

**2.0A SURFACE MOUNT SUPER FAST RECTIFIERS -50V- 600V  
SMA-LS PACKAGE**
**FEATURES**

- \* Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- \* Low profile surface mounted application in order to optimize board space.
- \* High current capability, low forward voltage drop.
- \* High surge capability.
- \* Superfast recovery time for switching mode application.
- \* Glass passivated chip junction.
- \* RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"

**MECHANICAL DATA**

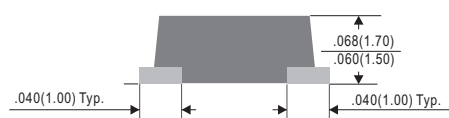
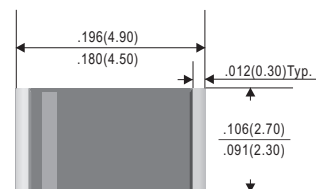
Case: Molded plastic, DO-214AC / SMA-LS

Epoxy: UL 94V-O rate flame retardant

Terminals: Solder plated, solderable per  
MIL-STD-750, Method 2026.

Mounting position: Any

Weight: Approximated 0.05 gram.



Dimensions in inches and (millimeters)

**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%

RATINGS	SYMBOL	SFM21L	SFM22L	SFM23L	SFM24L	SFM25L	SFM26L	SFM27L	SFM28L	UNIT
Marking Code		S21	S22	S23	S24	S25	S26	S27	S28	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	2.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50								Amps
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>	35								°C/W
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	25								pF
Operating Temperature Range	T <sub>J</sub>	-55 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150								°C

CHARACTERISTICS	SYMBOL	SFM21L	SFM22L	SFM23L	SFM24L	SFM25L	SFM26L	SFM27L	SFM28L	UNIT	
Maximum Forward Voltage at 2.0A DC	V <sub>F</sub>	0.95			1.25		1.70			Volts	
Maximum Average Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@T <sub>J</sub> =25°C				5					uAmps
		@T <sub>J</sub> =100°C				100					
Maximum Reverse Recovery Time (Note 3)	T <sub>rr</sub>	35								nS	

**NOTES:**

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to case mounted on FR-4 PCB.

3- Reverse recovery time test condition, I=0.5A, I=1.0A, I=0.25A

**RATING AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CHARACTERISTICS

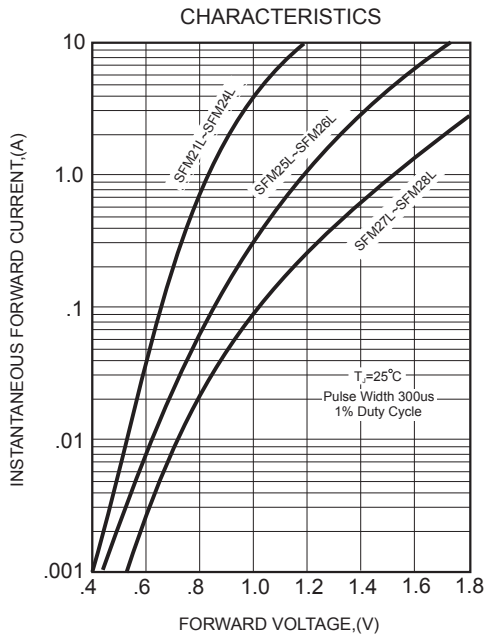


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

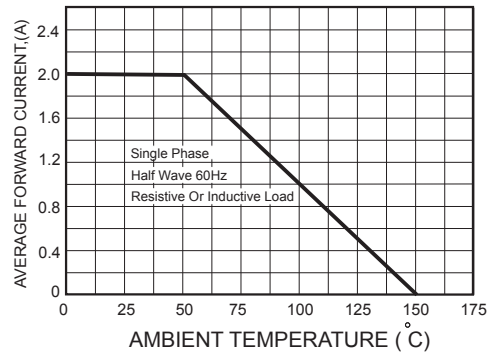


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

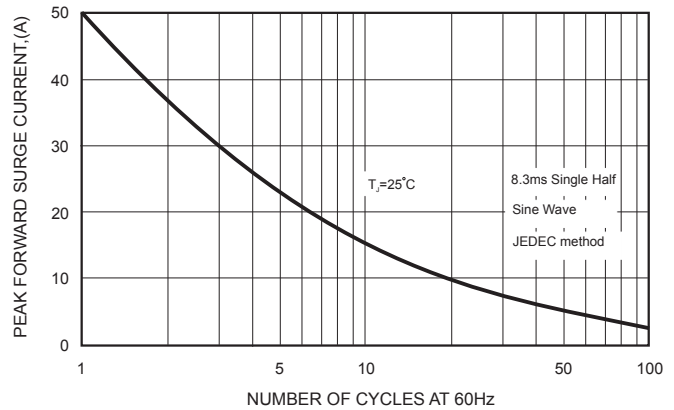
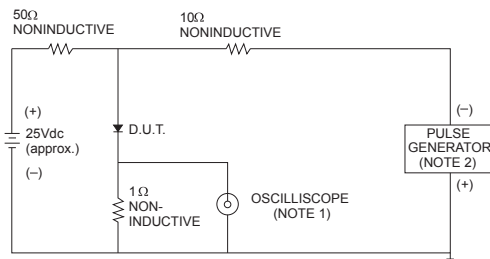


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

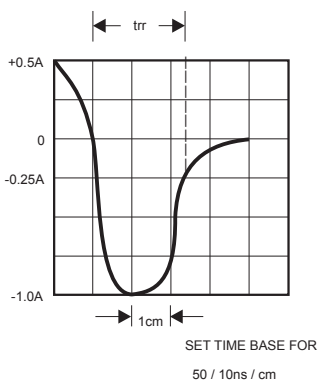


FIG.5-TYPICAL JUNCTION CAPACITANCE

