



HS1A THRU HS1M

Surface Mount High Efficient Rectifier

Features

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

Typical Applications

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

Mechanical Data

- Package: DO-214AC (SMA)
- Molding compound meets UL - 4 V-0 flammability rating
- RoHS-compliant
- halogen-free
- Terminals: Tin plated leads solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

Maximum Ratings (Ta 125 °C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	300	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	+0	140	210	280	420	560	+00
Maximum DC blocking Voltage	VDC	V	50	100	200	300	400	600	800	1000
Average rectified output current 4 60Hz sine wave Resistance load TL (FIG.1)	IO	A	1.0							
Forward Surge Current (Non-repetitive) 4 60Hz Half-sine wave 1 cycle Ta 125 °C	IFSM	A	30							
Forward Surge Current (Non-repetitive) 4 1ms square wave 1 cycle Ta 125 °C			60							
Current squared time 4 1ms @ 8.3ms Ta 125 °C	I²t	A²s	3. + 35							
Storage temperature	Tstg		-55 to +150							
Junction temperature	Tj		-55 to +150							

Electrical Characteristics Ta 125 °C Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M
Maximum instantaneous forward voltage	VF	V	IFM 1.0A	1.0			1.3		1. +		
Maximum reverse recovery time	trr	ns	IF 1.05A, IRR 1.0A, IRR 1.025A	50					+ 5		
Maximum DC reverse current at rated DC blocking voltage	IR	A	Ta 125 °C	5				100			

(# %)



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Thermal Characteristics T_a 125 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M
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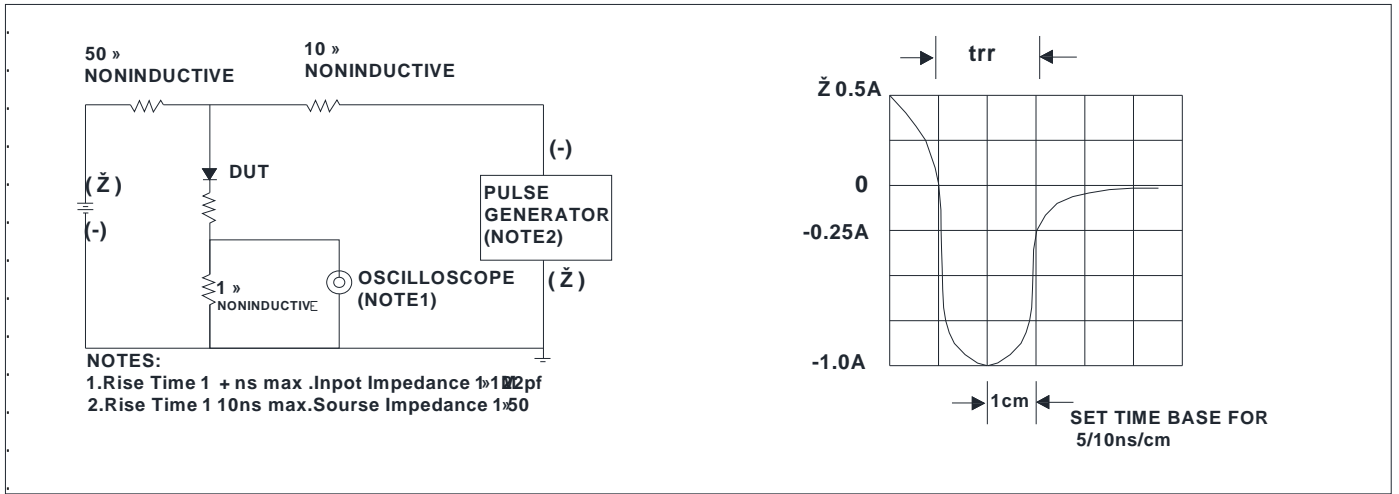
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Typical Thermal resistance



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FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HS1A-HS1M	F1	Approximate 0.05 -	5000	/	80000	13 1 reel
HS1A-HS1M	F2	Approximate 0.05 -	+ 500	/	120000	13 1 reel
HS1A-HS1M	F3	Approximate 0.05 -	+ 500	/	60000	13 1 reel
HS1A-HS1M	F4	Approximate 0.05 -	1800	14400	5 + 600	+ 1 reel
HS1A-HS1M	F5	Approximate 0.05 -	2000	16000	64000	+ 1 reel
HS1A-HS1M	F6	Approximate 0.05 -	5000	/	100000	13 1 reel

Outline Dimensions

DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4. + 5
D	1. - 0	2.30
E	4. - 3	5.28
F	0. + 6	1.41
G	0.05	0.20
H	0.15	0.31
I	1. + 0	2.10

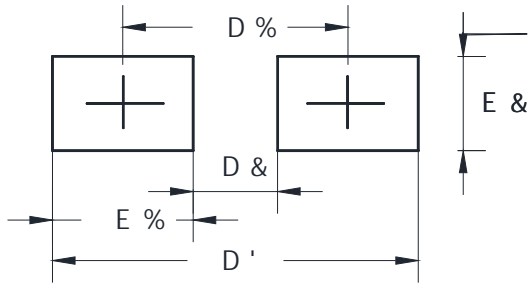
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Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	& ") \$
E &	% " + \$



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Disclaimer

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