



## GENERAL PURPOSE RECTIFIER

# SM4001 THRU SM4007

VOLTAGE RANGE  
CURRENT

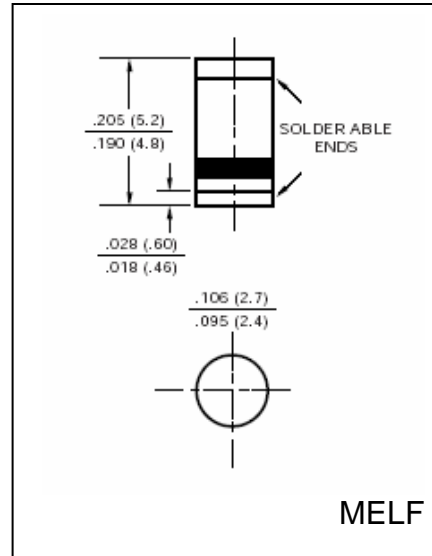
50 to 1000 Volts  
1.0 Ampere

### FEATURES

- Low reverse leakage
- High forward surge current capacity
- High temperature soldering guaranteed:  
260 /10 seconds, at terminal

### MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated terminal, solderable per MIL-STD-202E method 208C
- Mounting position: any
- Weight: 0.0046 ounce, 0.116 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SM 4001	SM 4002	SM 4003	SM 4004	SM 4005	SM 4006	SM 4007	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at $T_A = 75^\circ C$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	5.0							$\mu A$
		50							
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	15							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	(-55 to +150)							$^\circ C$
Storage Temperature Range	$T_{STG}$	(-55 to +150)							$^\circ C$

### Notes:



## RATINGS AND CHARACTERISTIC CURVES SM4001 THRU SM4007

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

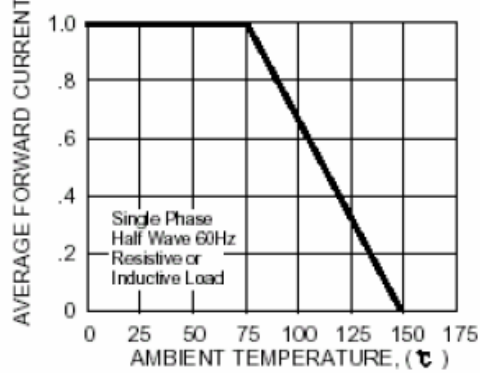


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

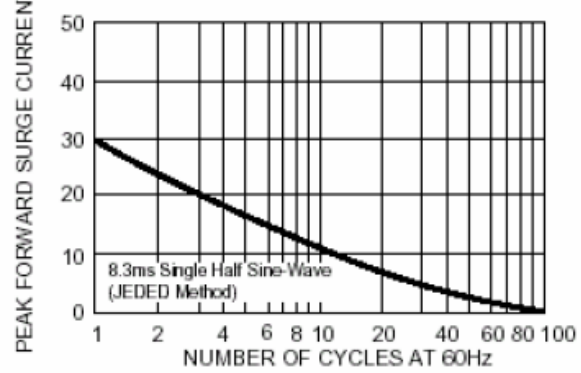


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

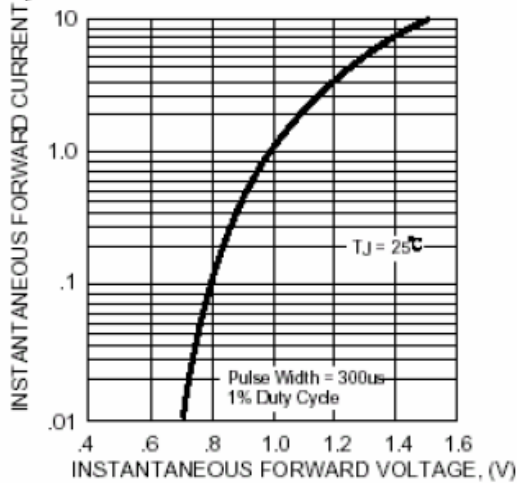


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

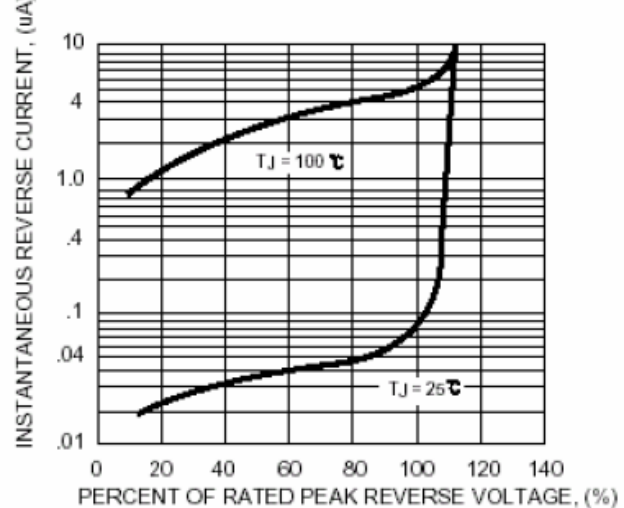


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

