



# HS1AL thru HS1ML

**SURFACE MOUNT  
HIGH EFFICIENCY (ULTRA FAST)  
GLASS PASSIVATED RECTIFIERS**

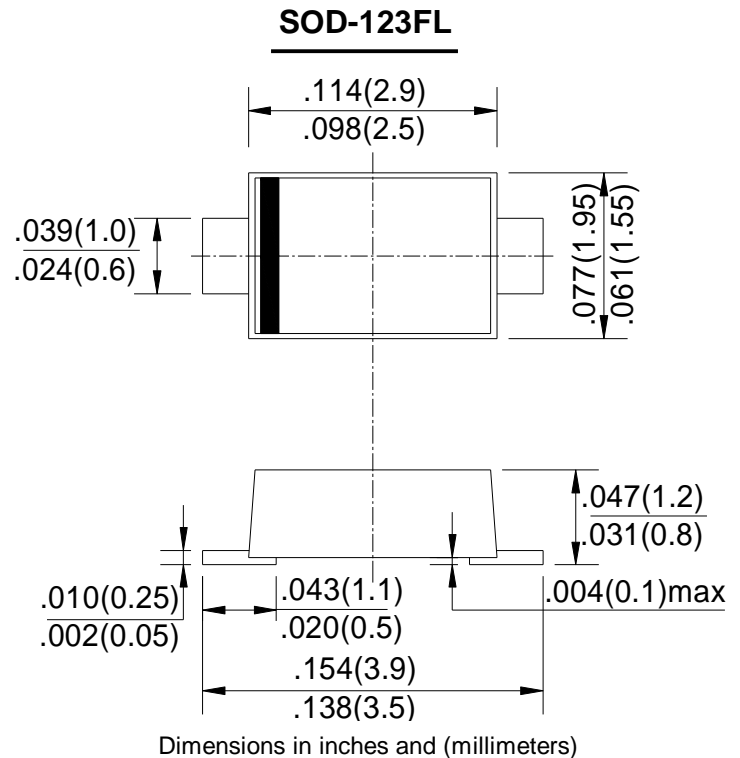
REVERSE VOLTAGE - **50** to **1000** Volts  
FORWARD CURRENT - **1.0** Ampere

**FEATURES**

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

**MECHANICAL DATA**

- Case: JEDEC SOD-123FL molded plastic body over glass passivated chip
- Terminals: Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end
- Weight: 0.017gram



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

CHARACTERISTICS	SYMBOL	HS1AL	HS1BL	HS1DL	HS1GL	HS1JL	HS1KL	HS1ML	UNIT
	MARKING	H1AL	H1BL	H1DL	H1GL	H1JL	H1KL	H1ML	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TA=55 °C	I(AV)	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	IFSM	25							A
Peak Forward Voltage at 1.0A DC	VF	1.0		1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ=25°C @TJ=100°C	IR	5.0 100							µA
Maximum Reverse Recovery Time(Note 1)	T <sub>RR</sub>	50				75			nS
Typical Junction Capacitance (Note2)	C <sub>J</sub>	9							pF
Typical Thermal Resistance (Note3)	RθJA	180							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

NOTES: 1.Measured with IF=0.5A,IR=1A,IRR=0.25A.  
2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC  
3.Thermal resistance junction to ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

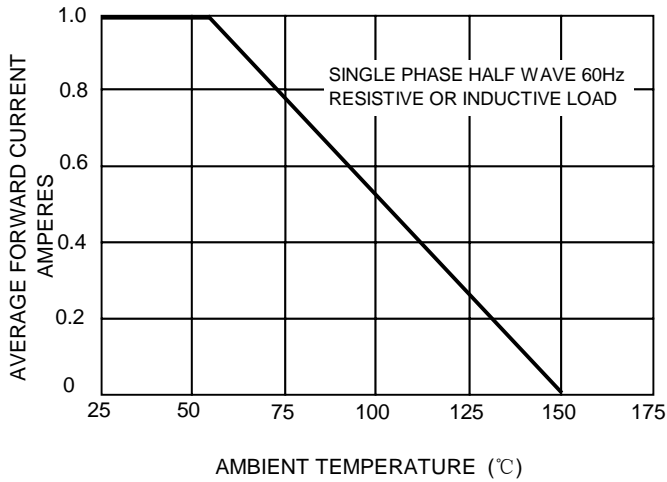


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

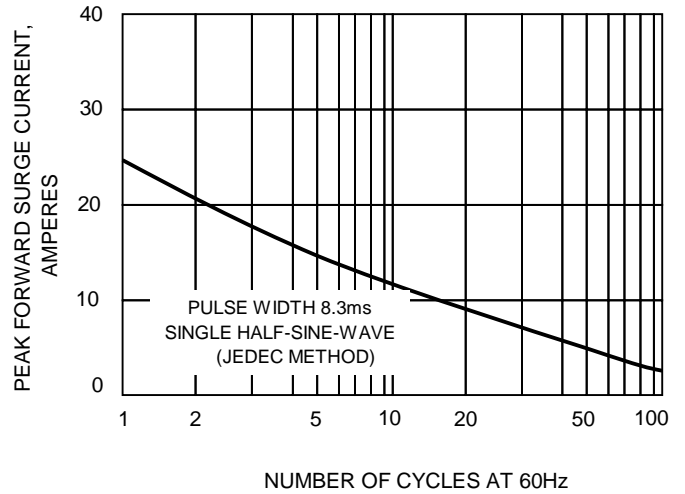


FIG.3 – TYPICAL JUNCTION CAPACITANCE

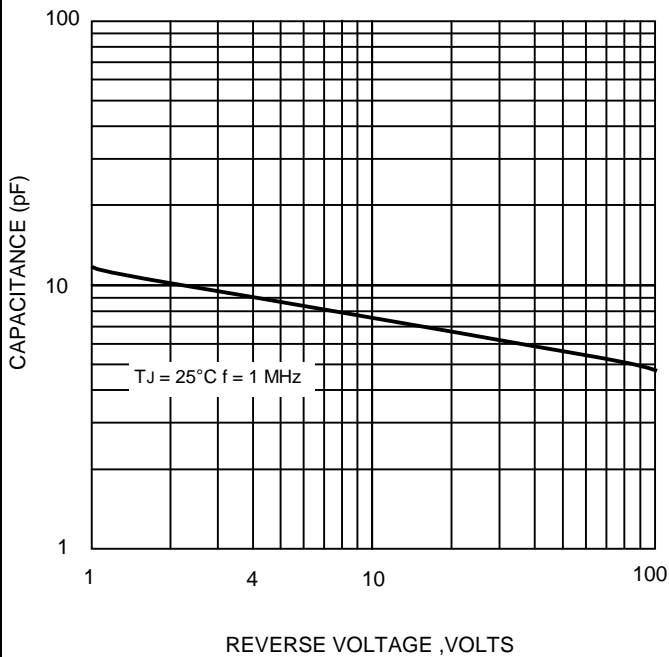


FIG.4-TYPICAL FORWARD CHARACTERISTICS

