Elektronische Bauelemente

SMF1001D1 THRU SMF1007D1

VOLTAGE 50V ~ 1000V

10.0AMP Surface Mount Fast Recovery Rectifiers

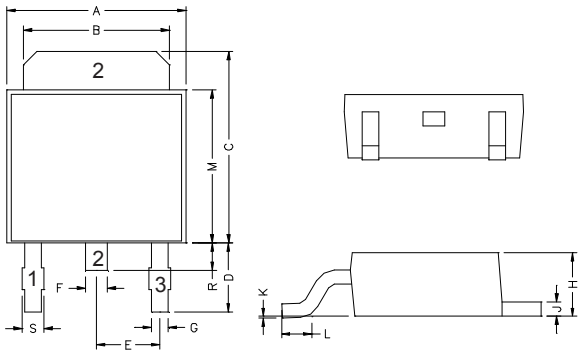
RoHS Compliant Product

A suffix of "-C" specifies halogen-free

TO-252

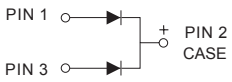
FEATURES

* 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℃ 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℃ (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℃	10							uA
at Rated DC Blocking Voltage Ta=100℃	0.5							mA
Maximum Reverse Recovery Time (Note 1)	150				250	500		nS
Typical Junction Capacitance (Note 2)	44							pF
Thermal Resistance, Juntion to Lead (Note 3)	8							℃/W
Thermal Resistance, Juntion to Ambient (Note 3)	30							℃/W
Operating and Storage Temperature Range T_J, T_{STG}	-65 ~ +150							℃

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.

Elektronische Bauelemente

SMF1001D1 THRU SMF1007D1

VOLTAGE 50V ~ 1000V

10.0AMP Surface Mount Fast Recovery Rectifiers

RATING AND CHARACTERISTIC CURVES (SMF1001D1 THRU SMF1007D1)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

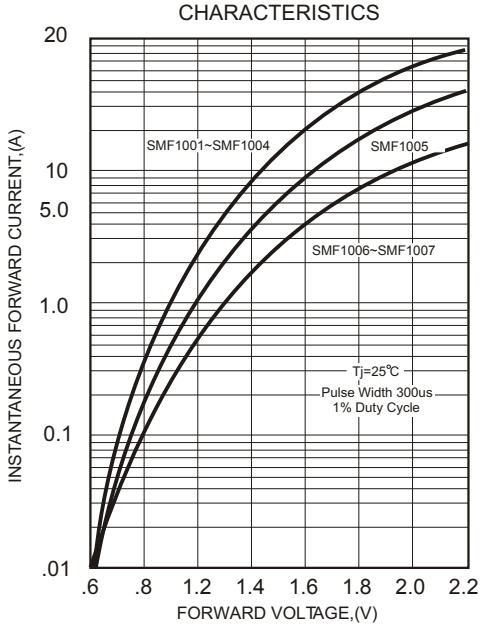


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

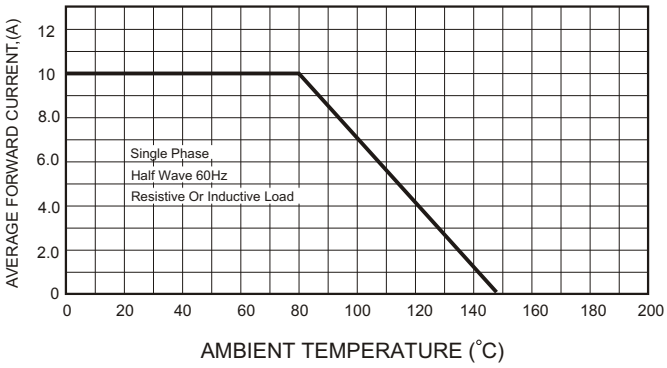
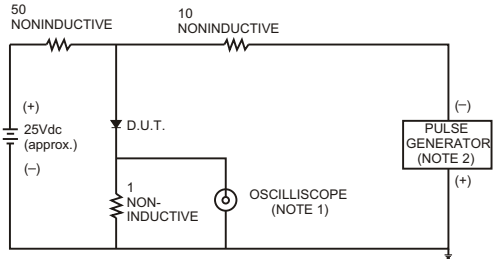
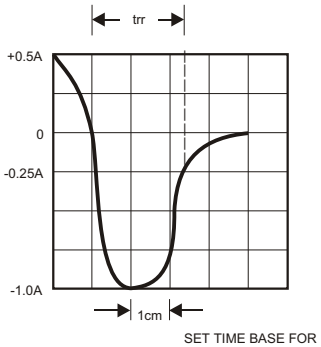


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.



SET TIME BASE FOR

50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

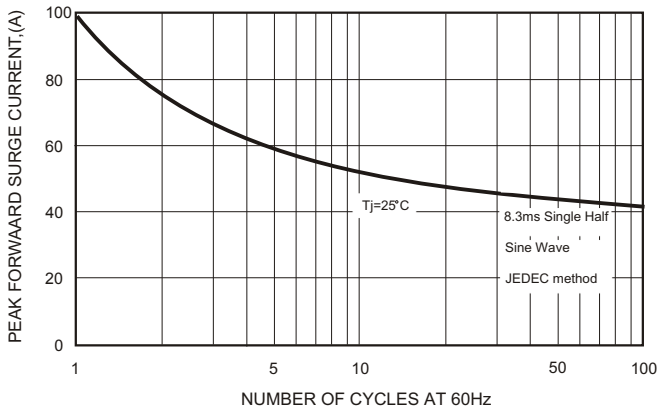


FIG.5-TYPICAL JUNCTION CAPACITANCE

