

RoHS Compliant Product

A suffix of "-C" specifies halogen-free

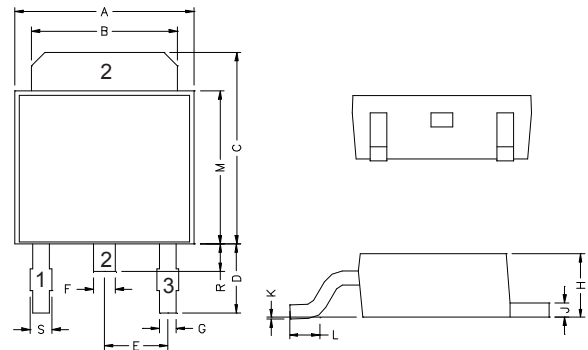
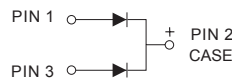
TO-252

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.40	6.80	G	0.50	0.70
B	5.20	5.50	H	2.20	2.40
C	6.80	7.20	J	0.45	0.55
D	2.20	2.80	K	0	0.15
E	2.30 REF.		L	0.90	1.50
F	0.70	0.90	M	5.40	5.80
S	0.60	0.90	R	0.80	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, derate current by 20%.

TYPE NUMBER	SMF1001D1	SMF1002D1	SMF1003D1	SMF1004D1	SMF1005D1	SMF1006D1	SMF1007D1	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current									
.375"(9.5mm) Lead Length at Ta=55°C (Per Leg 5.0A)								10.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								100	A
Maximum Instantaneous Forward Voltage at 5.0A	1.3				1.5	1.7		V	
Maximum DC Reverse Current Ta=25°C								10	uA
at Rated DC Blocking Voltage Ta=100°C								0.5	mA
Maximum Reverse Recovery Time (Note 1)	150			250		500		nS	
Typical Junction Capacitance (Note 2)								44	pF
Thermal Resistance, Junction to Lead (Note 3)								8	
Thermal Resistance, Junction to Ambient (Note 3)								30	°C/W
Operating and Storage Temperature Range T _J , T _{STG}								-65 ~ +150	°C

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Rating applies when surface mounted on the minimum pad size recommended, PC Board with 8.0 X 8.0mm copper pad.

RATING AND CHARACTERISTIC CURVES (SMF1001D1 THRU SMF1007D1)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

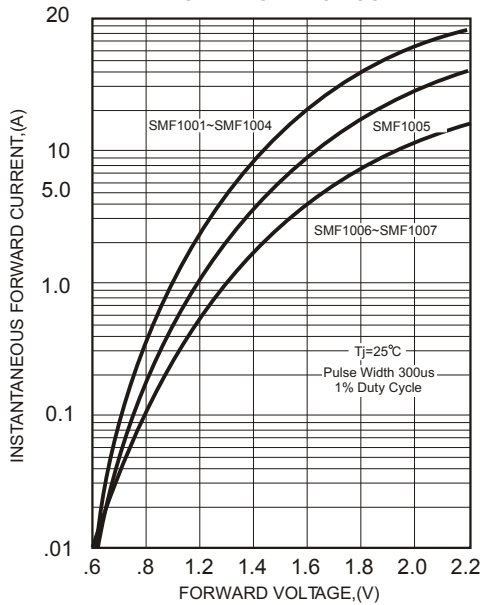


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

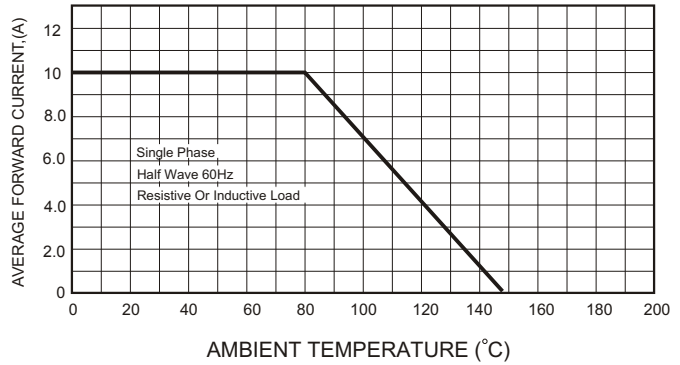


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

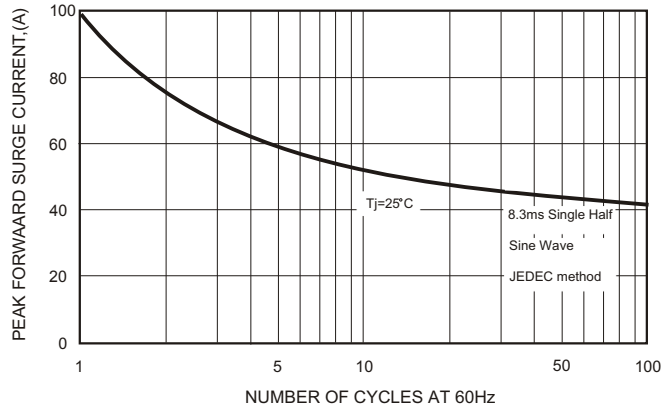
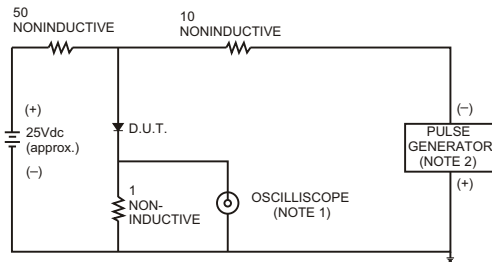


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

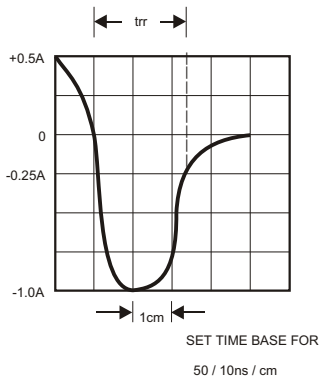


FIG.5-TYPICAL JUNCTION CAPACITANCE

