



Surface Mount High Efficiency (Ultra Fast) Glass Passivated Rectifiers

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

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

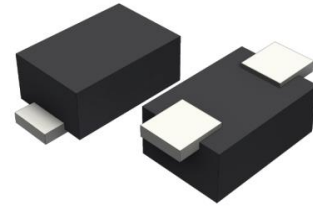
- Case: JEDEC SOD123-FL Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

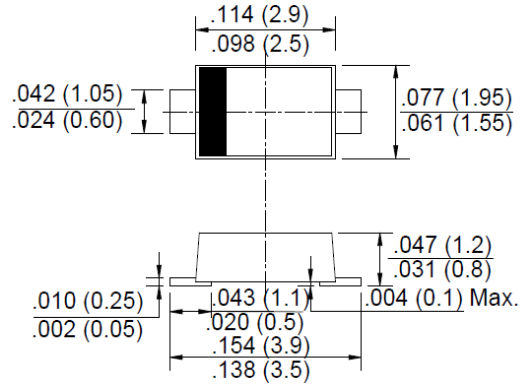
Applications

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

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 IF=0.5A,IR=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.

Rating and Characteristic Curves

HS1AL THRU HS1ML



Fig. 1 - Forward Current Derating Curve

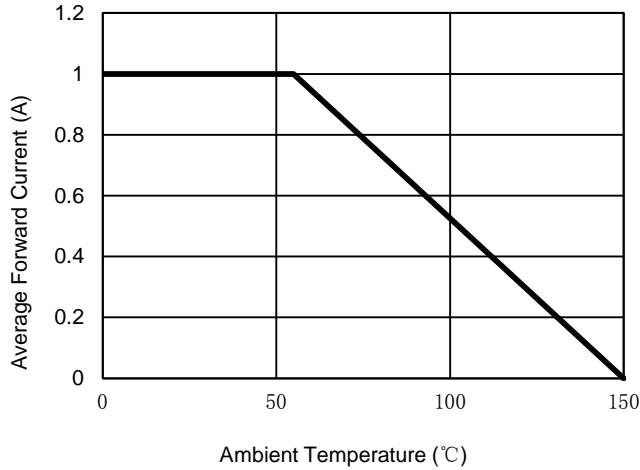


Fig. 2 - Maximum Non-Repetitive Surge Current

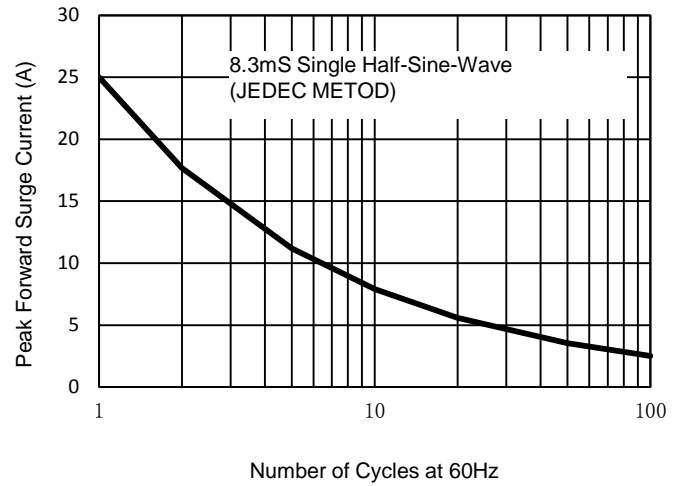


Fig. 3 - Typical Junction Capacitance

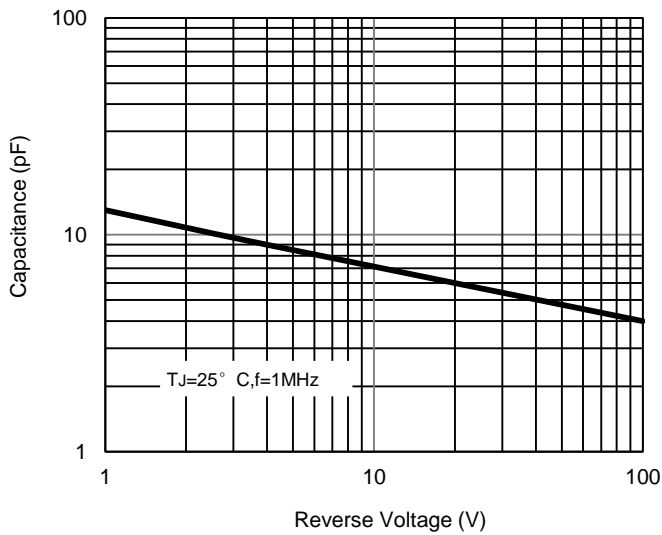


Fig. 4 - Typical Forward Characteristics

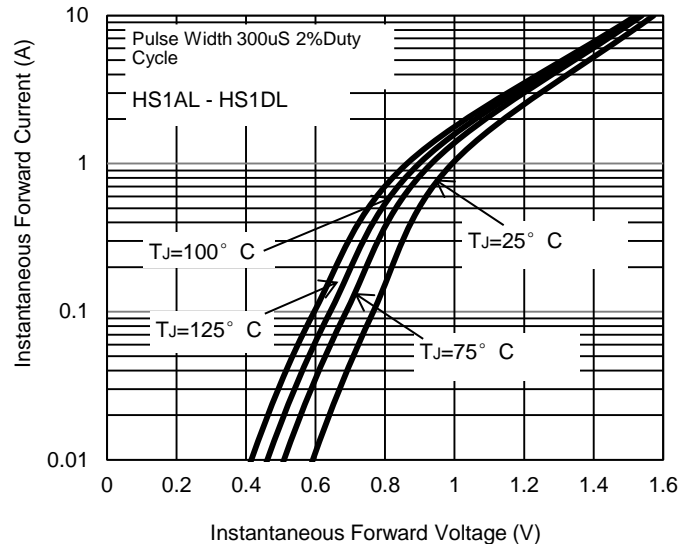
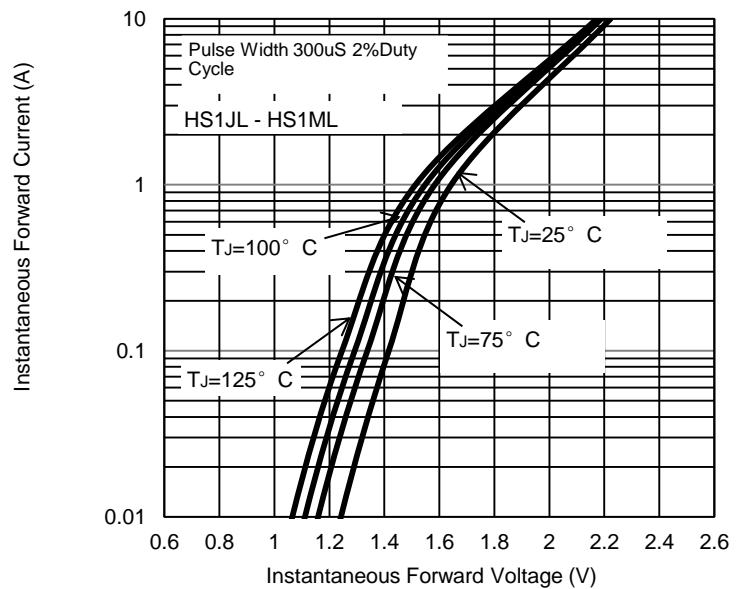
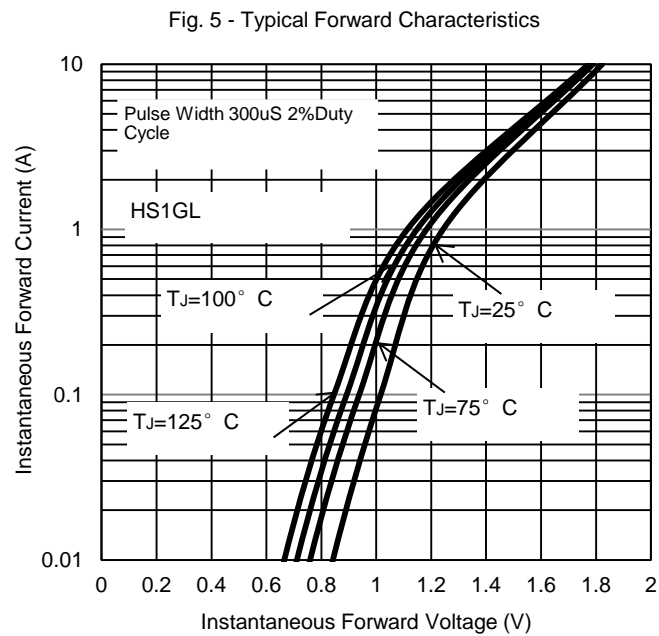


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.



Disclaimer

ALL specifications and data are subject to be changed without notice to improve reliability function or design or other reasons.

HY makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, HY disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on HY's knowledge of typical requirements that are often placed on HY products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify HY's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, HY products are not designed for use in medical, life-saving, or life-sustaining applications or for any other applications in which the failure of the HY product could result in personal injury or death. Customers using or selling HY products not expressly indicated for use in such applications do so at their own risk. Please contact authorized HY personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of HY. Product names and markings noted herein may be trademarks of their respective owners.