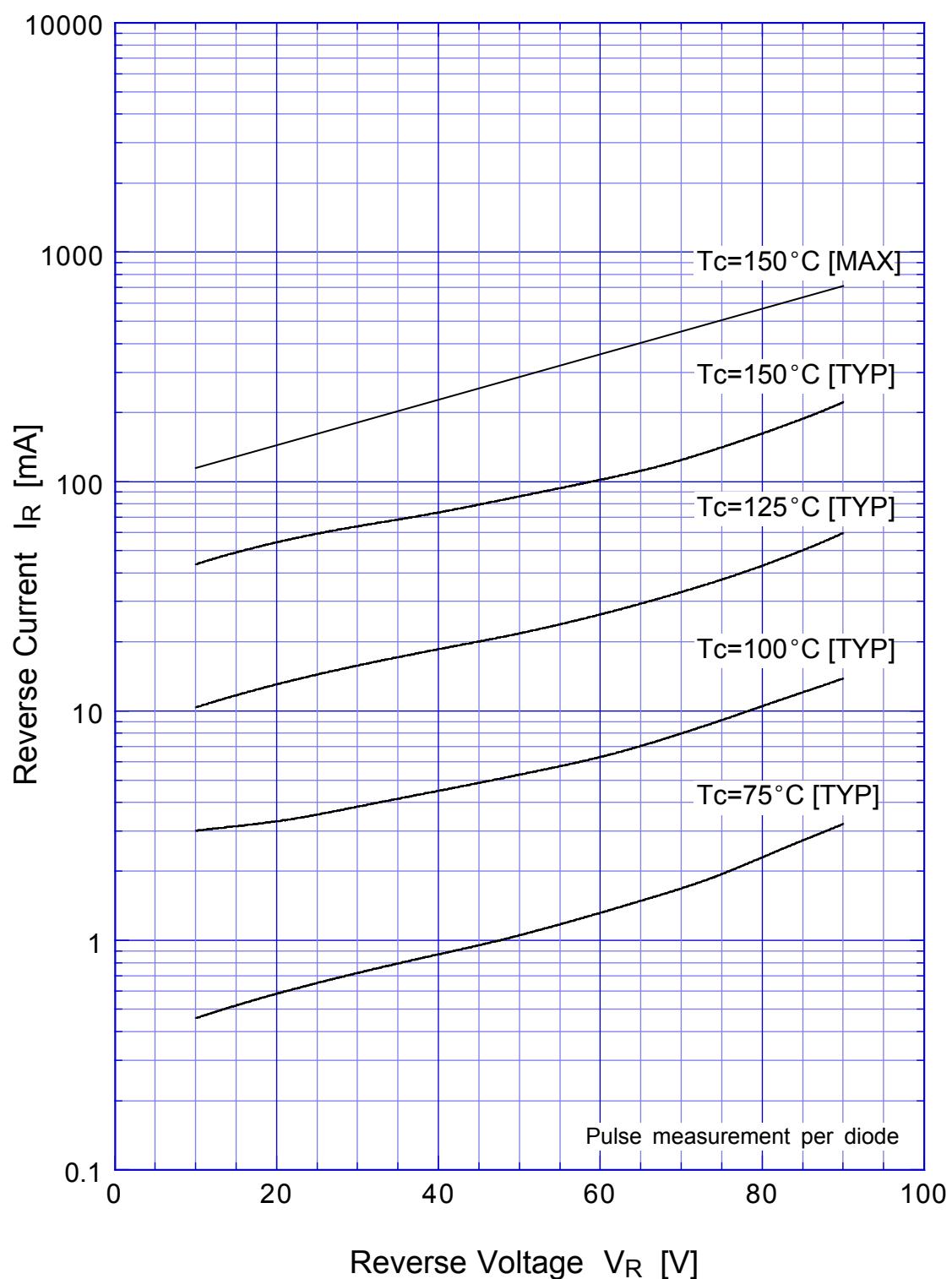
## S20SC9M      Forward Voltage



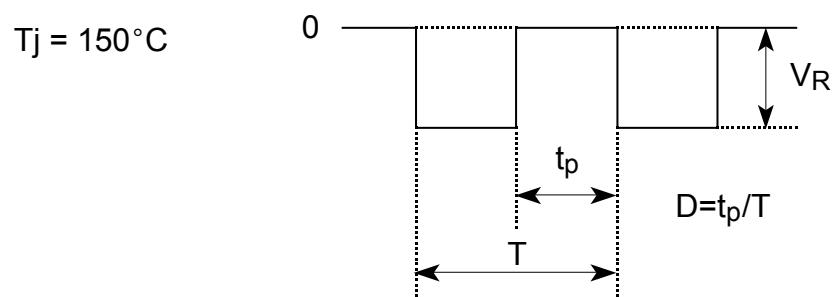
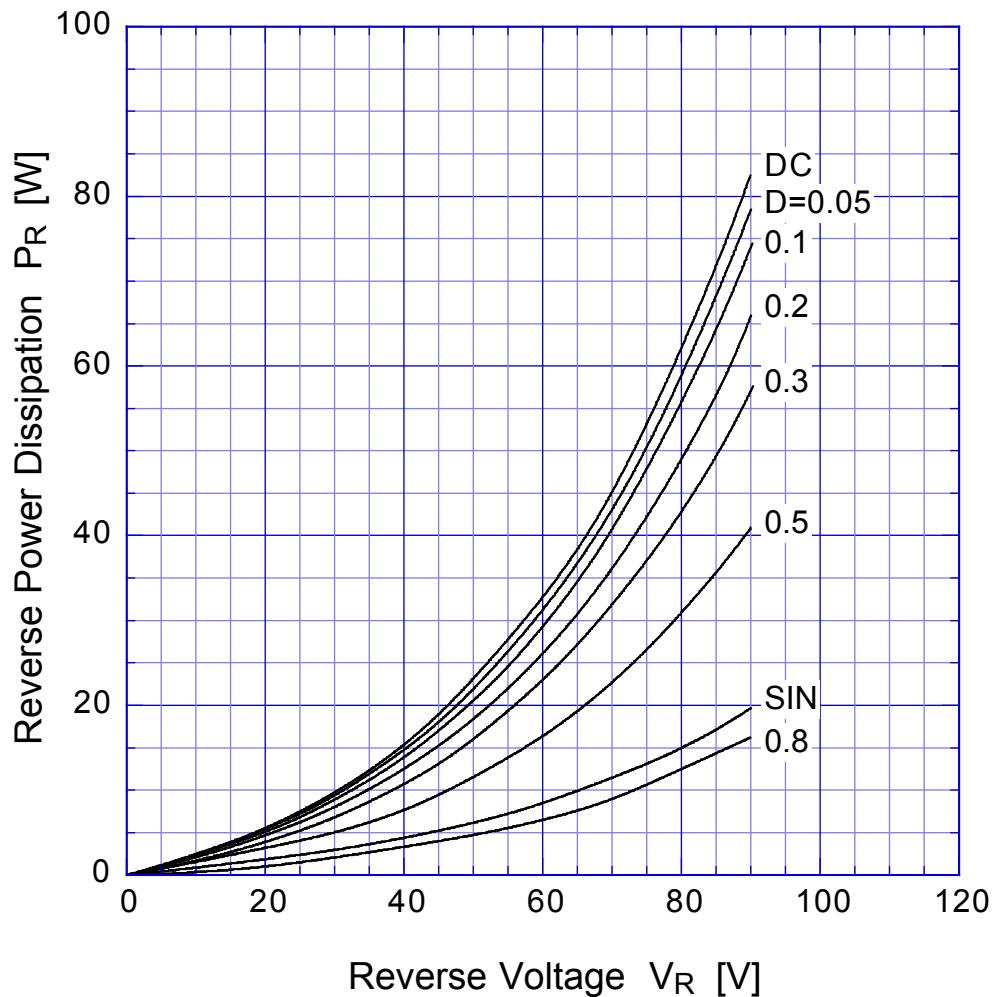
**S20SC9M** Junction Capacitance



## S20SC9M Reverse Current

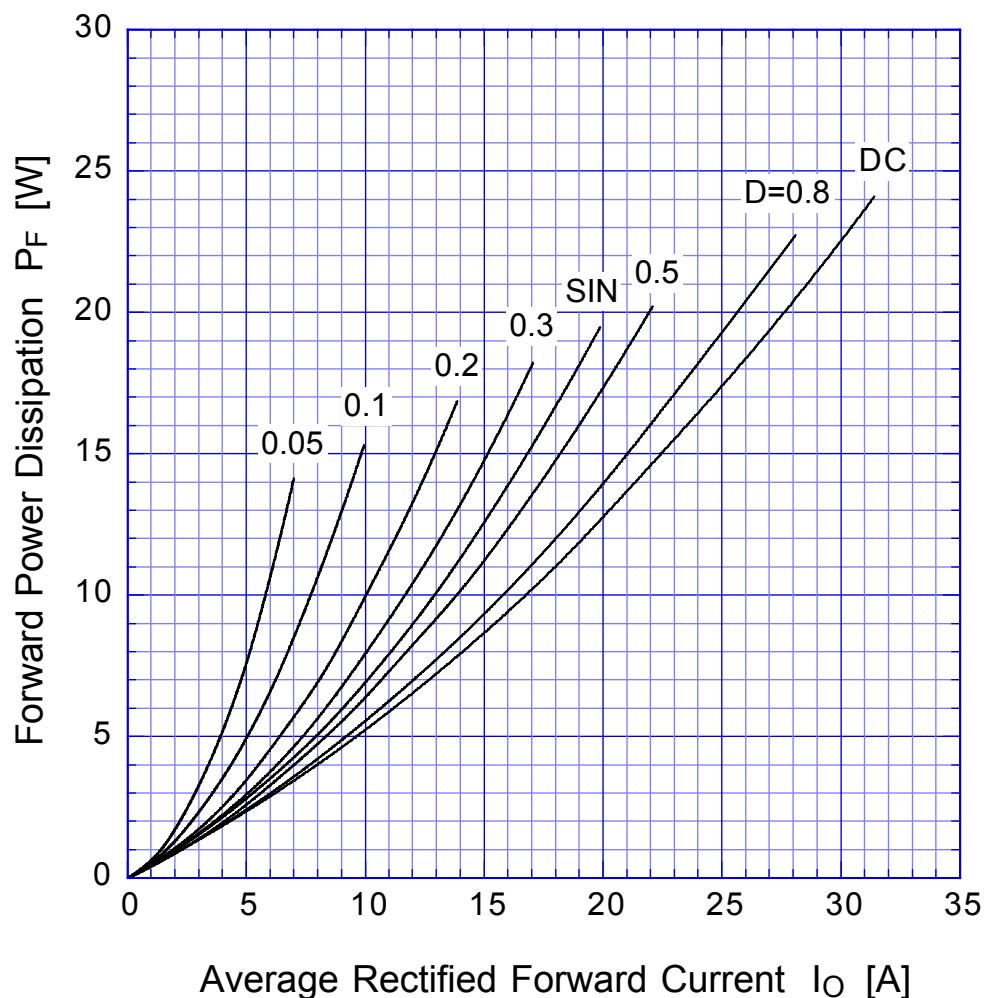


## S20SC9M Reverse Power Dissipation

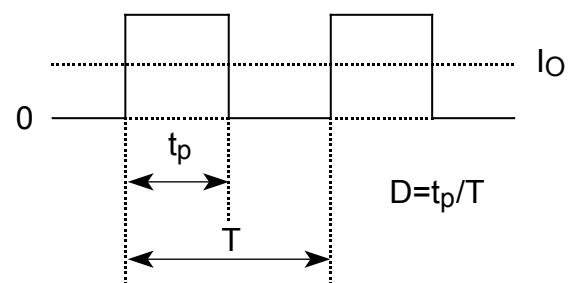


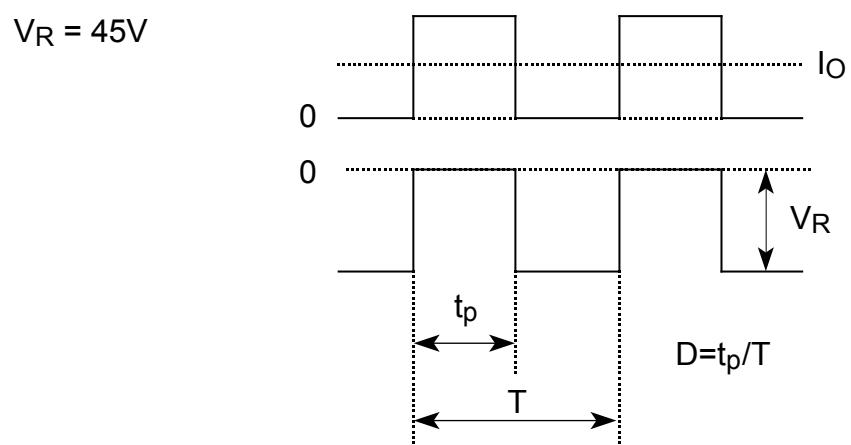
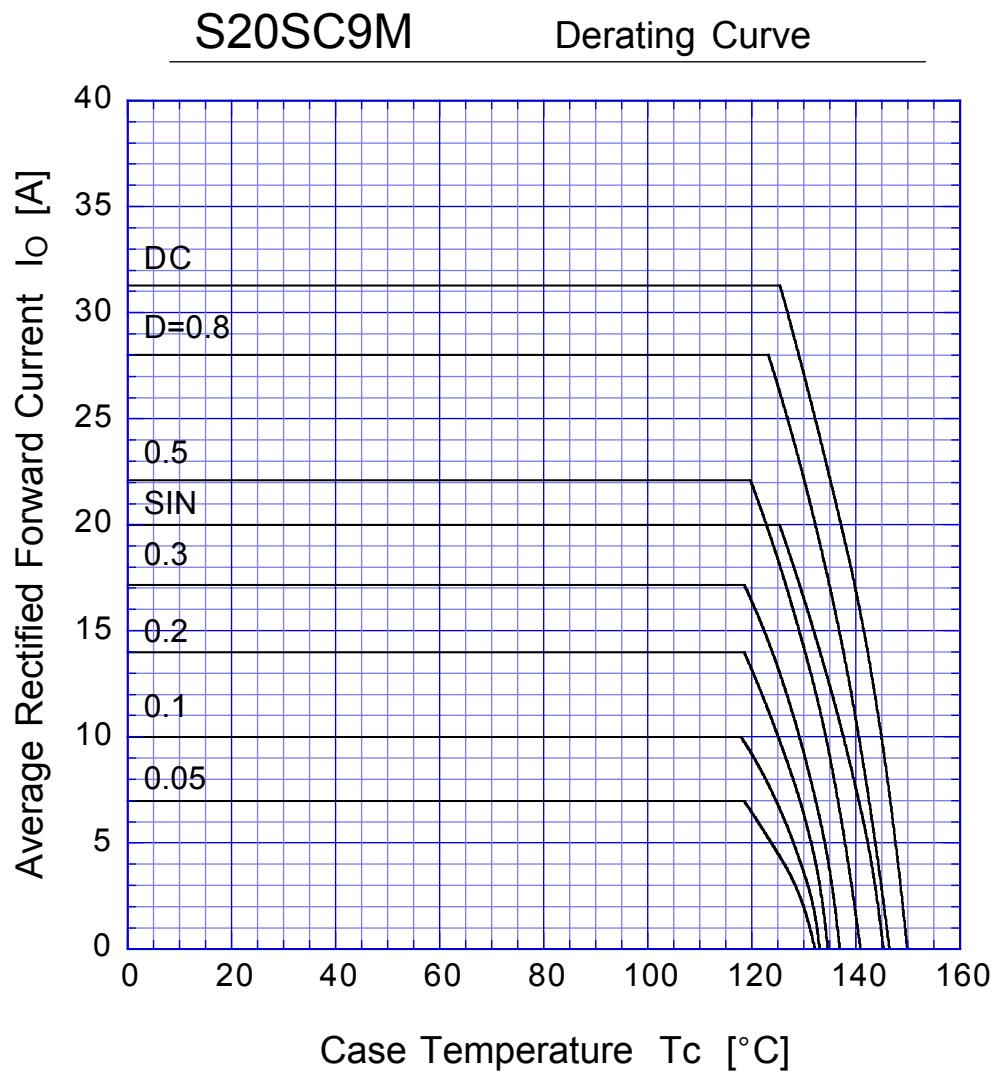
S20SC9M

Forward Power Dissipation



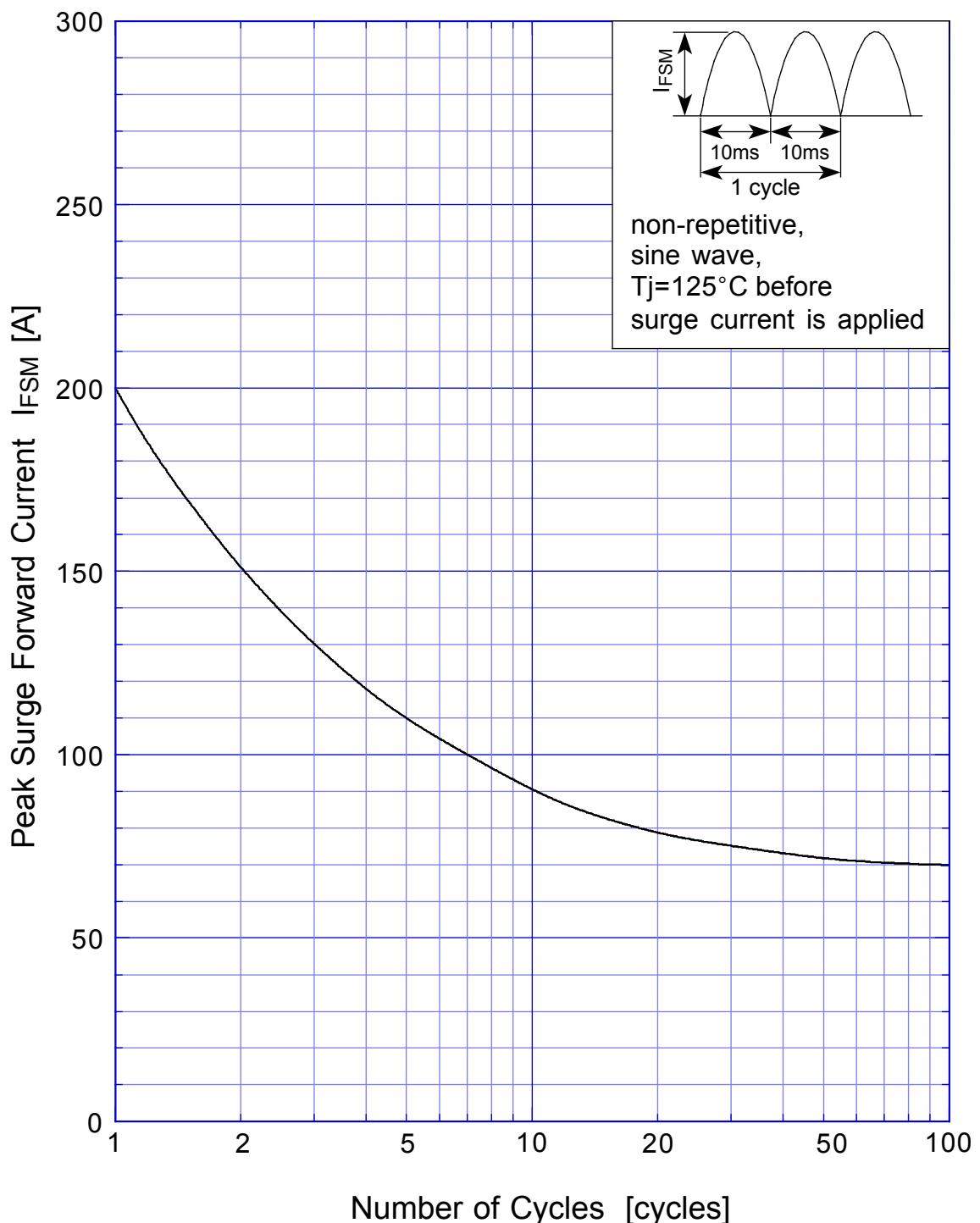
$T_j = 150^\circ\text{C}$



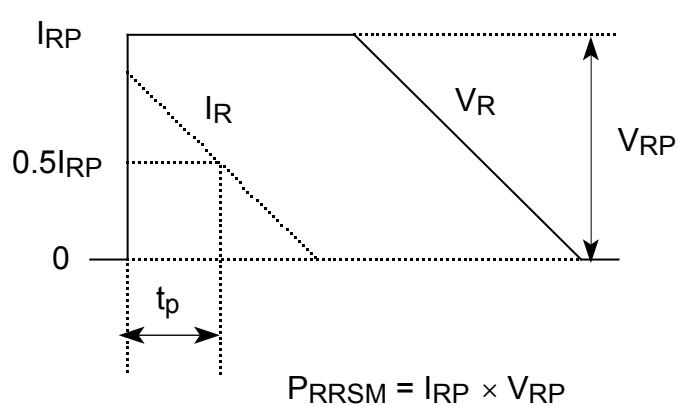
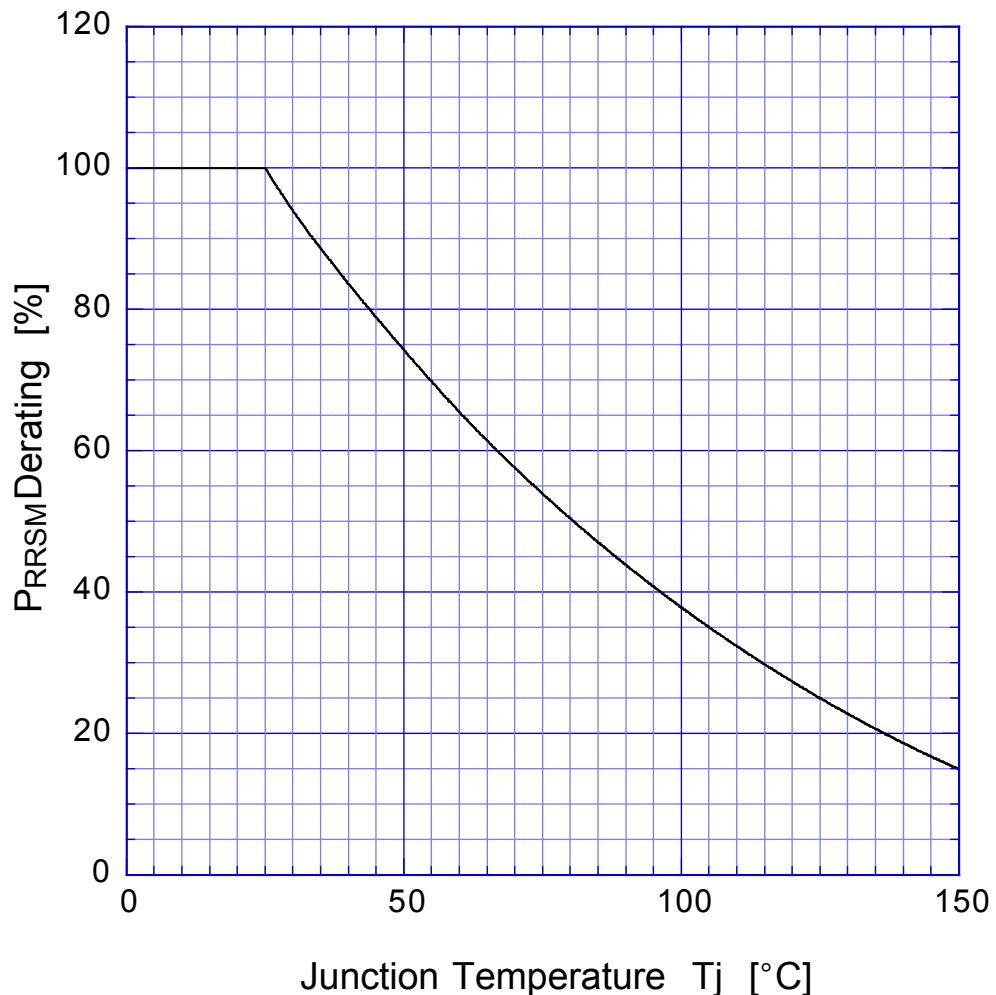


# S20SC9M

## Peak Surge Forward Capability



## SBD Repetitive Surge Reverse Power Derating Curve



## SBD      Repetitive Surge Reverse Power Capability

