

Surface Mount High Efficiency (Ultra Fast) Glass Passivated Rectifiers

Features

- Low cost
- 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

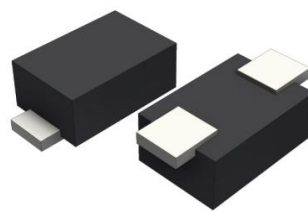
- Case: JEDEC SOD123-FL Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Applications

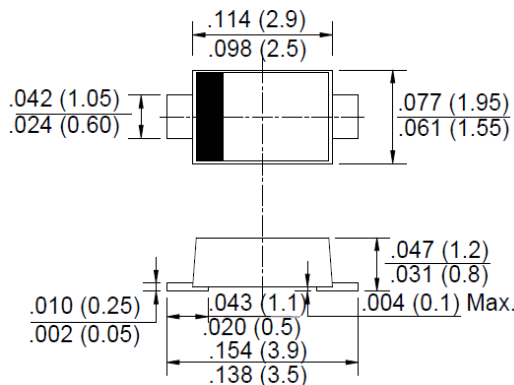
- For use in SMPS, high frequency inverters, PWM and polarity protection applications

Reverse Voltage - 50 to 1000 Volts
Forward Current - 1.0 Ampere

SOD123-FL



RoHS
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

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 Repetitive 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, Superimposed on Rated Load (JEDEC Method)	IFSM	25							A
Peak Forward Voltage at 1.0 A DC	VF	1.0			1.3	1.7			V
Maximum DC Reverse Current at Rated @TJ=25°C	IR	5.0							µA
DC Blocking Voltage @TJ=100°C		100							
Maximum Reverse Recovery Time (Note 1)	TRR	50				75			nS
Typical Junction Capacitance (Note2)	CJ	9							pF
Typical Thermal Resistance Junction to Ambient	RθJA	180							°C/W
Operating Junction Temperature Range	TJ	-55 to +150							°C
Storage Temperature Range	TSTG	-55 to +150							°C

Notes: 1.Measured with I_F=0.5A,I_R=1A,IRR=0.25A.

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3.The typical data above is for reference only.

HS1*L-7-99-00

Rev. 9, 22-Apr-2019

Fig. 1 - Forward Current Derating Curve

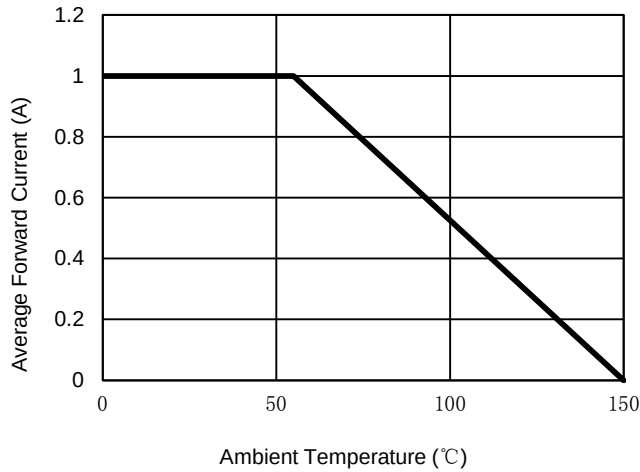


Fig. 2 - Maximum Non-Repetitive Surge Current

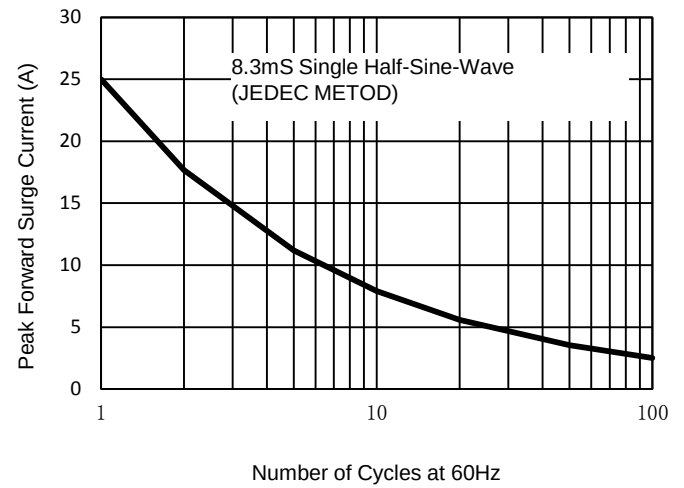


Fig. 3 - Typical Junction Capacitance

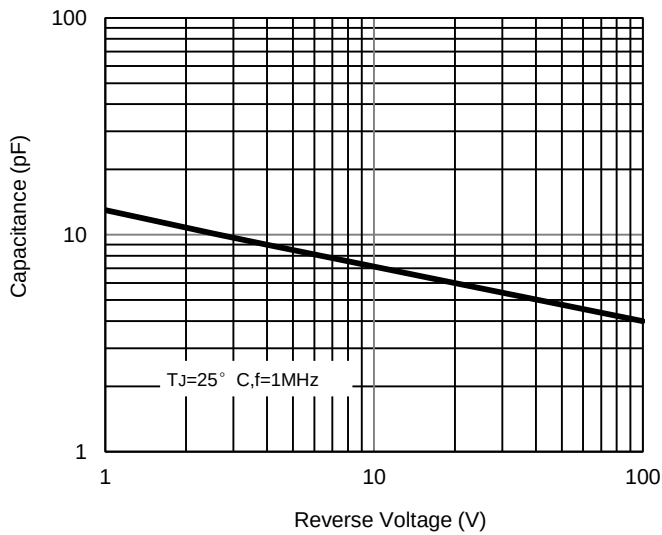


Fig. 4 - Typical Forward Characteristics

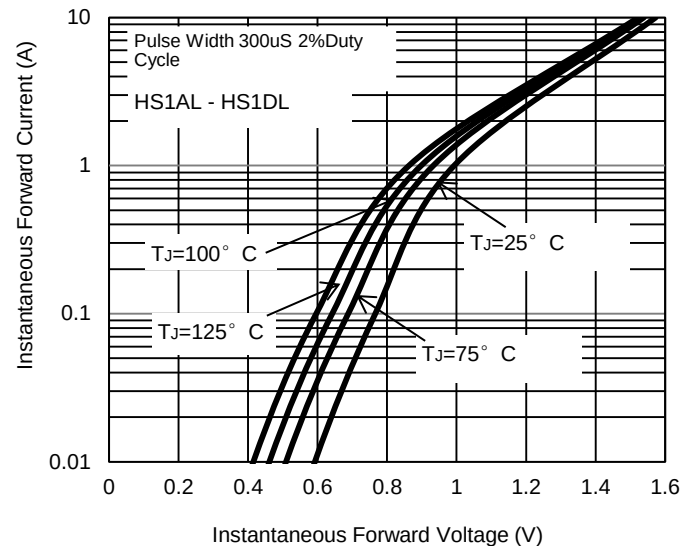


Fig. 5 - Typical Forward Characteristics

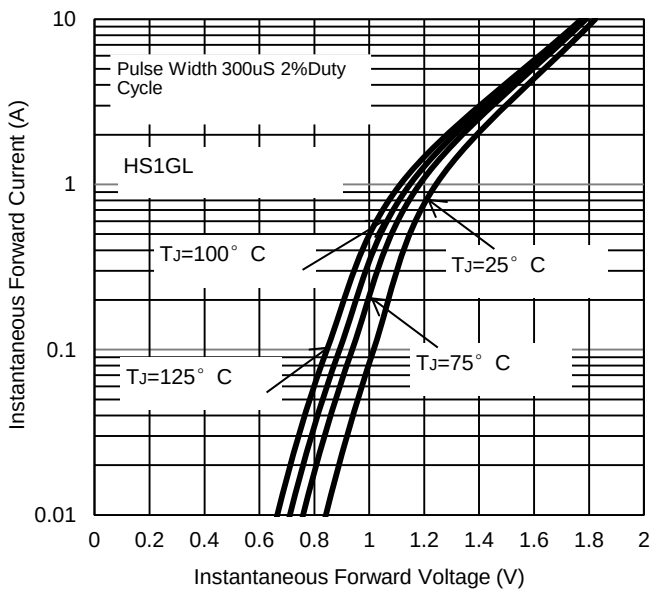
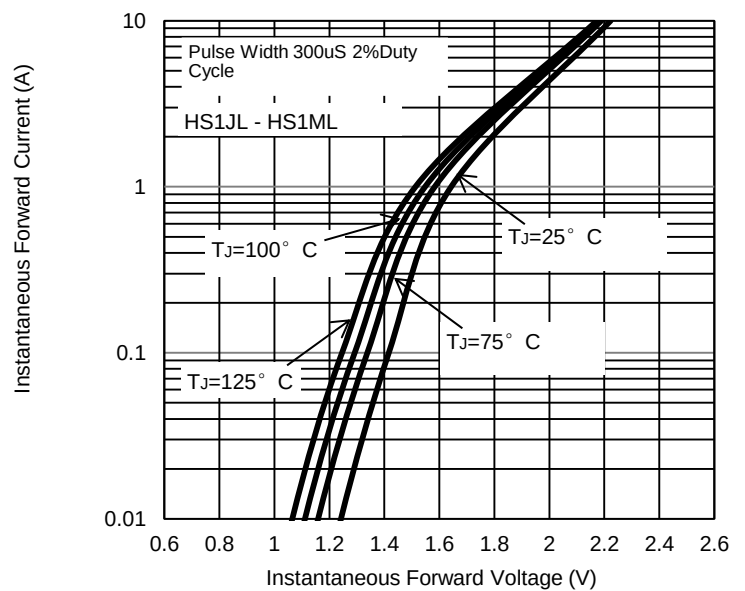


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.

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