



HS1A THRU HS1M

Surface Mount High Efficient Rectifier

Features

- ✓ Low profile package
- ✓ Ideal for automated placement
- ✓ Glass passivated chip junction
- ✓ 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 94 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 = 25°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	70	140	210	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	300	400	600	800	1000
Average rectified output current @60Hz sine wave , Resistance load , TL (FIG.1)	IO	A	1.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave , 1 cycle , Tj = 25°C	IFSM	A	30							
Forward Surge Current (Non-repetitive) @1ms , square wave , 1 cycle , Tj = 25°C			60							
Current squared time @1ms to 8.3ms Tj = 25°C	I²t	A²s	3.735							
Storage temperature	Tstg	°C	-55 ~ +150							
Junction temperature	Tj	°C	-55 ~ +150							

■Electrical Characteristics Ta = 25°C Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M
Maximum instantaneous forward voltage	V _F	V	I _{FM} = 1.0A	1.0			1.3		1.7		
Maximum reverse recovery time	t _{rr}	ns	I _F = 0.5A _{IO} = 1.0A , I _{rr} = 0.25A	50					75		
Maximum DC reverse current at rated DC blocking voltage	I _R	μA	T _j = 25℃	5							
			T _j = 125℃	100							



HS1A THRU HS1M

Thermal Characteristics $T_a = 25^{\circ}\text{C}$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M
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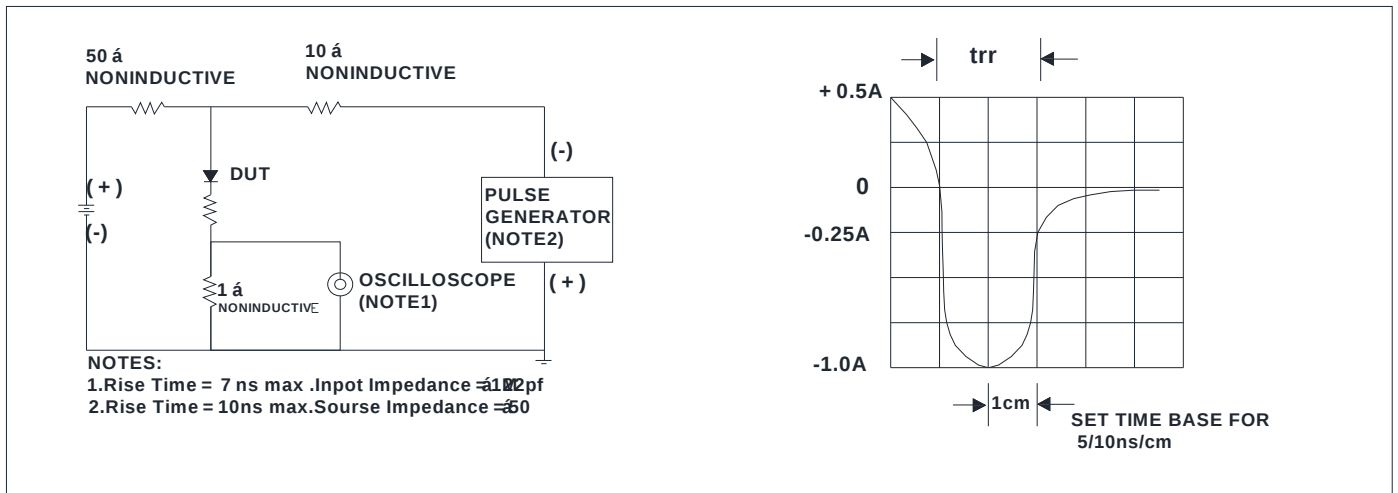
$R_{\theta JA}$

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 0.059	5000	/	80000	13 ÷ reel
HS1A-HS1M	F2	Approximate 0.059	7 500	/	120000	13 ÷ reel
HS1A-HS1M	F3	Approximate 0.059	7 500	/	60000	13 ÷ reel
HS1A-HS1M	F4	Approximate 0.059	1800	14400	5 7 600	7 ÷ reel
HS1A-HS1M	F5	Approximate 0.059	2000	16000	64000	7 ÷ reel
HS1A-HS1M	F6	Approximate 0.059	5000	/	100000	13 ÷ reel

Outline Dimensions

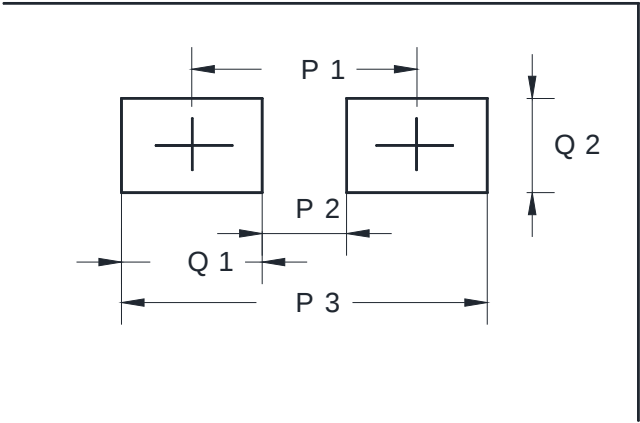
DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.70	2.10

Dimensions in millio ur u



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■Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2 . 5 0
Q 2	1 . 7 0



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Disclaimer

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This is a preliminary draft of the specification.

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