

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

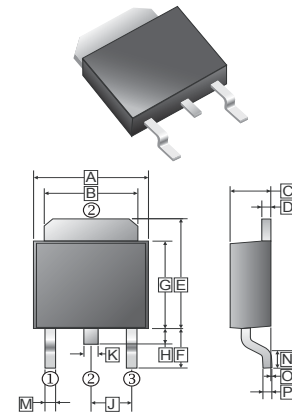
MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208
- Polarity: As Marked
- Mounting position: Any
- Weight: 0.7 grams

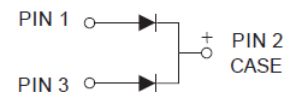
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

TO-252 (D-Pack)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.90	J	2.30	REF.
B	4.95	5.50	K	0.64	1.14
C	2.10	2.50	M	0.50	1.14
D	0.43	0.9	N	1.3	1.8
E	6.0	7.5	O	0	0.13
F	2.80	REF.	P	0.58	REF.
G	5.40	6.40			
H	0.60	1.20			



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
		SM1020D1	SM1040D1	SM1060D1	SM10100D1	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	100	V
Working Peak Reverse Voltage	V_{RSM}	20	40	60	100	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	100	V
Maximum Average Forward Rectified Current	I_F	10				A
Peak Forward Surge Current, @8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125				A
Maximum Instantaneous Forward Voltage @5A	V_F	0.55		0.65	0.83	V
Maximum DC Reverse Current at Rated DC Blocking Voltage ³	$T_A=25^\circ\text{C}$	0.3		0.15	0.05	mA
	$T_A=100^\circ\text{C}$	45		22.5	7.5	
Typical Junction Capacitance ¹	C_J	250				pF
Typical Thermal Resistance ²	$R_{\theta Jc}$	10				°C/W
Operating Temperature	$T_{J,}$	-55~125			-55~150	°C
Storage Temperature	T_{STG}	-65~175				°C

Note:

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.
3. Pulse test: 300us pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES

Typical Forward Current Derating Curve

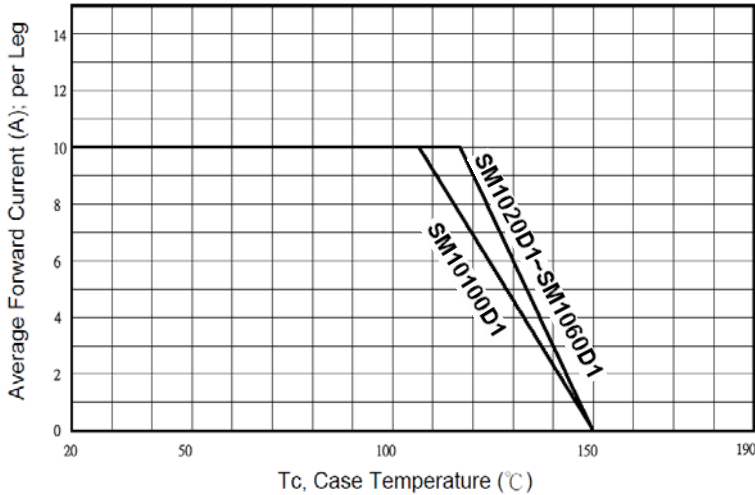


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

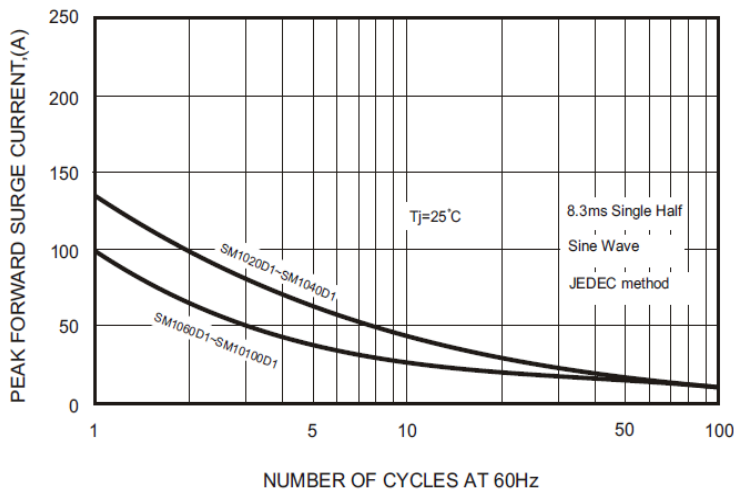


FIG.4-TYPICAL JUNCTION CAPACITANCE

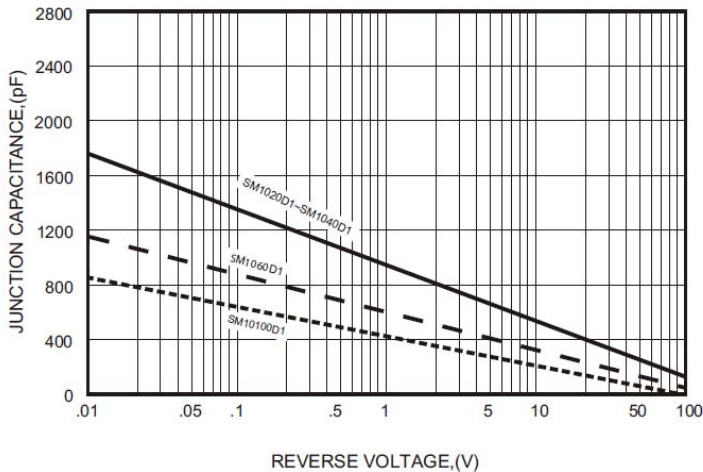


FIG.2-TYPICAL FORWARD CHARACTERISTICS

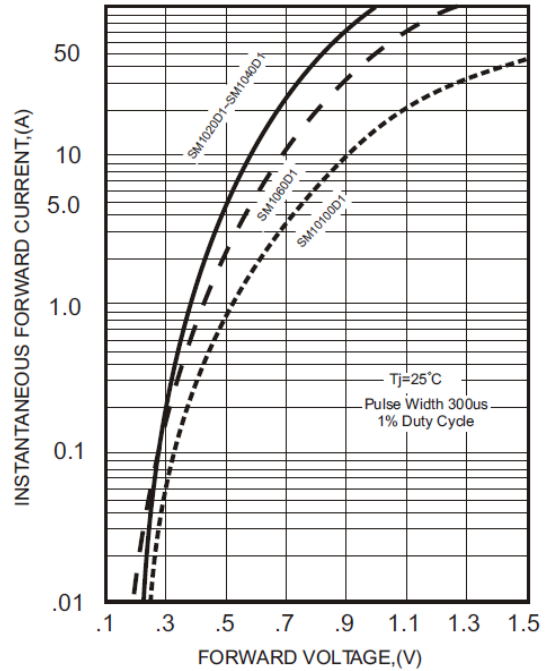


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

