

HS1A THRU HS1M

High Efficient Rectifier Diode

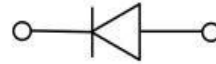
Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High frequency
- 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-214AC(SMA)
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	HS1							
				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		1.0							
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60HZ sine wave, 1 cycle, Ta=25°C	30							
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	HS1					
				A	B	D	F	G	J
Peak Forward Voltage	V_{FM}	V	$I_F = 1.0A$	1.0		1.3		1.7	
Peak Reverse Current	I_{RRM1}	μA	$V_{RM} = V_{RRM}$	10					
	I_{RRM2}			100					
Maximum reverse recovery time	T_{rr}	ns	$I_F = 0.5A$ $I_R = 1A$ $I_{RR} = 0.25A$	50				75	
Thermal Resistance(Typical)	$R_{θJ-A}$	°C/W	Between junction and ambient	75 ¹⁾					
	$R_{θJ-L}$		Between junction and terminal	27 ¹⁾					

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

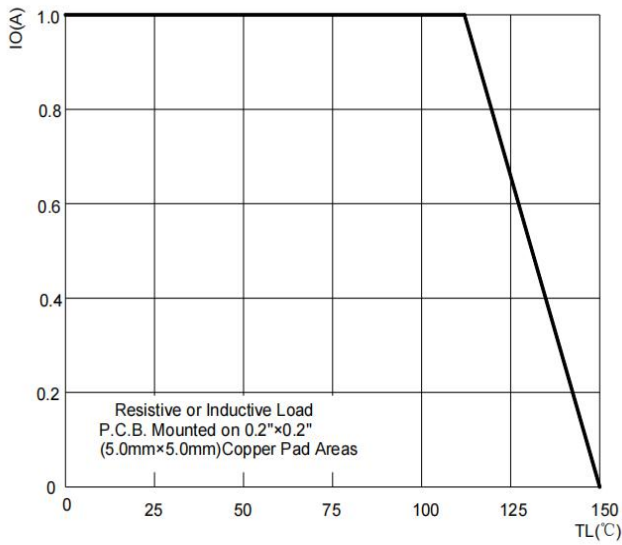


FIG2: Surge Forward Current Capability

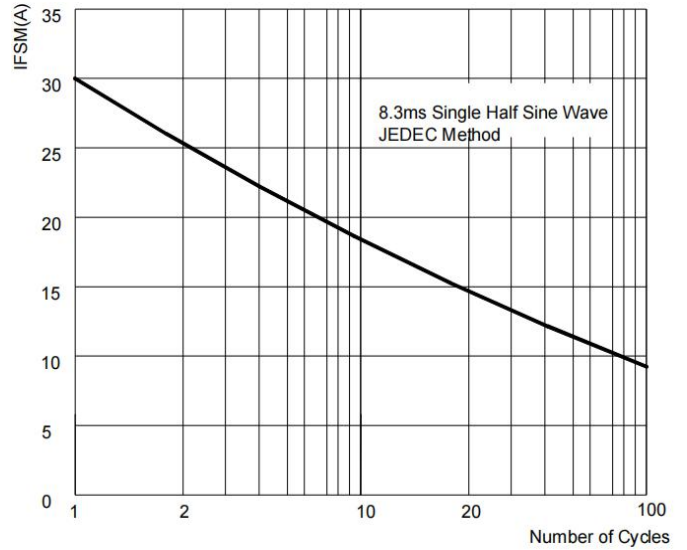


FIG3: Instantaneous Forward Voltage

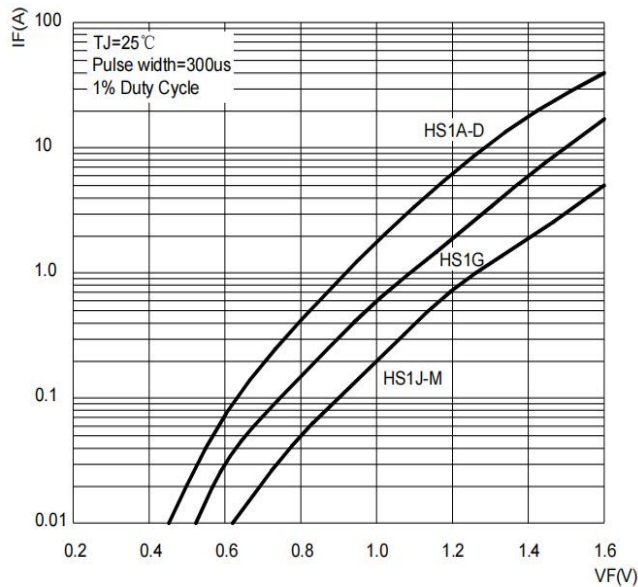


FIG4: Typical Reverse Characteristics

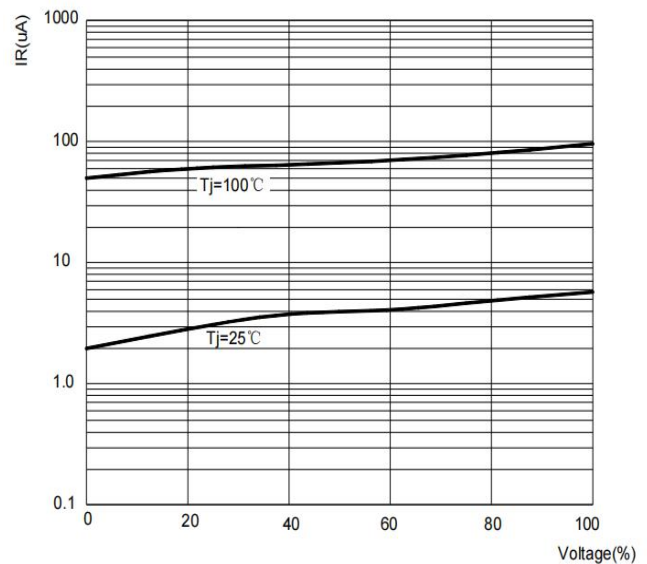
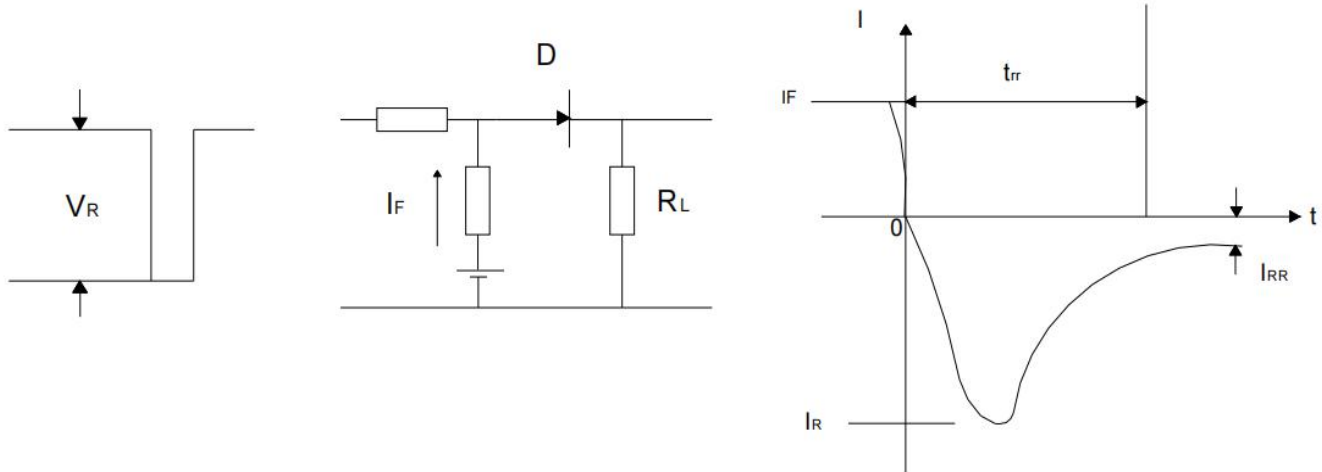


FIG5: Diagram of circuit and Testing wave form of reverse recovery time



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Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HS1A ~ HS1M	DO-214AC(SMA)	5000	10000	80000	13" reel
HS1A ~ HS1M	DO-214AC(SMA)	7500	15000	120000	13" reel

Outline Dimensions

