

# HS2A THRU HS2M (US2A THRU US2M)

## 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-214AA(SMB)  
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	HS2/US2							
				A	B	D	F	G	J	K	M
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		50	100	200	300	400	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60HZ Half-sine wave, Resistance load, $T_L=110^\circ\text{C}$	2.0							
Surge(Nonrepetitive)Forward Current	$I_{FSM}$	A	60HZ Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	50							
Storage Temperature	$T_{stg}$	°C		-55 ~ +150							
Junction Temperature	$T_j$	°C		-55 ~ +150							

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

PARAMETER	Symbol	Unit	Conditions	HS2/US2							
				A	B	D	F	G	J	K	M
Peak Forward Voltage	$V_{FM}$	V	$I_{FM}=2.0\text{A}$	1.0		1.3		1.7			
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$		5.0					
	$I_{RRM2}$			$T_a=100^\circ\text{C}$		100					
Maximum reverse recovery time	$T_{rr}$	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	50			75				
Thermal Resistance(Typical)	$R_{\theta J-A}$	°C/W	Between junction and ambient	80 <sup>1)</sup>							
	$R_{\theta J-L}$		Between junction and terminal	20 <sup>1)</sup>							

### Notes:

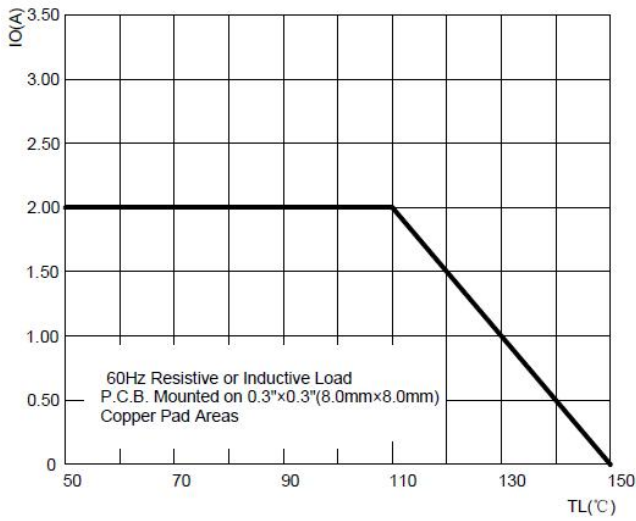
1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.



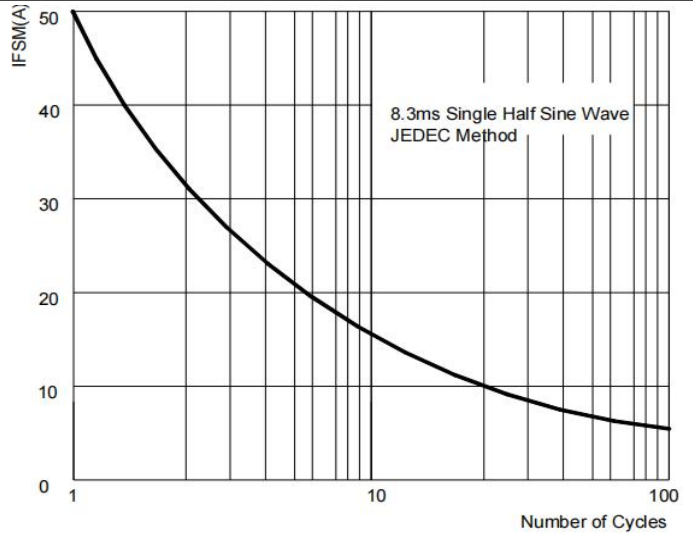
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### ■ Characteristics (Typical)

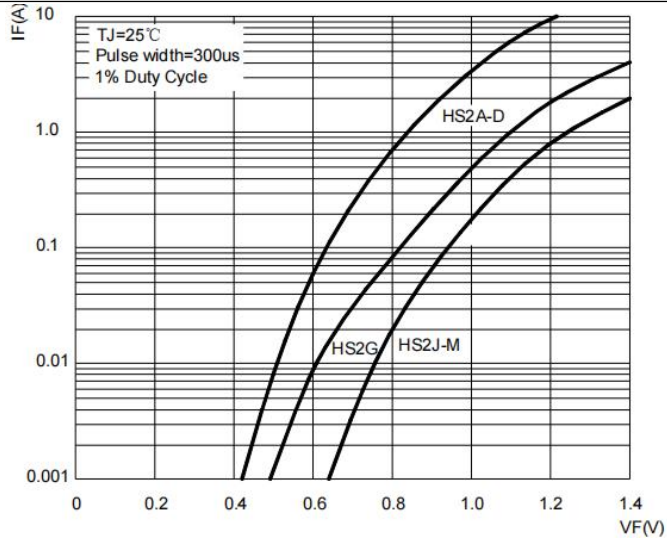
**FIG1: Forward Current Derating Curve**



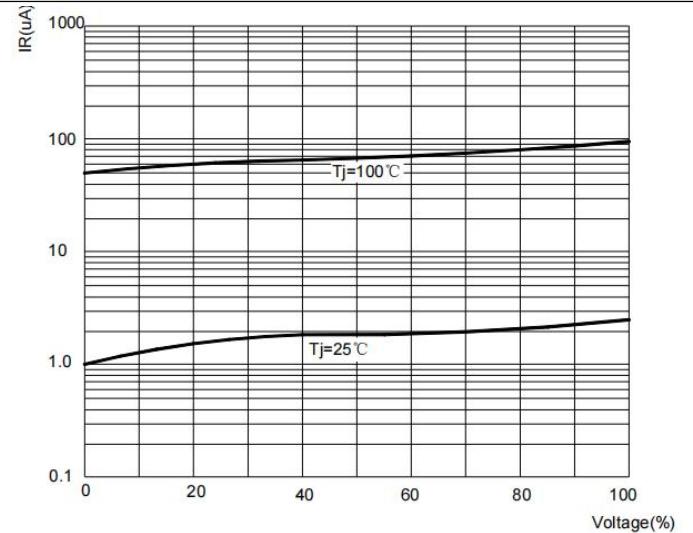
**FIG2: Surge Forward Current Capability**



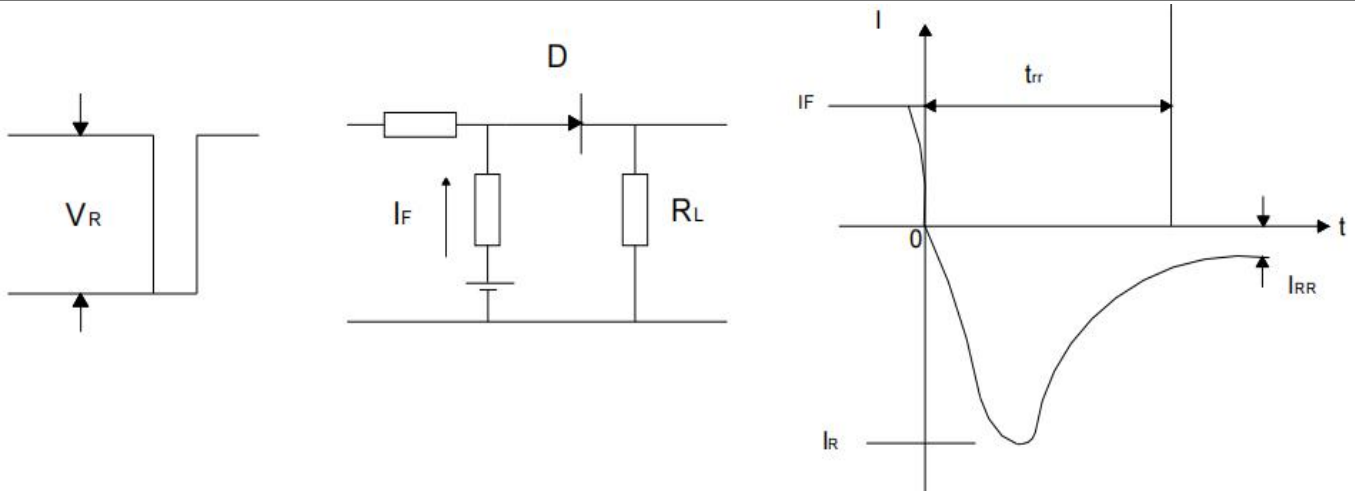
**FIG3: Instantaneous Forward Voltage**



**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
HS2A THRU HS2M (US2A THRU US2M)	DO-214AA(SMB)	3000	6000	48000	13" reel

■ Outline Dimensions

