

SMS1A - SMS1M

PRV : 50 - 1000 Volts
Io : 1.0 Ampere

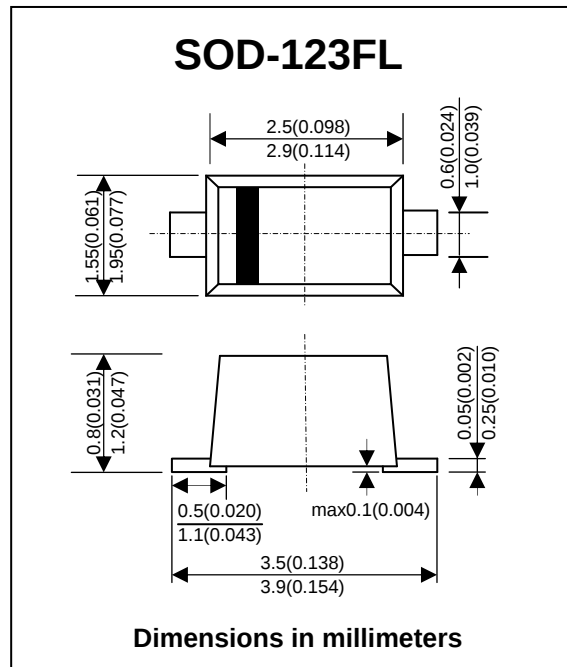
FEATURES :

- * Glass passivated junction chip
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Super fast recovery time
- * **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 SUPER FAST 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%.

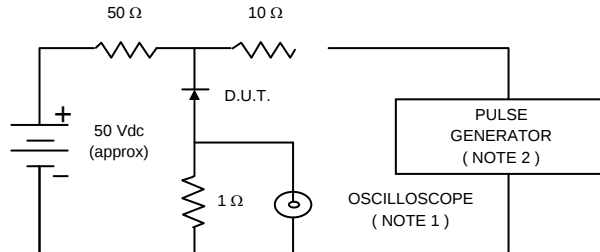
RATING	SYMBOL	SMS1A	SMS1B	SMS1D	SMS1G	SMS1J	SMS1K	SMS1M	UNIT
Marking		SA	SB	SD	SG	SJ	SK	SM	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current Ta = 55 °C	I _{F(AV)}								A
Maximum Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	I _{FSM}	30							A
Maximum Peak Forward Voltage at I _F = 1.0 A	V _F	0.95			1.7		4.0		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	5.0					10		μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35							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 V_{DC}

RATING AND CHARACTERISTIC CURVES (SMS1A - SMS1M)

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.

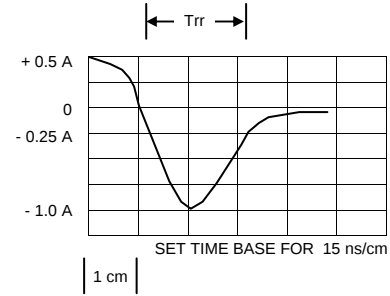


FIG.2 - DERATING CURVE CURRENT

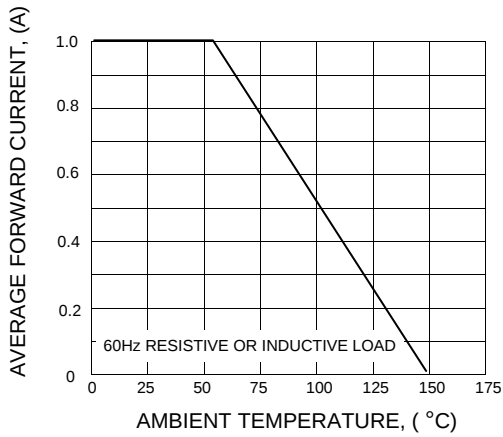


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

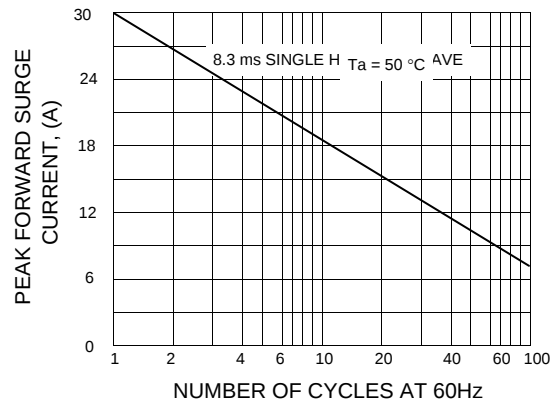


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

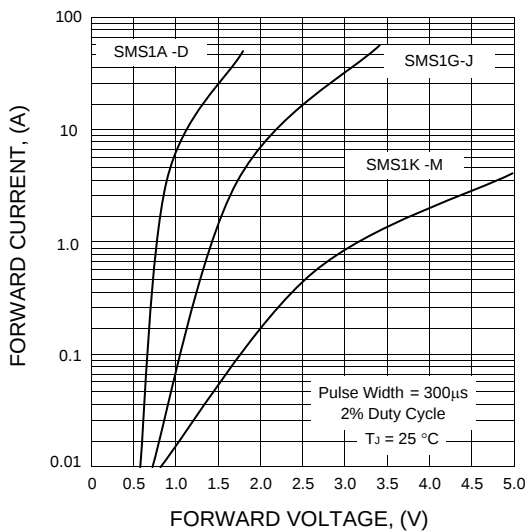


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

