

RoHS Compliant Product  
 A suffix of "-C" specifies halogen & lead-free

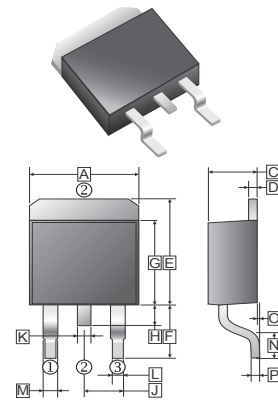
**FEATURES**

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

**MECHANICAL DATA**

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 1.6 grams

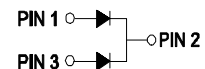
**TO-263(D<sup>2</sup>-PACK)**



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	9.50	10.50	H	1.50	REF.
C	4.30	4.80	J	2.54	TYP.
D	1.17	1.45	K	-	-
E	9.50	10.50	L	0.71	1.00
F	4.33	5.93	M	1.17	1.47
G	8.50	9.00	P	0.31	0.53

**PACKAGE INFORMATION**

Package	MPQ	Leader Size
TO-263	0.8K	13 inch



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

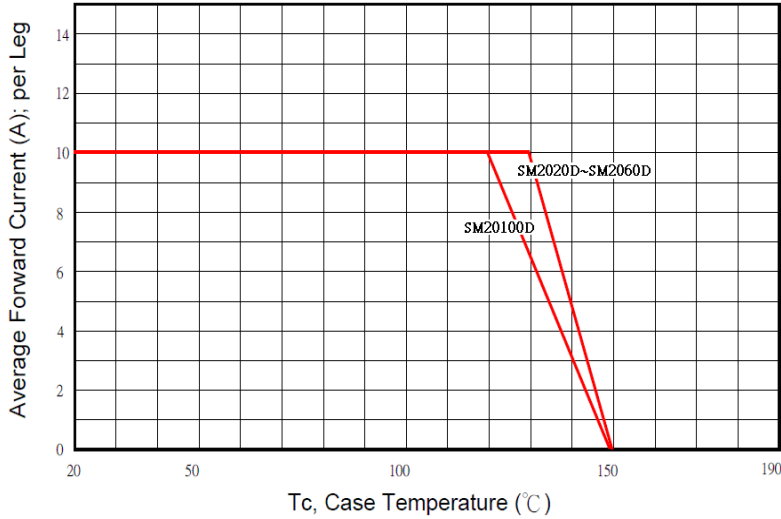
Parameter	Symbol	Part Number				Unit
		SM2020D	SM2040D	SM2060D	SM20100D	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	100	V
Maximum RMS Voltage	$V_{RMS}$	20	40	60	100	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	100	V
Maximum Average Forward Rectified Current	$I_F$	20				A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	200				A
Maximum Instantaneous Forward Voltage @ 10A	$V_F$	0.57		0.68	0.85	V
Maximum Reverse Current at Rated VR Per Diode	$T_A=25^{\circ}C$	$I_R$	0.3	0.15	0.1	mA
	$T_A=100^{\circ}C$		45	22.5	7.5	
Typical Junction Capacitance <sup>1</sup>	$C_J$	700		460	280	pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta Jc}$	3				°C / W
Operating & Storage Temperature	$T_J, T_{STG}$	-55~150, -65~175				°C

Notes:

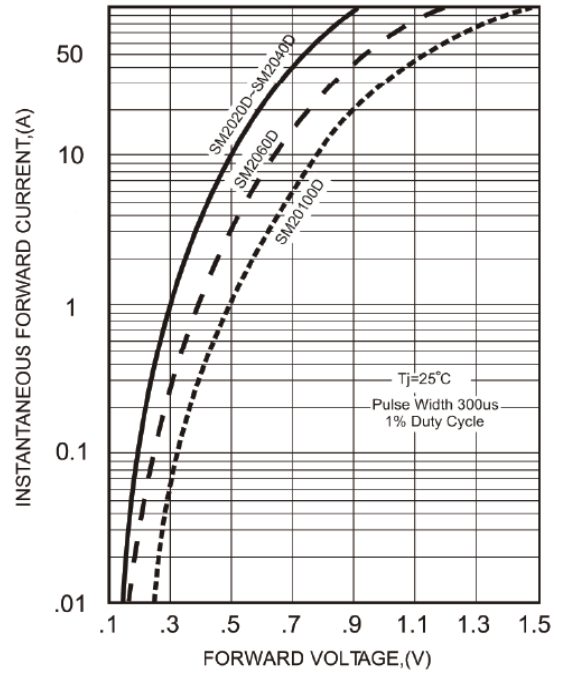
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

**RATINGS AND CHARACTERISTIC CURVES**

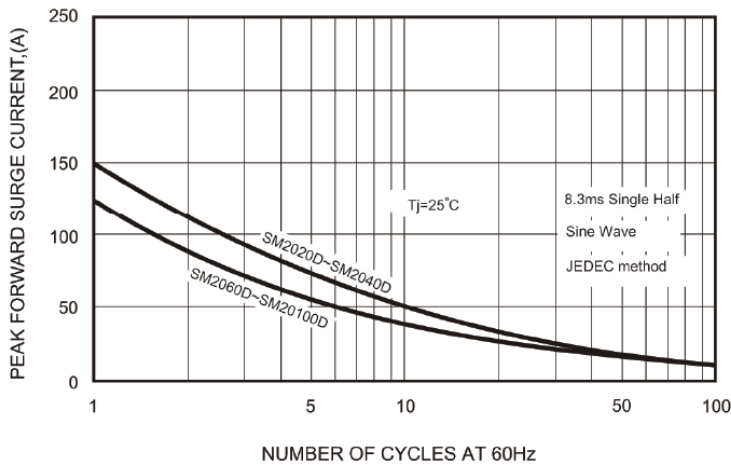
Typical Forward Current Derating Curve



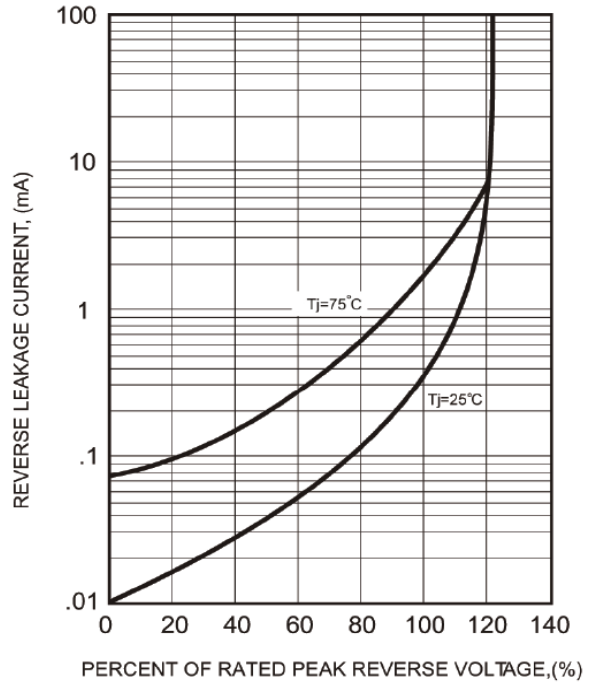
TYPICAL FORWARD CHARACTERISTICS



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL REVERSE CHARACTERISTICS



TYPICAL JUNCTION CAPACITANCE

