

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

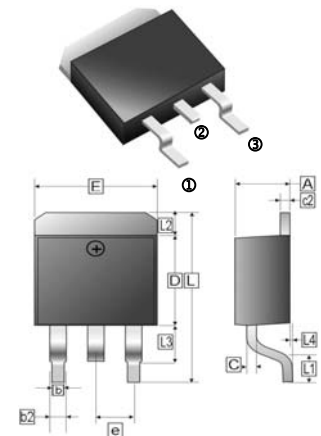
MECHANICAL DATA

- 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

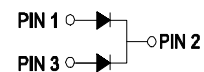
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

TO-263(D²-PACK)



REF.	Min.	Max.	REF.	Min.	Max.
A	4.00	4.85	c2	1.10	1.65
b	0.51	1.00	b2	1.34	REF
L4	0.00	0.30	D	8.0	9.65
C	0.30	0.74	e	2.54	REF
L3	1.50	REF	L	14.6	15.88
L1	1.78	2.79	L2	1.27	REF
E	9.60	10.67			



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%.)

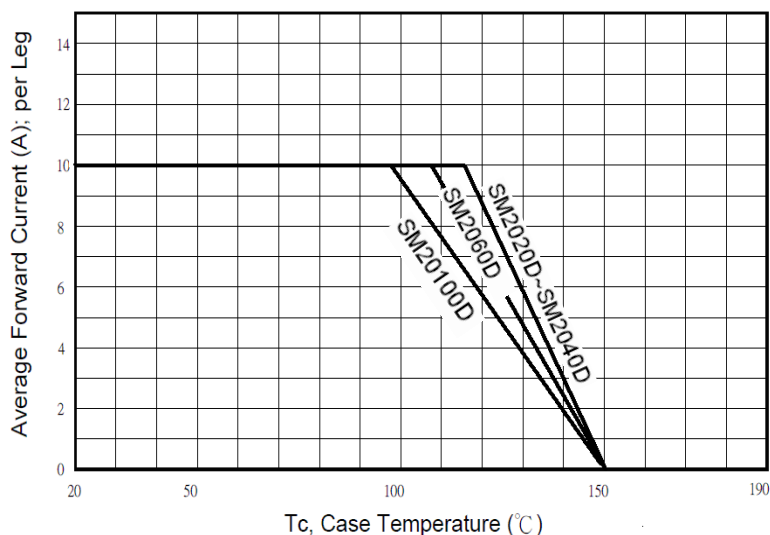
Parameter	Symbol	Part Number				Unit
		SM2020D	SM2040D	SM2060D	SM20100D	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	100	V
Maximum RMS Voltage	V_{RMS}	20	40	60	100	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	100	V
Maximum Average Forward Rectified Current	I_F	20				A
Peak Forward Surge 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 ¹	C_J	700		460	280	pF
Typical Thermal Resistance ²	$R_{\theta JC}$	6				°C / W
Operating & Storage Temperature	T_J, T_{STG}	-55~150				°C

Notes:

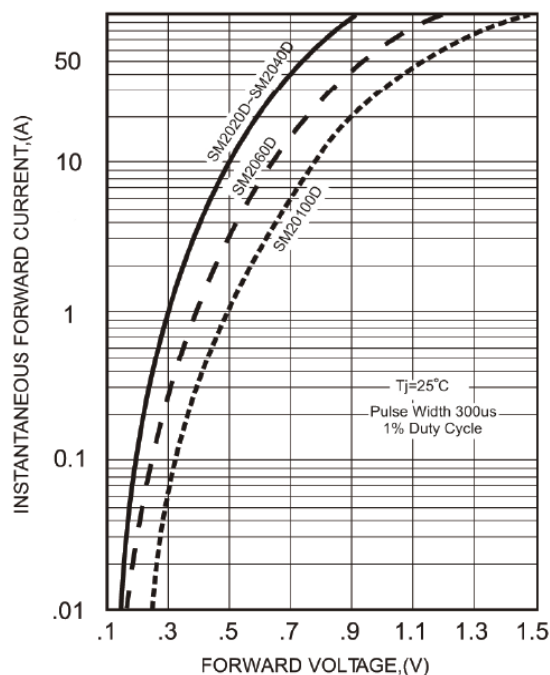
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case. FR4 Board Heat sink size: 10*10*0.2mm.

RATINGS AND CHARACTERISTIC CURVES

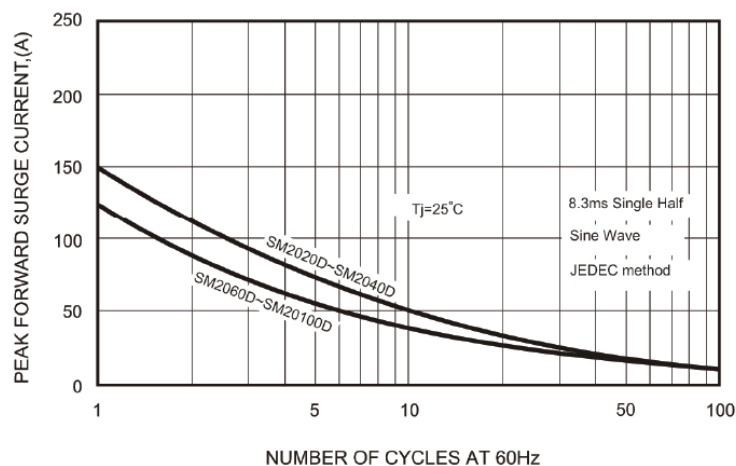
Typical Forward Current Derating Curve



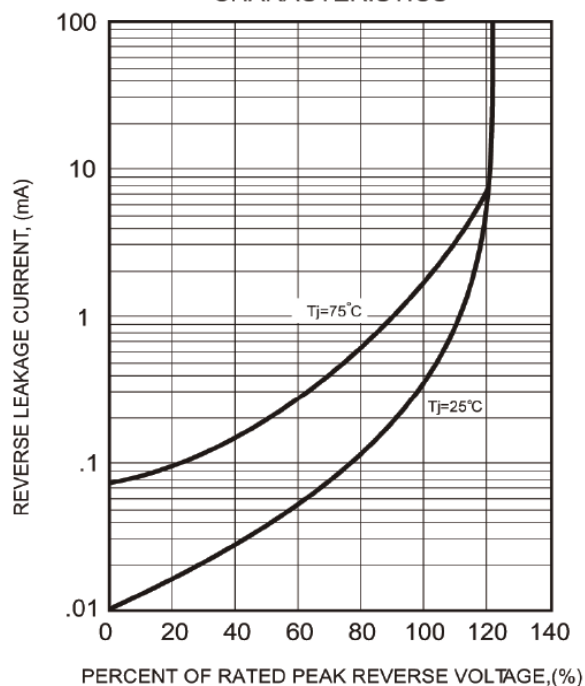
TYPICAL FORWARD CHARACTERISTICS



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL REVERSE CHARACTERISTICS



TYPICAL JUNCTION CAPACITANCE

