



# AGS1AFLH THRU AGS1MFLH

## SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Low forward voltage drop
- AEC-Q101 Qualified
- Suffix "H" indicates Halogen-free parts, ex. AGS1AFLH

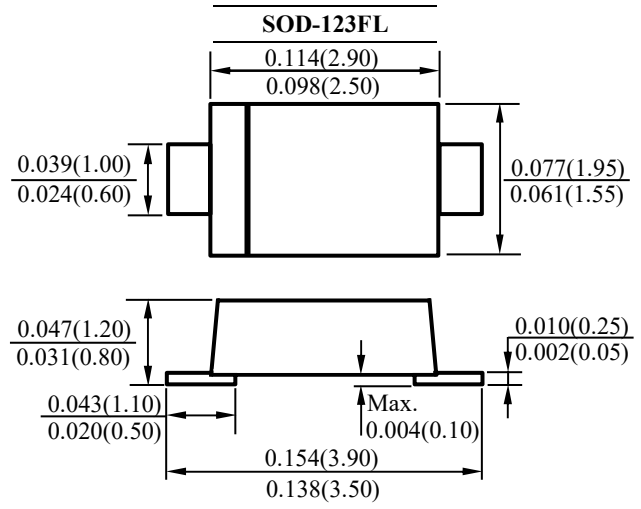
### MECHANICAL DATA

Case : Molded plastic, SOD-123FL

Terminals : Solder plated, solderable per

MIL-STD-750, method 2026 guaranteed

Polarity : Color band denotes cathode end



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%.

Parameter	Symbols	AGS1AFLH	AGS1BFLH	AGS1DFLH	AGS1GFLH	AGS1JFLH	AGS1KFLH	AGS1MFLH	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current at 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25							Amp
Maximum Forward Voltage at 1.0A	$V_F$	1.1							Volts
Maximum Reverse Current at $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$	5.0							$\mu\text{Amp}$
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	30							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

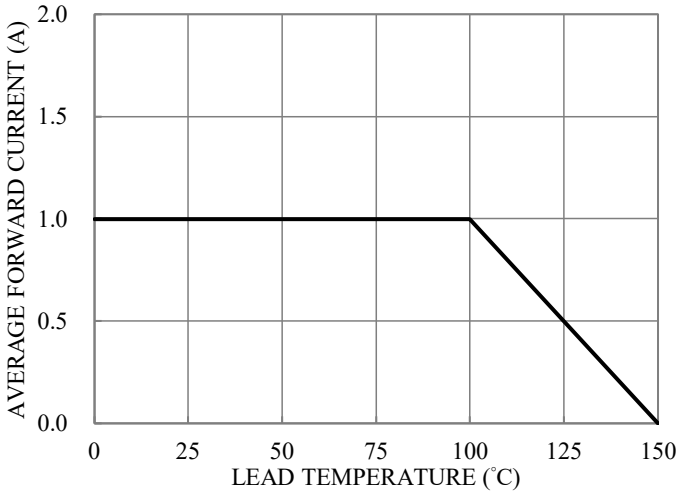
1- Mounted on epoxy glass PCB with 3mm×3mm Cu pads (40 $\geq$  $\mu\text{m}$  thick)



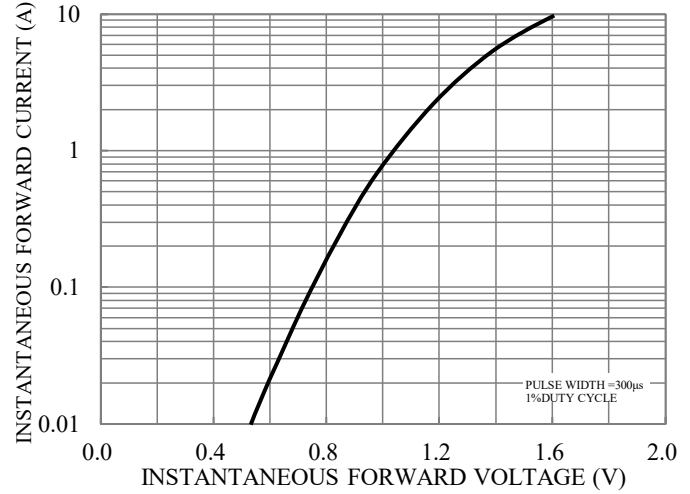
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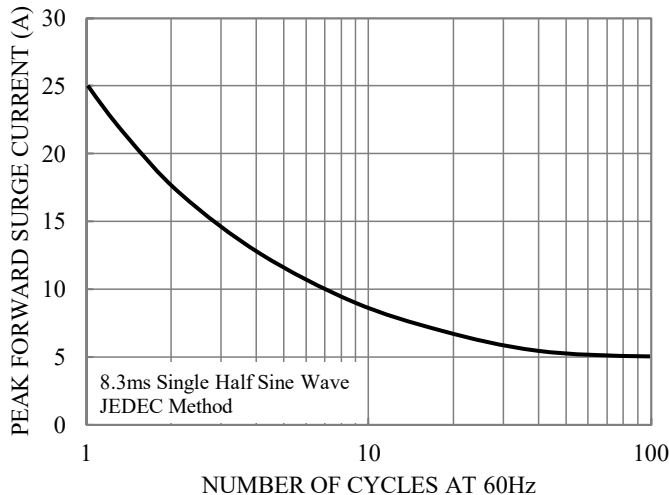
### RATINGS AND CHARACTERISTIC CURVES



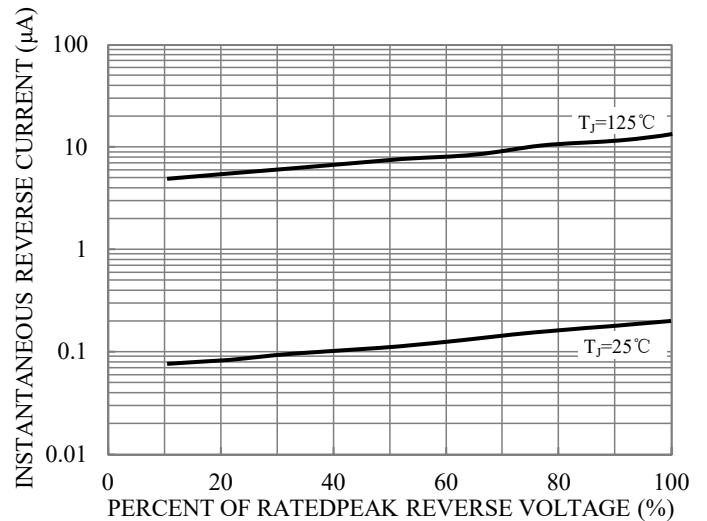
**Fig.1-FORWARD CURRENT DERATING CURVE**



**Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.3-MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.4-TYPICAL REVERSE CHARACTERISTICS**