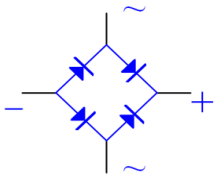
E91307R

Surface Mount Glass Passivated Single Phase Bridge Rectifier
Reverse Voltage 1000V Output Current 3.0A

Features



RoHS COMPLIANT

- Glass passivated fast recovery bridge rectifiers
- Ideal for automated placement
- Very low profile - max height 1.2 mm
- High surge current capability
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260℃/10 seconds
- Low forward voltage drop



case: E91

Mechanical Data

- Case:E91,Molding compound meets UL 94V-0 flammability rating
- Terminals:Matte tin plated leads,solderable per MIl-STD-750 Method 2026,J-STD-002 and JESD22-B102

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for TV,Monitor,SMPS,Adapter, Printer,Audio equipment,and Home Applications application

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	E91307R	Unit
Maximum repetitive peak reverse voltage	VRRM	1000	V
Maximum RMS voltage	VRMS	700	V
Maximum DC blocking voltage	VDC	1000	V
Maximum average output rectified current	Io(AV)[1)]	3.0	A
	Io(AV)[2)]	2.5	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	90	A
Rating for fusing (t≤8.3ms)	I^2t	34	A^2s
Operating junction and storage temperature range	TJ, TSTG	-55 to +150	°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	E91307R	Unit
Maximum instantaneous forward voltage	IF=1.5A	V_F	1.2	Volts
	IF=3.0A		1.3	
Maximum DC reverse current at rated DC blocking voltage	TA=25℃	I_R	5.0	μA
	TA=125℃		100	
Typical reverse recovery time	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	t_{rr}	250	nS
Typical junction capacitance	4.0 V, 1 MHz	C_J	19	pF

Note 1). mounted recommended copper pad areas with Al substrate PCB

2). mounted 13*13mm copper pad areas with FR-4 PCB

Thermal Characteristics (Ta=25℃ unless otherwixe noted)

Parameter	Test Conditions	Symbol	E91307R	Unit
Typical thermal resistance	juntion to ambient[1)]	$R_{\theta JA}$	45	℃/W
	juntion to case[1)]	$R_{\theta JC}$	12.6	
	juntion to ambient[2)]	$R_{\theta JA}$	29.8	
	juntion to case[2)]	$R_{\theta JC}$	8.4	

Note:1), The thermal resistance from junction to ambient and case, mounted on glass epoxy FR-4 P.C.B with recommended copper pads

2), The thermal resistance from junction to ambient and case, mounted on glass epoxy FR-4 P.C.B with 13*13mm copper pads

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

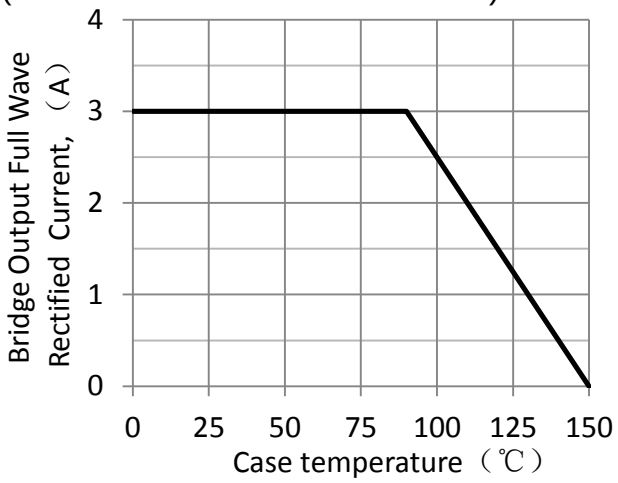


Figure 1.Forward Current Derating Curve

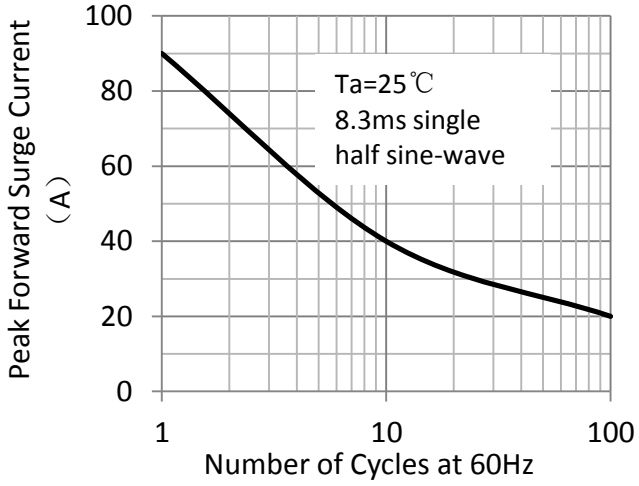


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

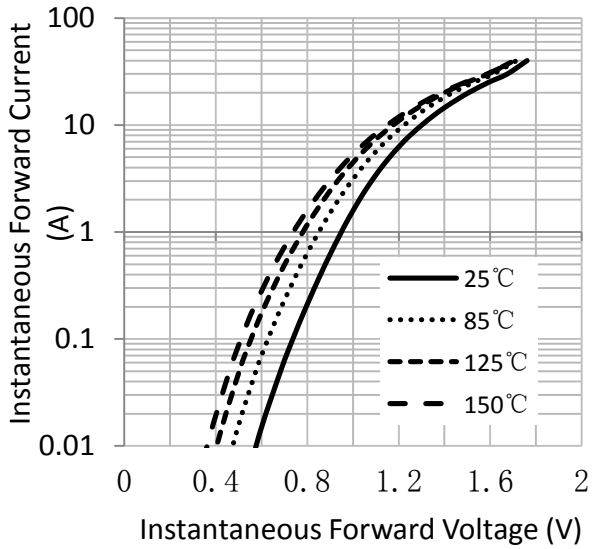


Figure 3. Typical Instantaneous Forward Characteristics

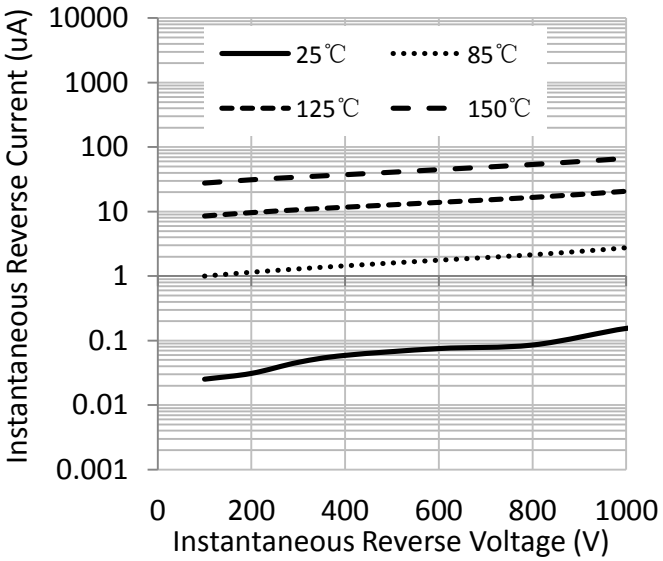
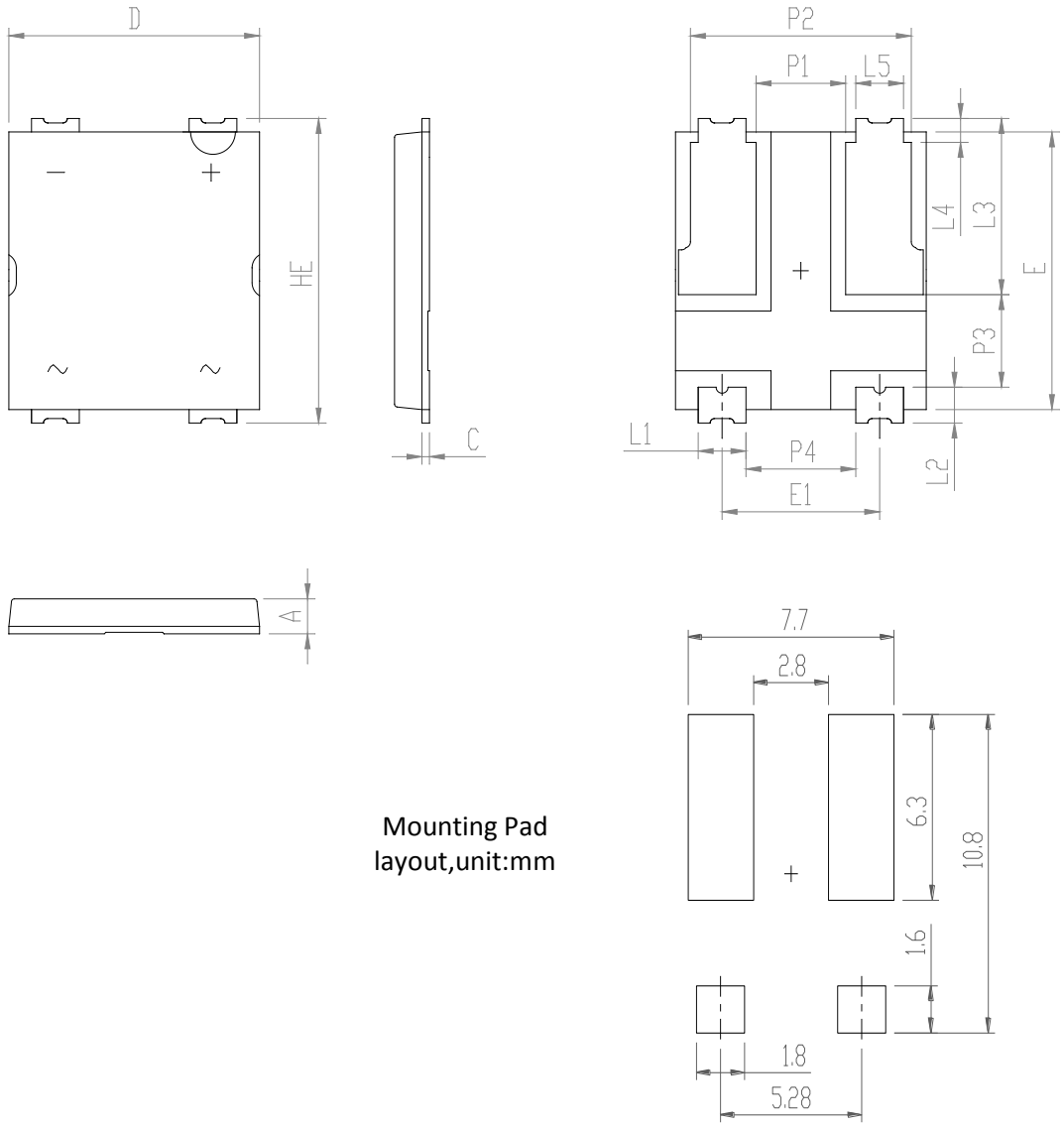


Figure 4. Typical Reverse Characteristics

Package Outline Dimensions



Mounting Pad layout,unit:mm

(Unit:mm)

Dim	Min	Nom.	Max	Dim	Min	Nom.	Max
A	1.10	1.17	1.20	L3	5.7	5.9	6.1
C	0.20	0.25	0.35	L4	0.6	0.80	1
D	8.3	8.4	8.6	L5	1.4	1.6	1.8
HE	10.0	10.2	10.4	P1	3.0 REF		
E	9.1	9.30	9.5	P2	7.4 REF		
E1	5.28 REF			P3	3.1 REF		
L1	1.4	1.60	1.80	P4	3.68 REF		
L2	1.0	1.2	1.4				

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