1A, 200V - 1000V Standard Surface Mount Rectifier

FEATURES

• Glass passivated chip junction

EMICONDUCTOR

- Ideal for automated placeme
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant

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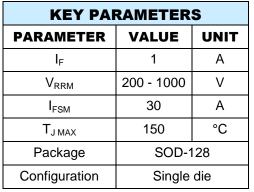
• Halogen-free according to IEC 61249-2-21

APPLICATIONS

- DC to DC converter
- Switching mode converters and inverters
- General purpose

MECHANICAL DATA

- Case: SOD-128
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.027g (approximately)





ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)							
PARAMETER	SYMBOL	S1DFS	S1GFS	S1JFS	S1KFS	S1MFS	UNIT
Marking code on the device		S1DFS	S1GFS	S1JFS	S1KFS	S1MFS	
Repetitive peak reverse voltage	V _{RRM}	200	400	600	800	1000	V
Reverse voltage, total rms value	V _{R(RMS)}	140	280	420	560	700	V
Forward current	١ _F			1			А
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30			A		
Junction temperature	TJ	-55 to +150			°C		
Storage temperature	T _{STG}	-55 to +150			°C		



THERMAL PERFORMANCE				
PARAMETER	SYMBOL	ТҮР	UNIT	
Junction-to-lead thermal resistance	R _{ƏJL}	29	°C/W	
Junction-to-ambient thermal resistance	R _{eja}	82	°C/W	
Junction-to-case thermal resistance	R _{eJC}	30	°C/W	

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 0.5A, T_J = 25^{\circ}C$	V _F	0.91	1.0	V
	$I_F = 1.0A, T_J = 25^{\circ}C$		0.99	1.1	V
	$I_F = 0.5A, T_J = 125^{\circ}C$		0.78	0.87	V
	$I_F = 1.0A, T_J = 125^{\circ}C$		0.85	0.95	V
Reverse current @ rated $V_R^{(2)}$	T _J = 25°C	I _R	-	1	μA
	T _J = 125°C		-	50	μA
Junction capacitance	1MHz, V _R = 4.0V	CJ	9	-	pF

Notes:

- 1. Pulse test with PW = 0.3ms
- 2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
S1xFS	SOD-128	14,000 / Tape & Reel

Notes:

1. "x" defines voltage from 200V(S1DFS) to 1000V(S1MFS)



100

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

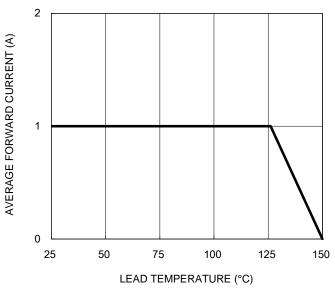


Fig.3 Typical Reverse Characteristics

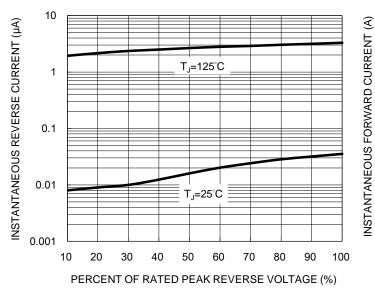
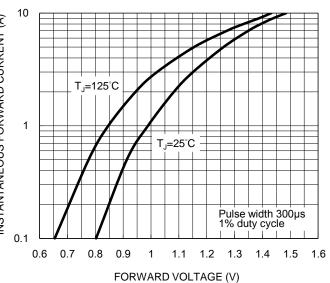
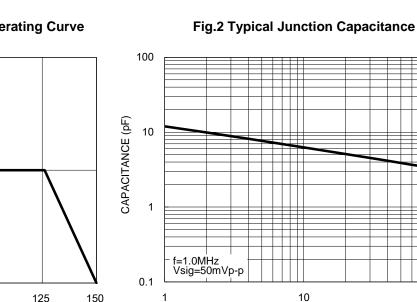


Fig.4 Typical Forward Characteristics

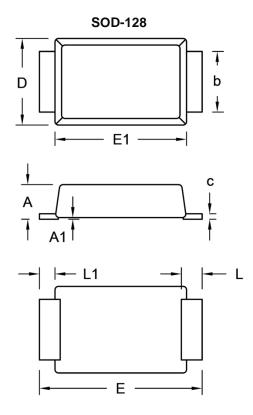
REVERSE VOLTAGE (V)





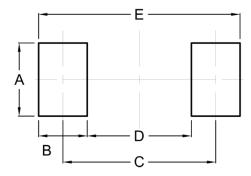


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)		
	Min.	Max.	Min.	Max.	
A	0.90	1.10	0.035	0.043	
A1	0.00	0.10	0.000	0.004	
b	1.60	1.90	0.063	0.075	
с	0.10	0.22	0.004	0.009	
D	2.30	2.70	0.091	0.106	
E	4.40	5.00	0.173	0.197	
E1	3.60	4.00	0.142	0.157	
L	0.40	0.80	0.016	0.031	
L1	0.30	0.60	0.012	0.024	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.10	0.083
В	1.40	0.055
С	4.40	0.173
D	3.00	0.118
E	5.80	0.228

MARKING DIAGRAM



P/N = Marking Code

YW = Date Code

= Factory Code F



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