DATA SHEET

TYPE: 90A/600V

Packge: TO-247

Prepared by	Audit by	Approved by

Product specifications

V_{RRM} = 600V
I_{FAV} = 90 A
V_F = 1.0V

Product Application:

- Household Electric Appliances
- Industrial power supply
- Industrial automation equipment
- Electric welding machine

Product Features:

- Glass passivated chip
- Low Reverse Leakage Current
- High surge current capability to 1300 Amperes
- ROHS compliance
- High temperature soldering guaranteed:
  260℃±5℃/10 seconds (2.3kg.F) tension

Parkage:

Mechanical Data:

- Terminals:Nickel-plaed (6.30mm) Faston lugs
- Polarity : Polarity symbols being marked on body
- Mounting Position : Fixing the bridge rectifier with M6 screw to the heat sink . Coat silicon thermal compound between backside of the bridge ,which will be contacted with the heat sink for maximizing heat transfer.
- Higher Reliability Systems
- Weight : 5.7 grams

Circuit diagram

1 - Cathode
2 - Anode
Back of Case - Cathode

MAXIMUM RATINGS

All Ratings: Tc = 25° C unless otherwise specified.

Symbol	Characteristic / Test Conditions	TYP	UNIT
VR	Maximum D.C. Reverse Voltage	600	Volts
VRRM	Maximum Peak Repetitive Reverse Voltage		
i^2t	Rating for fusing, 8.3ms, Tj=25℃, Rating of per diode	7000	A^2S
IF(AV)	Maximum Average Forward Current (Tc = 100℃, Duty Cycle = 0.5)	90	Amps
IFSM	Non-Repetitive Forward Surge Current (Tj = 25℃, 10ms)	1300	
TJ	Junction Temperature Range	-40 to 150	° C
TSTG	Storage Temperature Range	-40 to 150	
TL	Lead Temperature for 10 Sec	260	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions		TYP	MAX	UNIT
VF	Forward Voltage	IF = 45A, TJ = 25℃	0.89	0.92	Volts
		IF = 90A, TJ = 25℃	0.95	1	
		IF = 45A, TJ = 125℃	0.77	0.8	
		IF = 90A, TJ = 125℃	0.85	0.9	
IRM	Maximum Reverse Leakage Current	VR = 600V, TJ =25℃		10	uA
		VR = 600V, TJ =150℃		500	

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	90EPS06 LH	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance	0.35	℃/W
WT	Package Weight	5.7	g
Torque	Maximum Mounting Torque	8	Nm

TYPICAL PERFORMANCE CURVES

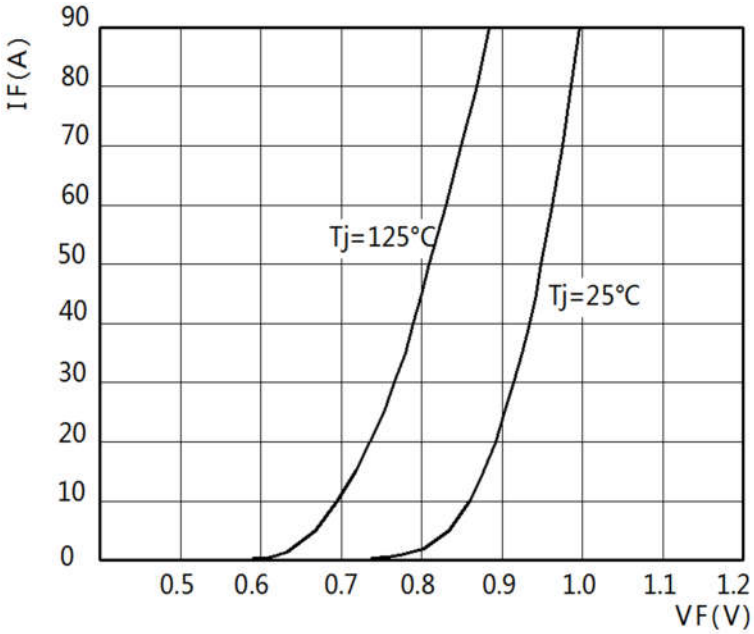


FIGURE 1. FORWARD CURRENT vs FORWARD VOLTAGE

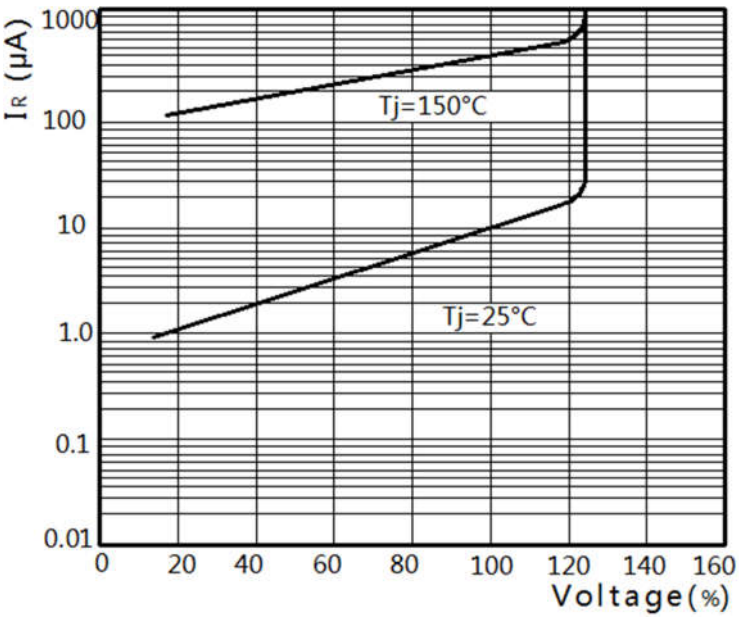


FIGURE 2. REVERSE CURRENT vs REVERSE VOLTAGE

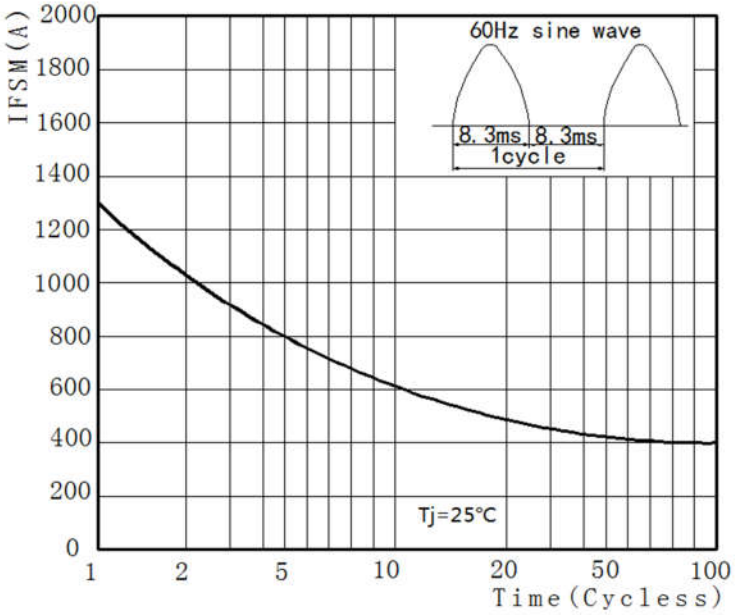


FIGURE 3. Peak Surge Forward Capability

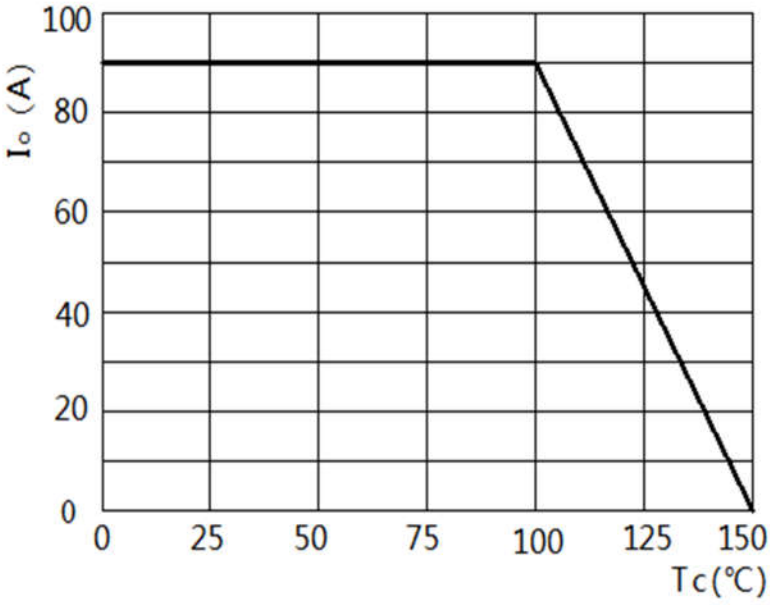
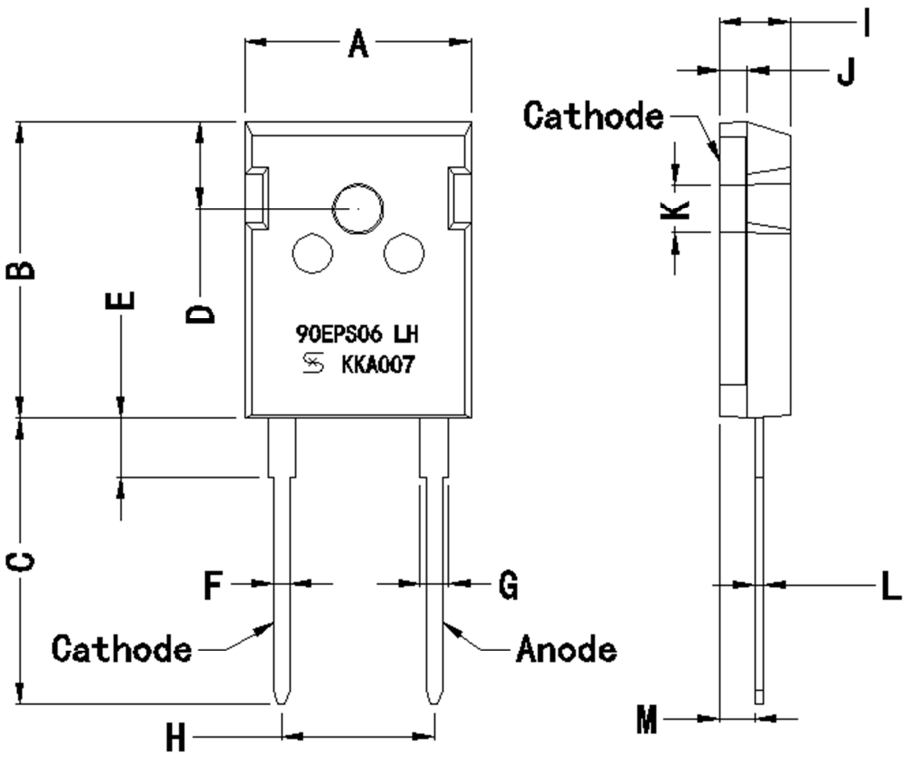


FIGURE 4. CURRENT DERATING CURVE

Dimensioned drawing



Dim.	Millimeter		Inches	
	min	max	min	max
A	15.70	16.30	0.618	0.641
B	20.70	21.30	0.814	0.838
C	19.80	20.80	0.779	0.818
D	6.05	6.35	0.238	0.249
E	4.00	4.40	0.157	0.173
F	1.00	1.30	0.039	0.051
G	1.80	2.20	0.070	0.086
H	10.50	11.10	0.413	0.437
I	4.70	5.30	0.185	0.208
J	1.70	2.30	0.066	0.090
K	3.5	3.8	0.138	0.149
L	0.55	0.75	0.021	0.029
M	2.30	2.70	0.090	0.106

Marking