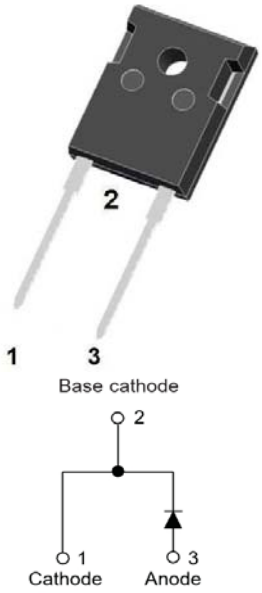
General Purpose Rectifier Diodes



Features

- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Application

- Input rectification

Mechanical Data

- **Package**: TO-247AC
  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**: As marked

■Maximum Ratings (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	90EPS20
Device marking code			90EPS20
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	2000
Maximum RMS Voltage	V_{RMS}	V	1400
Maximum DC Blocking Voltage	V_{DC}	V	2000
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc (FIG.1)	Io	A	90
Surge(Non-repetitive) Forward Current @10ms half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	1200
Current Squared Time @1ms≤t≤10ms Tj=25℃	I^2t	$A^2s.$	5976
Storage Temperature	T_{stg}	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150

■Electrical Characteristics (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=45.0A		1.03	1.2
			I_{FM}=90.0A	-	1.5	1.5
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	uA	$V_{RM}=V_{RRM}$ Tj=25℃	-	-	10
			$V_{RM}=V_{RRM}$ Tj=125℃	-	-	1000
Junction Capacitance	Cj	pF	1MHz and Applied on 4.0VD.C	-	308	-

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	90EPS20
Typical Thermal Resistance Between junction and case	$R_{\theta J\text{-}C}$	℃/W	0.2

■Characteristics (Typical)

FIG.1: Io-TC Curve

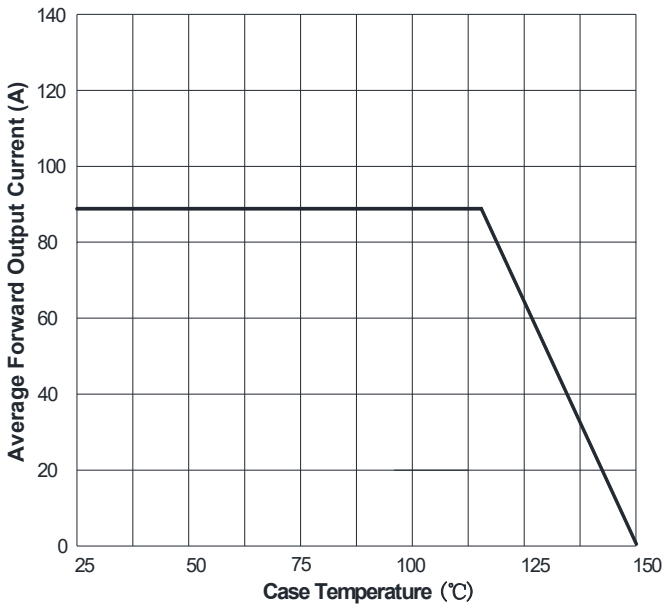


FIG2:Surge Forward Current Capability

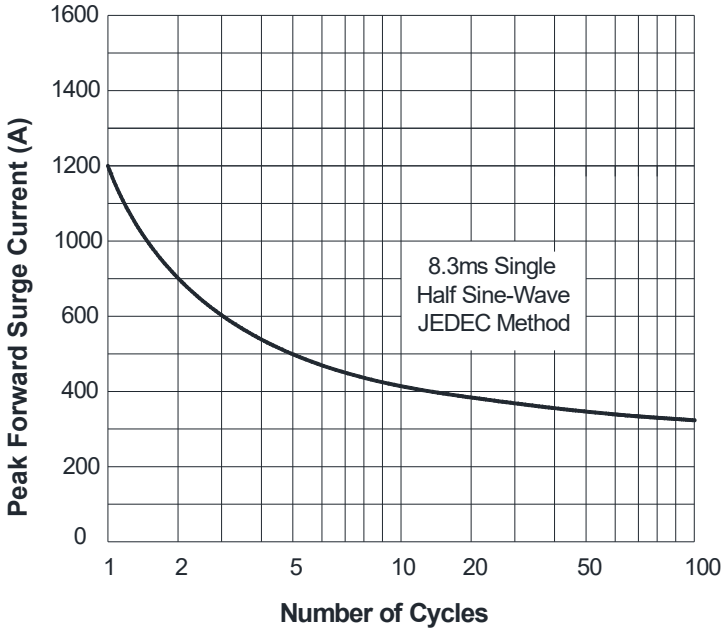


FIG3: Typical Forward Voltage

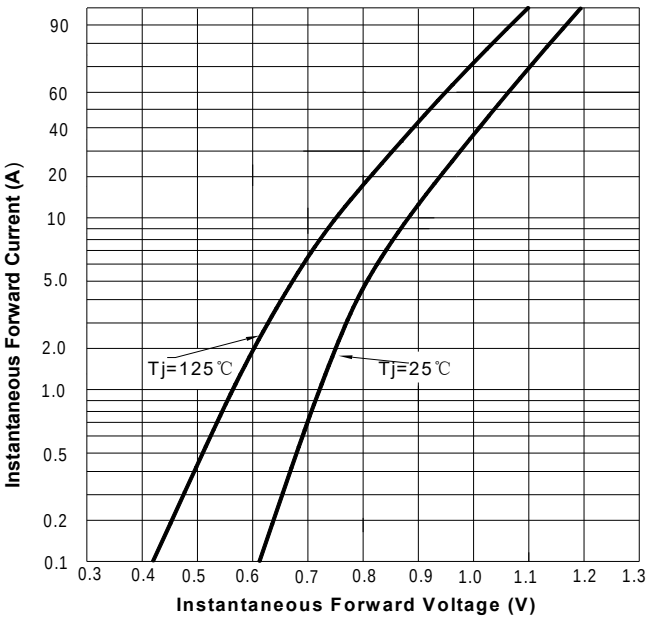
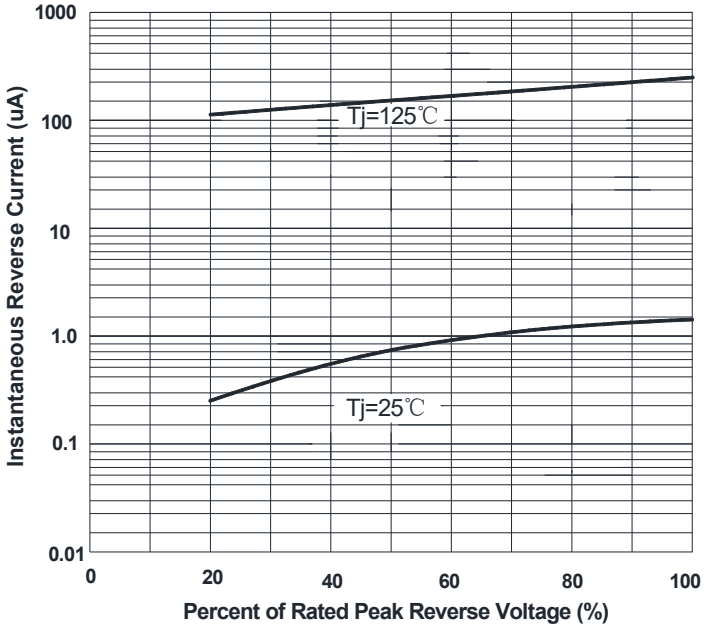
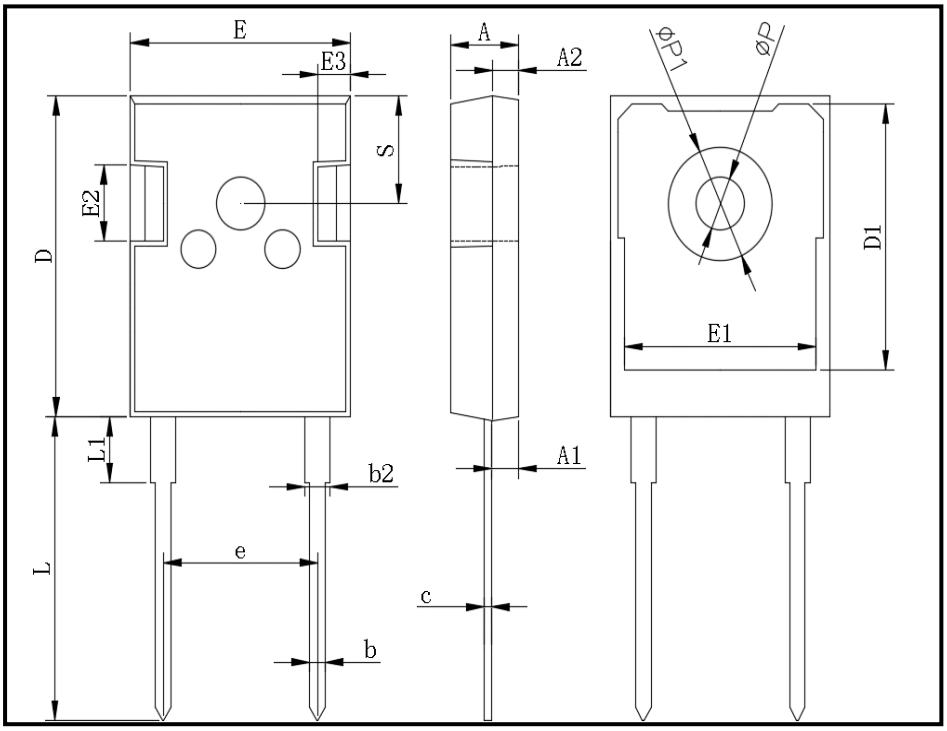


FIG.4: Typical Reverse Characteristics



■Outline Dimensions



TO-247AC		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.11	1.36
b2	1.91	2.21
c	0.51	0.75
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.00	13.60
E2	4.80	5.20
E3	2.30	2.70
e	10.88BSC	
L	19.62	20.22
L1	-	4.30
ϕP	3.40	3.80
ϕP1	-	7.30
S	6.15BSC	

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.21yangjie.com , or consult your nearest Yangjie's sales office for further assistance.