

# HS3A THRU HS3M

## High Efficient Rectifier

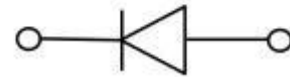
### Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Ultra-fast reverse recovery time
- High forward surge capability
- Meets MSL level 1, per J-STD-020,LF maximum peak of 260 °C



### Typical Application

For use in high frequency rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.



### Mechanical Data

- Package: DO-214AB(SMC)  
Molding compound meets UL 94 V-0 flammability rating,RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	HS3							
				A	B	D	F	G	J	K	M
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V		50	100	200	300	400	600	800	1000
Average Forward Current	I <sub>F(AV)</sub>	A	60HZ Half-sin wave,Resistance load, TL=110°C	3							
Surge(Nonrepetitive)Forward Current	I <sub>FSM</sub>	A	60HZ Half-sine wave, 1 cycle, Ta=25°C	100							
Storage Temperature	T <sub>stg</sub>	°C		-55 ~ +150							
Junction Temperature	T <sub>j</sub>	°C		-55 ~ +150							

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	HS3					
				A	B	D	F	G	J
Peak Forward Voltage	V <sub>FM</sub>	V	IFM =3.0A	1.0		1.3		1.7	
Peak Reverse Current	I <sub>RRM1</sub>	µA	VRM=VRRM	10					
	I <sub>RRM2</sub>			200					
Maximum reverse recovery time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	50				75	
Thermal Resistance(Typical)	R <sub>θJ-A</sub>	°C/W	Between junction and ambient	47 <sup>1)</sup>					
	R <sub>θJ-L</sub>		Between junction and terminal	13 <sup>1)</sup>					

### Notes:

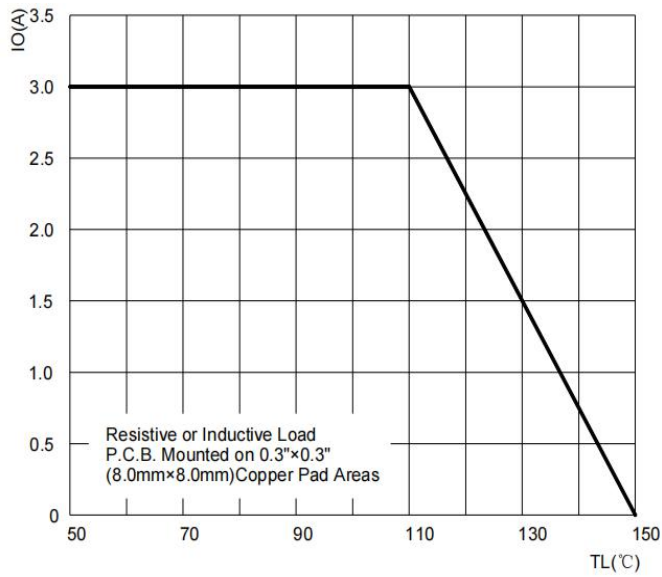
1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.



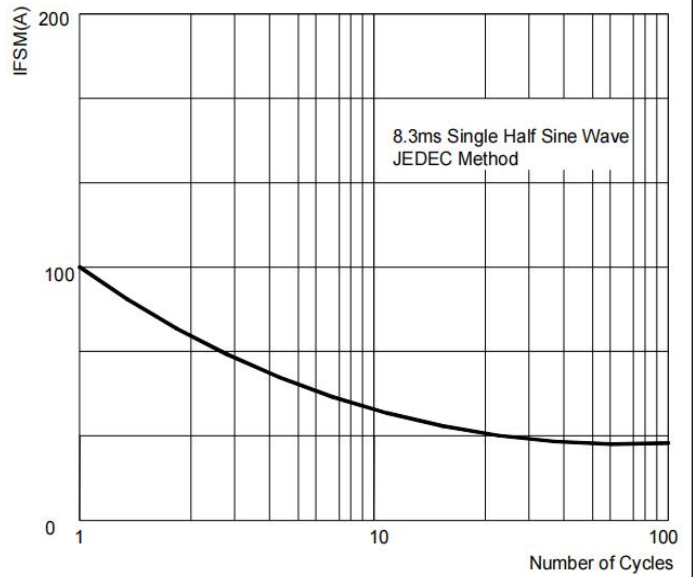
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## ■ Characteristics (Typical)

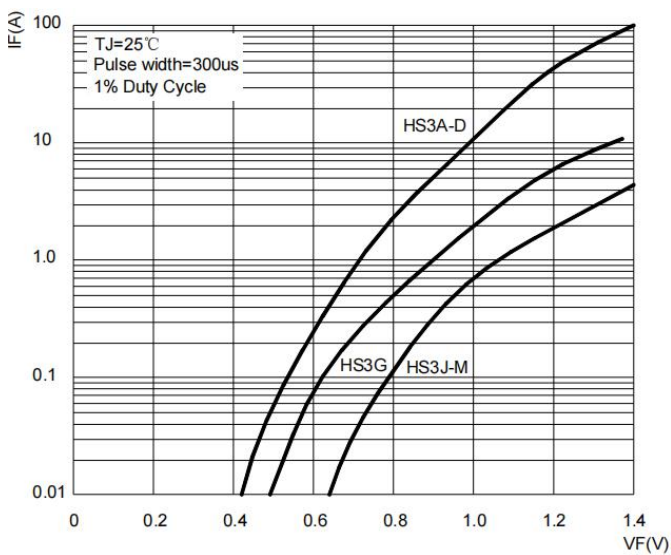
**FIG1: Forward Current Derating Curve**



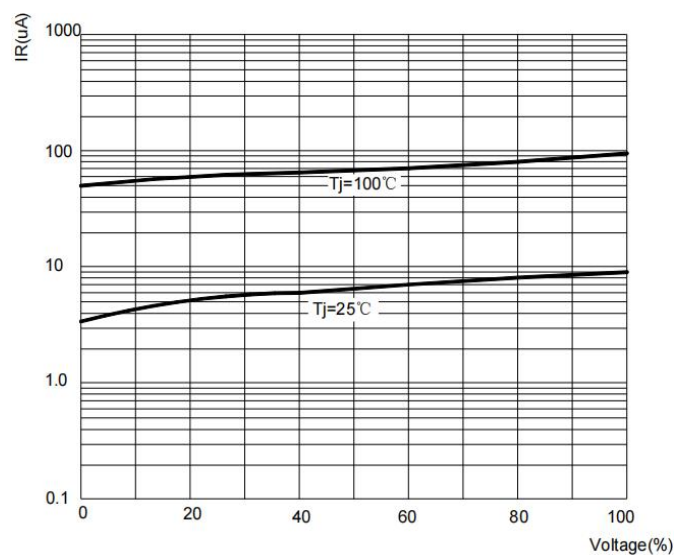
**FIG2: Surge Forward Current Capability**



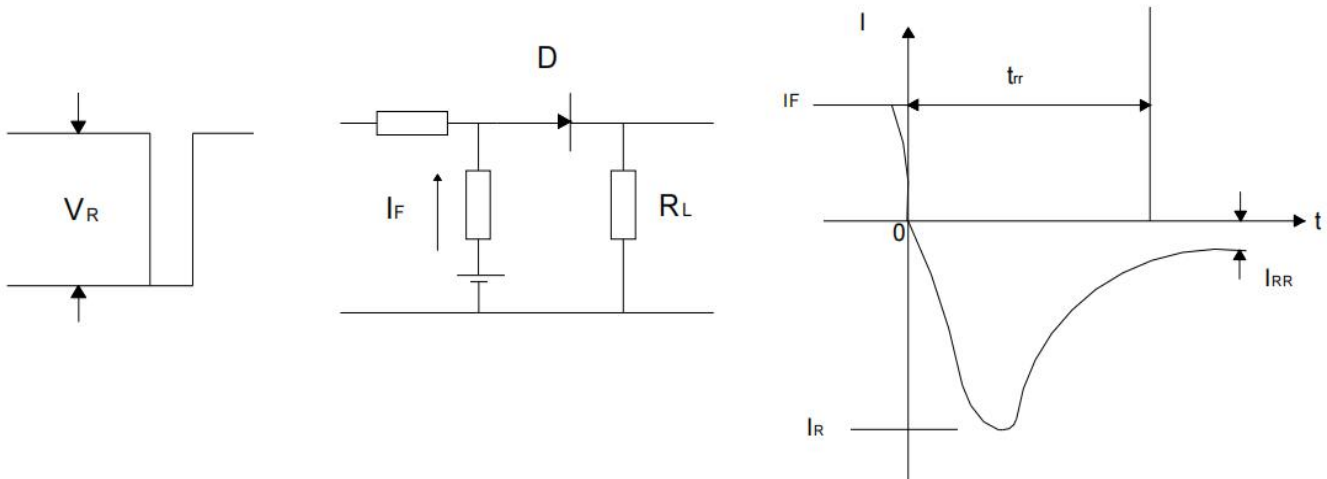
**FIG3: Instantaneous Forward Voltage**



**FIG4: Typical Reverse Characteristics**



**FIG5: Diagram of circuit and Testing wave form of reverse recovery time**



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## Ordering Information (Example)

PREFERRED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HS3A~ HS3M	DO-214AB(SMC)	3000	6000	42000	13" reel

## Outline Dimensions

