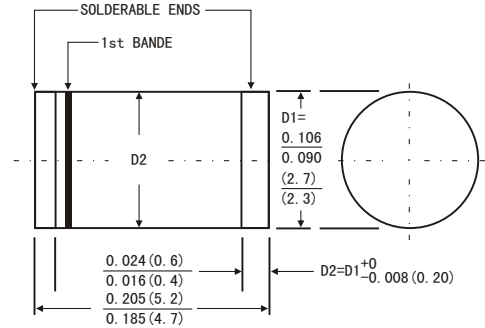


### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Guardring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:280 C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### MELF(DO-213AB)



### MECHANICAL DATA

- Case: JEDEC MELF(DO-213AB) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0041ounce, 0.116 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	SM 120	SM 130	SM 140	SM 150	SM 160	SM 180	SM 1100	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	57	71	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see Fig. 1 )	I(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30.0							Amps
Maximum instantaneous forward voltage at 1.0 A(Note 1 )	V <sub>F</sub>	0.55		0.70		0.85		Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1 )	I <sub>R</sub>	0.2							mA
		10							
Typical junction capacitance(Note 2)	C <sub>J</sub>	110							PF
Typical thermal resistance (Note 3) (Note 4)	R <sub>θJA</sub>	80.0							°C/W
	R <sub>θJL</sub>	30.0							
Operating junction temperature range	T <sub>J</sub>	-65 to+150							°C
Storage temperature range	T <sub>STG</sub>	-65 to+150							°C

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts

3.Thermal resistance (from junction to ambient),0.24X0.24" copper pads to each terminals

4.Thermal resistance (from junction to terminal),0.24X0.24" copper pads to each terminals

# RATINGS AND CHARACTERISTIC CURVES SM120 THRU SM1100

FIG.1-FORWARD CURRENT DERATING CURVE

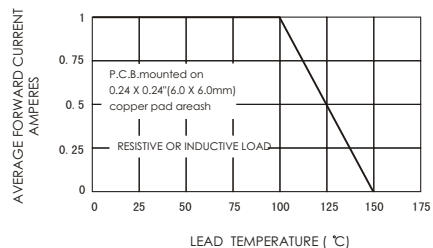


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

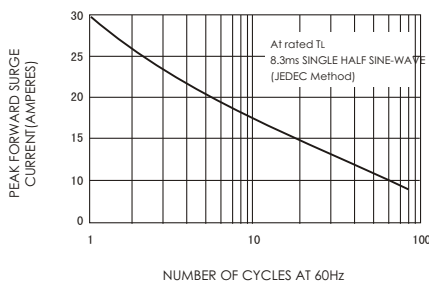


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

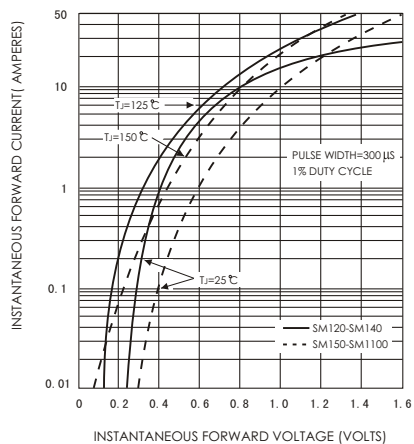


FIG.4-TYPICAL REVERSE CHARACTERISTICS

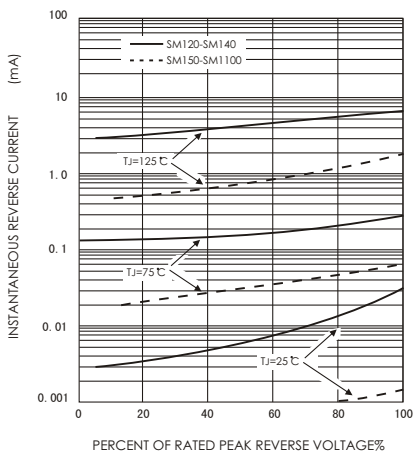


FIG.5-TYPICAL JUNCTION CAPACITANCE

