

**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

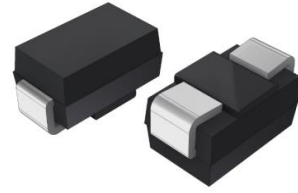
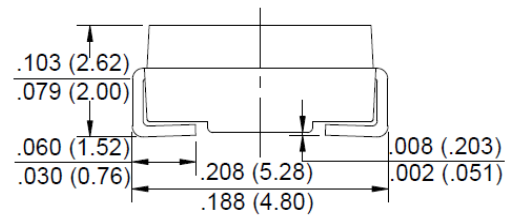
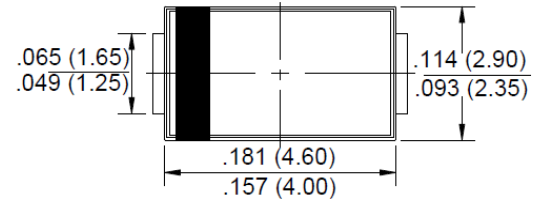
**Mechanical Data**

- Case: JEDEC SMA 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

**SMA****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	HS1A	HS1B	HS1D	HS1G	HS1J	HS1K	HS1M	Unit
		UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UF1M	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =55 °C	I(AV)	1.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30							A
Peak Forward Voltage at 1.0 A DC	V <sub>F</sub>	1.0			1.3	1.7			V
Maximum DC Reverse Current at Rated @T <sub>J</sub> =25°C	I <sub>R</sub>	5.0							μA
DC Blocking Voltage @T <sub>J</sub> =100°C		100							
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	50				75			nS
Typical Junction Capacitance (Note2)	C <sub>J</sub>	20				10			pF
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	25							°C/W
Operating Junction 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 I<sub>F</sub>=0.5A,I<sub>R</sub>=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.



Fig. 1 - Forward Current Derating Curve

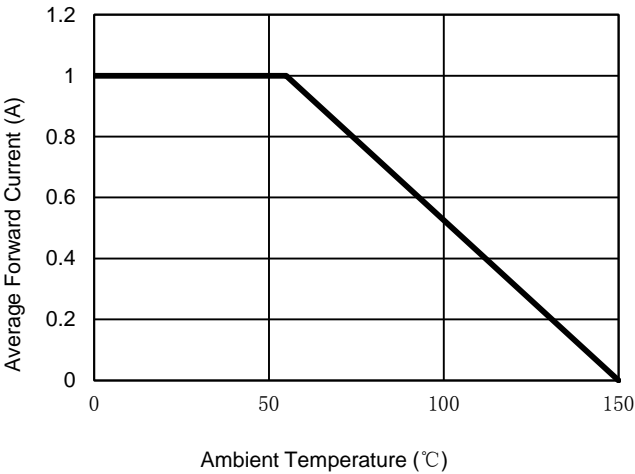


Fig. 2 - Maximum Non-Repetitive Surge Current

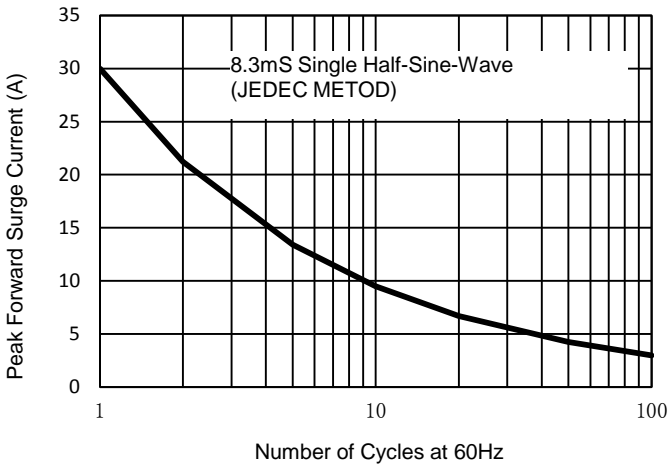


Fig. 3 - Typical Junction Capacitance

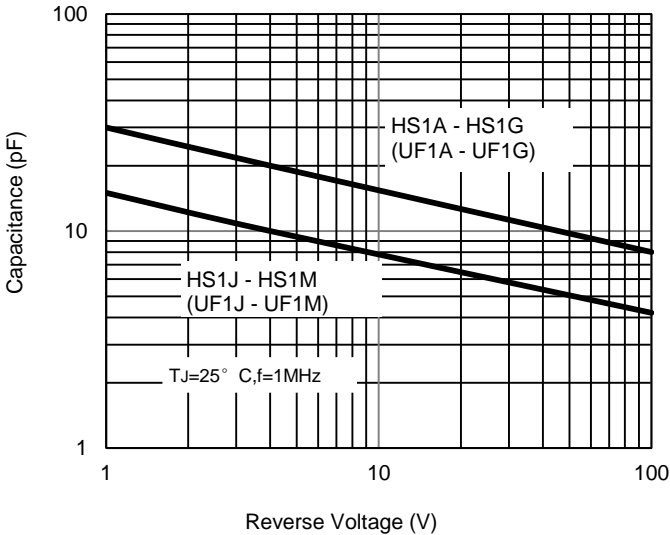


Fig. 4 - Typical Forward Characteristics

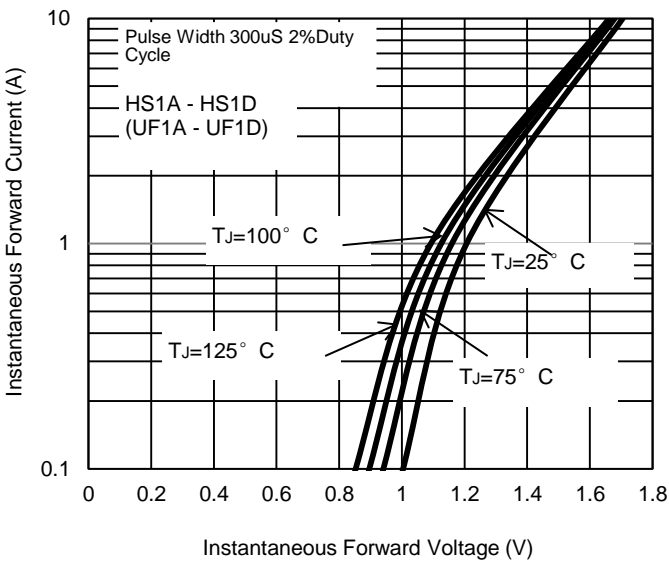


Fig. 5 - Typical Forward Characteristics

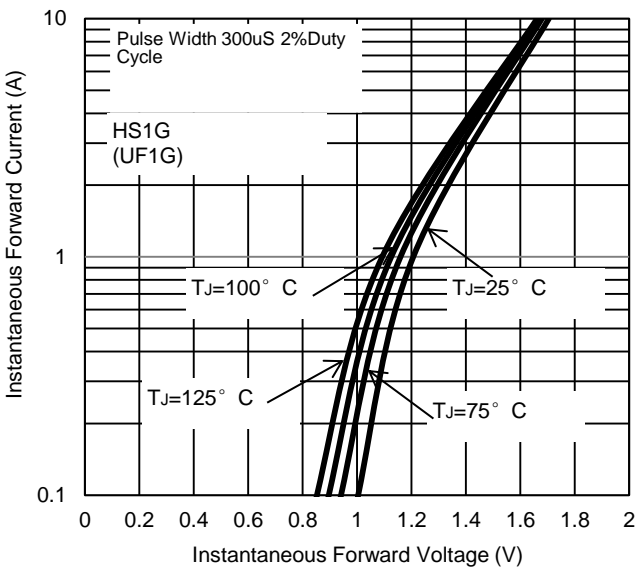
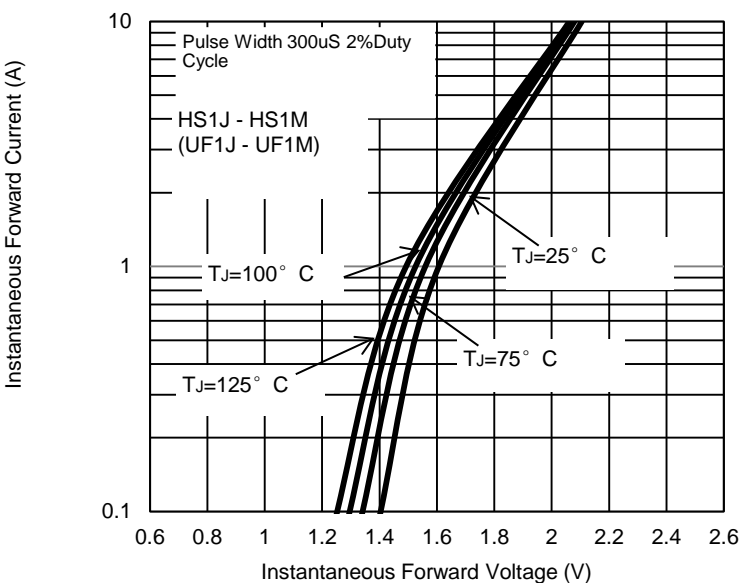


Fig. 6 - Typical Forward Characteristics





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