HS1X / UF1X SERIES

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

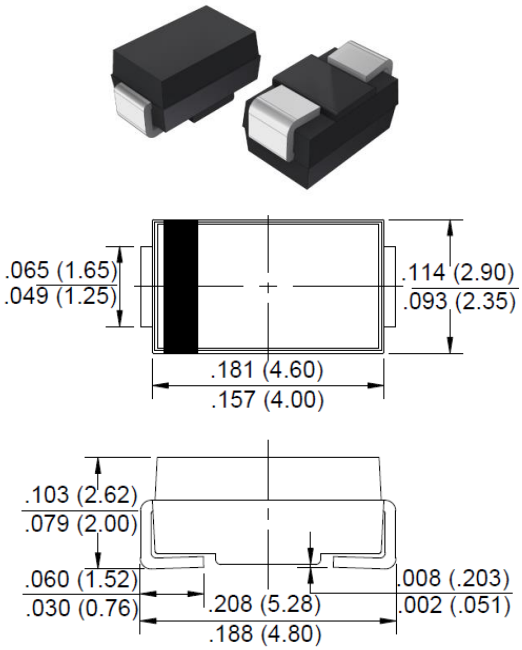
Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

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

Characteristics	Symbol	HS1A / UF1A	HS1B / UF1B	HS1D / UF1D	HS1G / UF1G	HS1J / UF1J	HS1K / UF1K	HS1M / UF1M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_A=55 ℃	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Peak Forward Voltage at 1.0 A DC	V_F	1.0			1.3	1.7			V
Maximum DC Reverse Current at Rated @T_J=25℃ DC Blocking Voltage @T_J=100℃	I_R	5.0 100							μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50				75			nS
Typical Junction Capacitance (Note2)	C_J	20				10			pF
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	25							℃/W
Operating Junction Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

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.

Fig. 1 - Forward Current Derating Curve

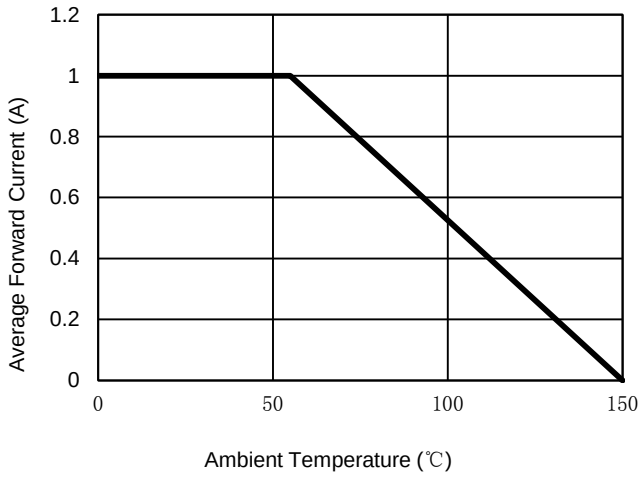


Fig. 2 - Maximum Non-Repetitive Surge Current

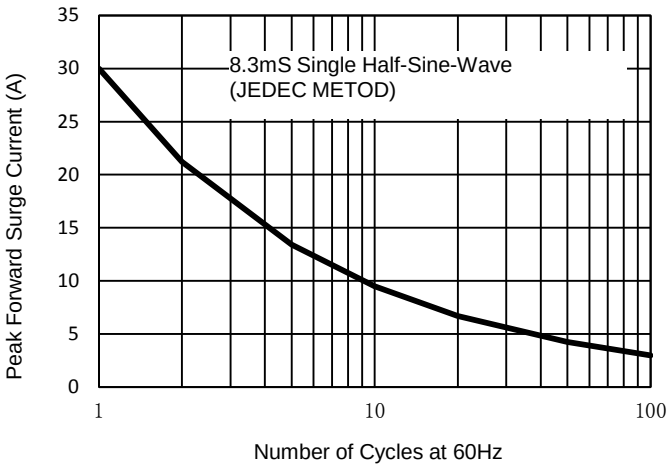


Fig. 3 - Typical Junction Capacitance

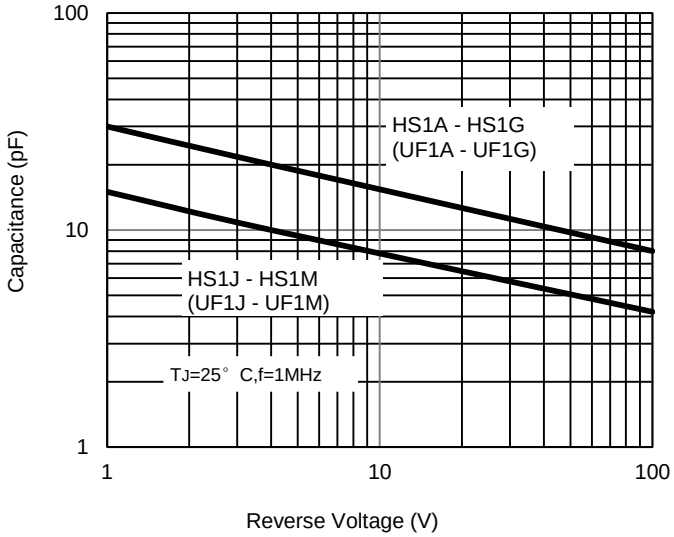


Fig. 4 - Typical Forward Characteristics

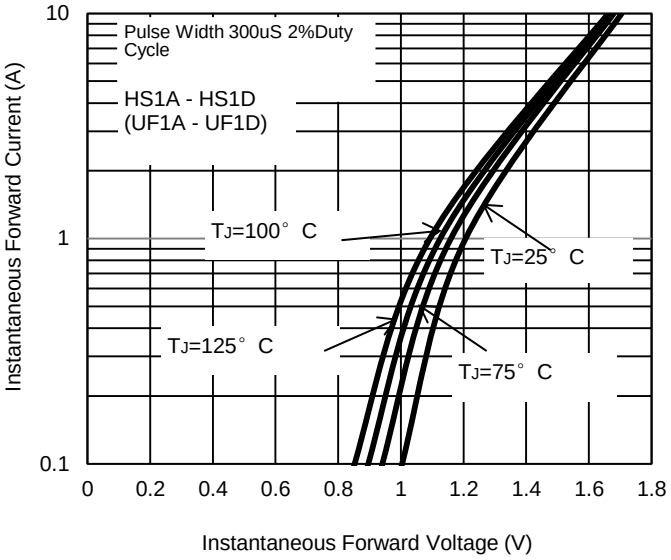


Fig. 5 - Typical Forward Characteristics

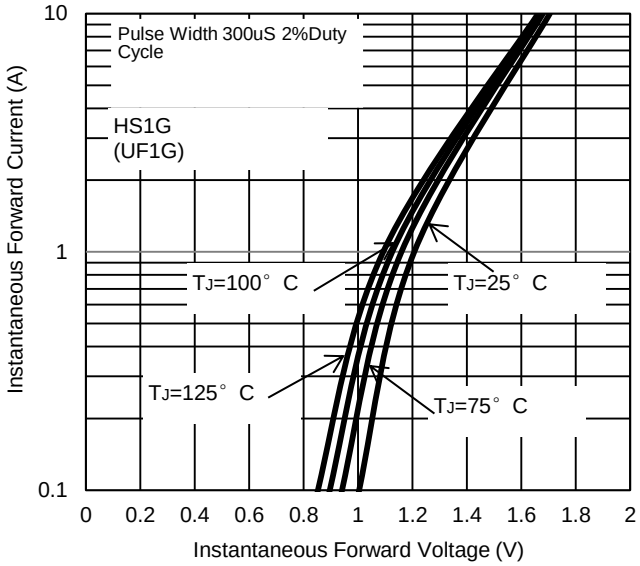
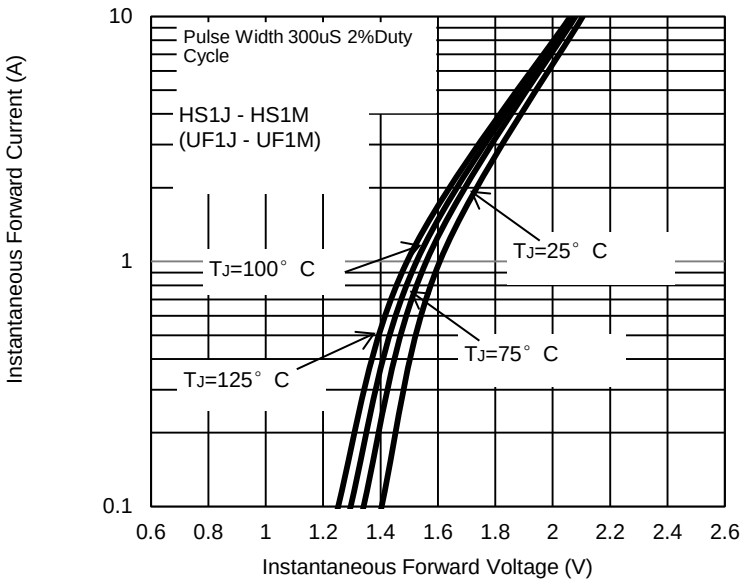


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.

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