

SME1A -SME1M

PRV : 50 - 1000 Volts
Io : 1.0 Ampere

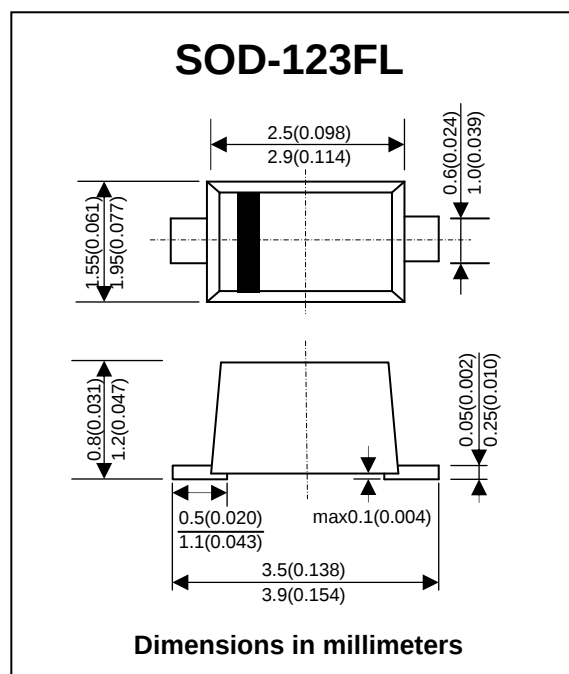
FEATURES :

- * Glass passivated junction chip
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * **Pb Free / RoHS Compliant**

MECHANICAL DATA :

- * Case: JEDEC SOD-123FL, molded plastic over passivated chip
- * Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting position : Any
- * Weight: 0.02 gram (Approximate)

SURFACE MOUNT HIGH EFFICIENT RECTIFIERS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	SME1A	SME1B	SME1D	SME1E	SME1G	SME1J	SME1K	SME1M	UNIT
Marking		EA	EB	ED	EE	EG	EJ	EK	EM	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Current Ta = 55 °C	I _{F(AV)}	1.0								A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	I _{FSM}	30								A
Maximum Forward Voltage at If = 1.0 A	V _F	1.1					1.7		2.2	V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I _R	5.0								μA
	I _{R(H)}	50								μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	50					75			ns
Typical Junction Capacitance (Note 2)	C _J	50								pF
Junction Temperature Range	T _J	- 65 to + 150								°C
Storage Temperature Range	T _{STG}	- 65 to + 150								°C

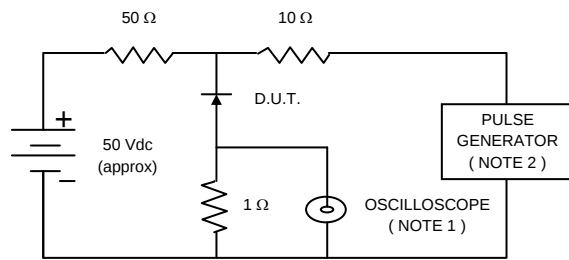
Notes :

(1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

RATING AND CHARACTERISTIC CURVES (SME1A - SME1M)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

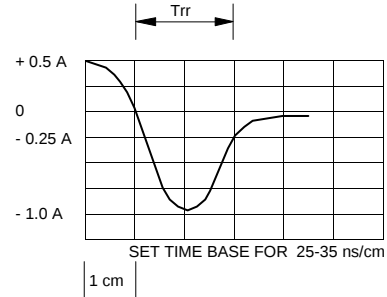


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

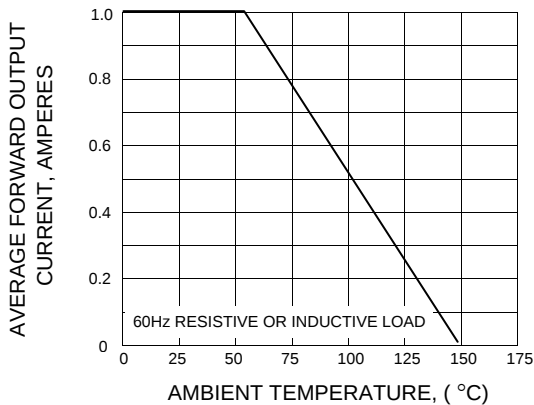


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

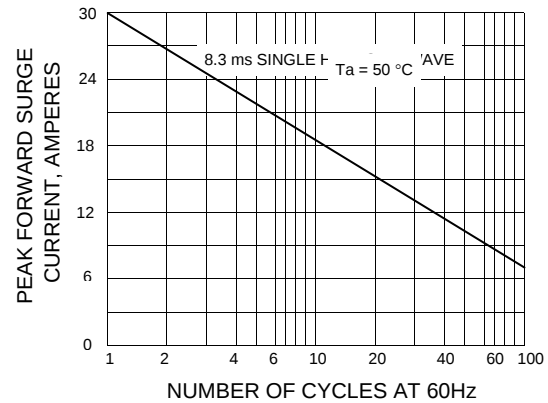


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

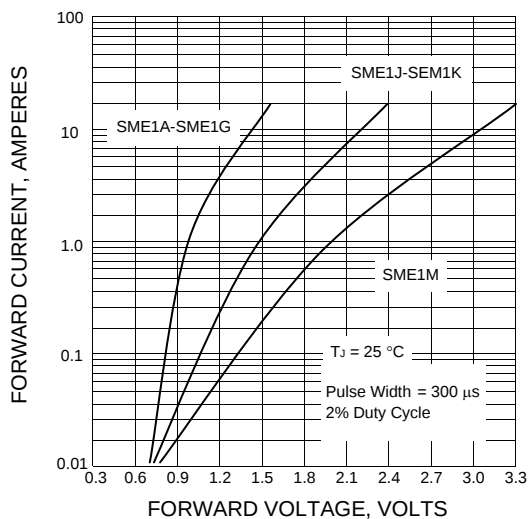


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

