



GENERAL PURPOSE RECTIFIER SM4001 ~ SM4007

General Purpose Rectifier

Features

- Low reverse leakage
- Glass passivated dice
- High forward surge current capacity
- Ideal for surface mounted application
- High temperature soldering guaranteed 250°C/ 10 seconds, at terminals
- RoHS and REACH compliance



DO-213AB

RoHS
COMPLIANT

Mechanical Data

Case:	Transfer molded plastic, DO-213AB(MELF) package
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Plated terminal, solderable per MIL-STD 750, Method 2026
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.0046 ounce, 0.116 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	Unit	Conditions
V_{RRM}	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
V_{RMS}	Max RMS Voltage	35	70	140	280	420	560	700	V	
V_{DC}	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
$I_{(AV)}$	Max Average Forward Rectified Current at Ambient Temperature	1.0							A	TL=75°C (note 2)
I_{FSM}	Peak Forward Surge Current	30							A	8.3ms single half sine-wave (JEDEC)
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150							°C	
C_J	Typical Junction Capacitance	15							pF	At 1MHz, reversed voltage of 4V

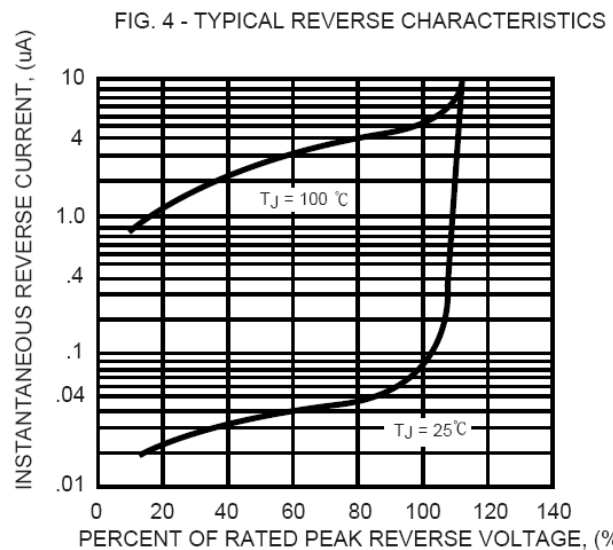
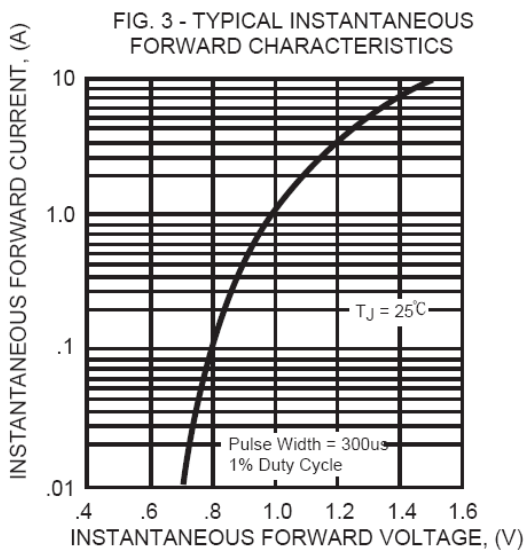
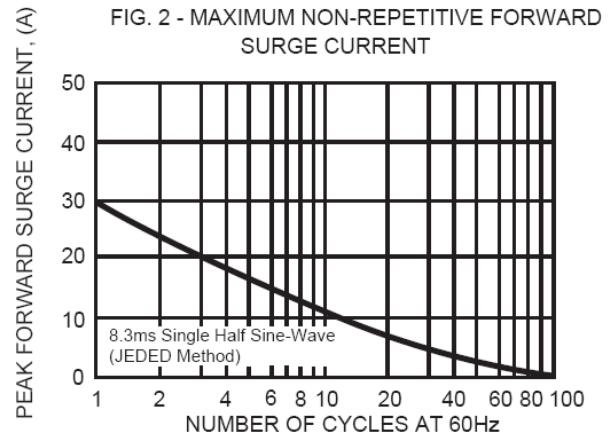
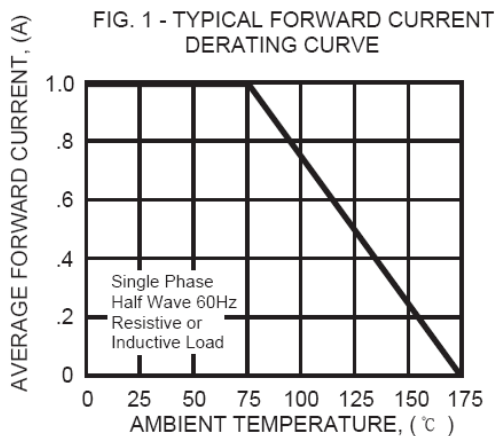
Rev. 0 2010-07-15

SM4001 ~ SM4007
Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

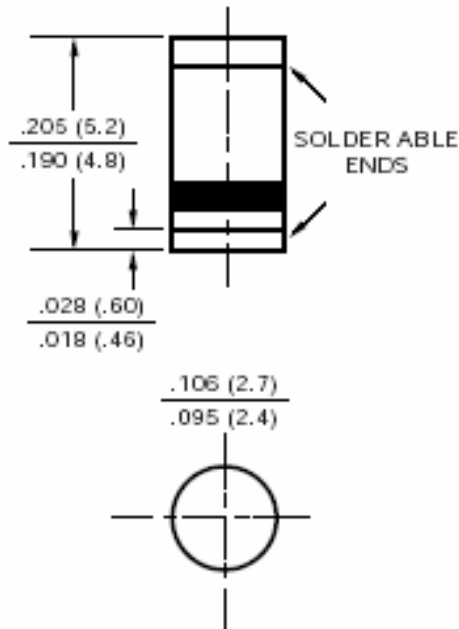
Symbol	Description	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	Unit	Conditions
V_F	Max Instantaneous Forward Voltage	1.1							v	$I_{F(AV)}=1.0A$
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	$T_A=25^{\circ}C$
		50								$T_A=100^{\circ}C$
$R_{\theta-JA}$	Typical Thermal Resistance	50							$^{\circ}C/W$	Note 2

Note:

- Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
- Thermal Resistance from junction to ambient and from junction to lead mounted on PCB with 0.3" x 0.3" (8.0mm x 8.0mm) copper pad areas.

Typical Characteristics Curves


Dimensions in inch (mm)

**DO-213AB(MELF)**

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