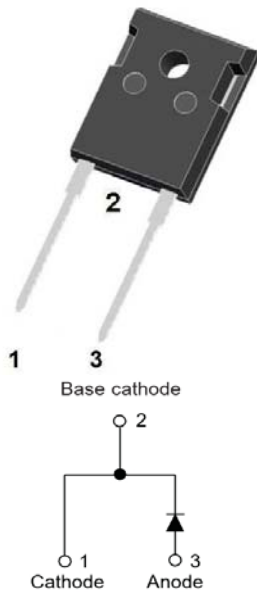


General Purpose Rectifier Diodes



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 (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	90EPS22
Device marking code			90EPS22
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	2200
Maximum RMS Voltage	V _{RMS}	V	1540
Maximum DC Blocking Voltage	V _{DC}	V	2200
Average Rectified Output Current @60Hz half sine-wave, R-load, T _c (FIG.1)	I _o	A	90
Surge(Non-repetitive) Forward Current @10ms half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	1200
Current Squared Time @1ms≤t≤10ms T _j =25°C	I ² t	A ² s.	5976
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

■Electrical Characteristics (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =45.0A		1.05	1.2
			I _{FM} =90.0A	-	1.2	1.5
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	uA	V _{RM} =V _{RRM} T _j =25°C	-	-	10
			V _{RM} =V _{RRM} T _j =125°C	-	-	1000
Junction Capacitance	C _j	pF	1MHz and Applied on 4.0VD.C	-	295	-



90EPS22

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

PARAMETER	SYMBOL	UNIT	90EPS22
Typical Thermal Resistance Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	0.2

■ Characteristics (Typical)

FIG.1: I_o -TC Curve

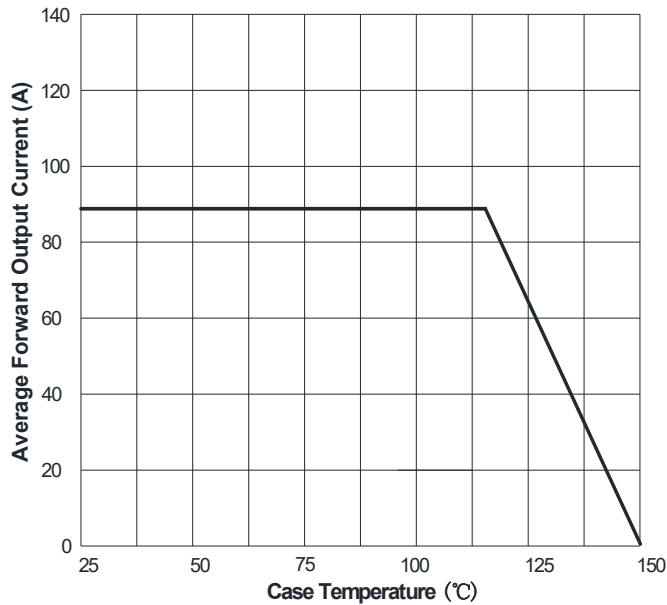


FIG2: Surge Forward Current Capability

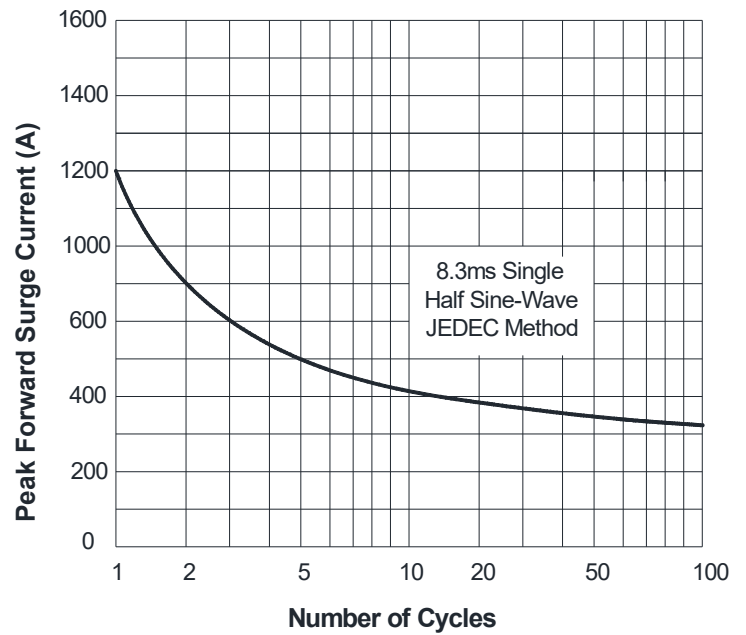


FIG3: Typical Forward Voltage

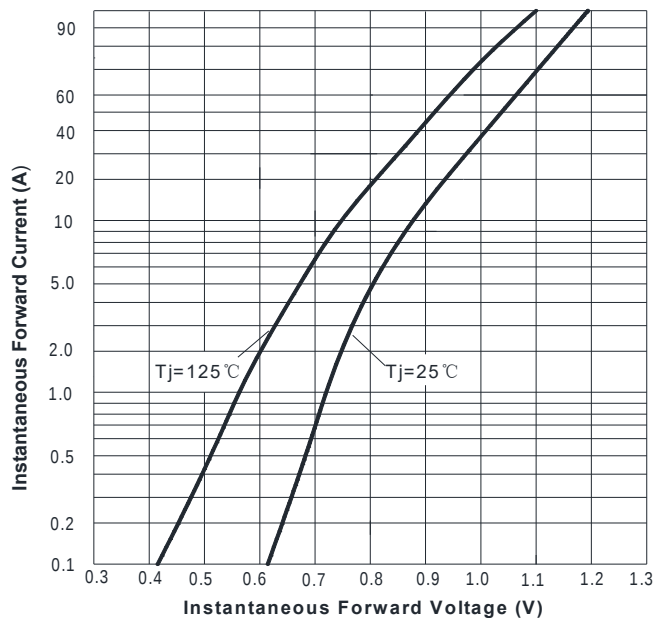
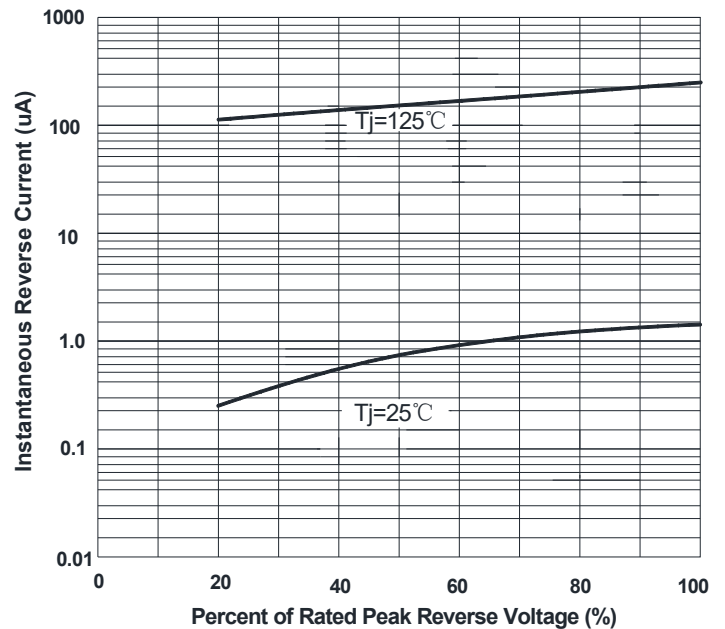


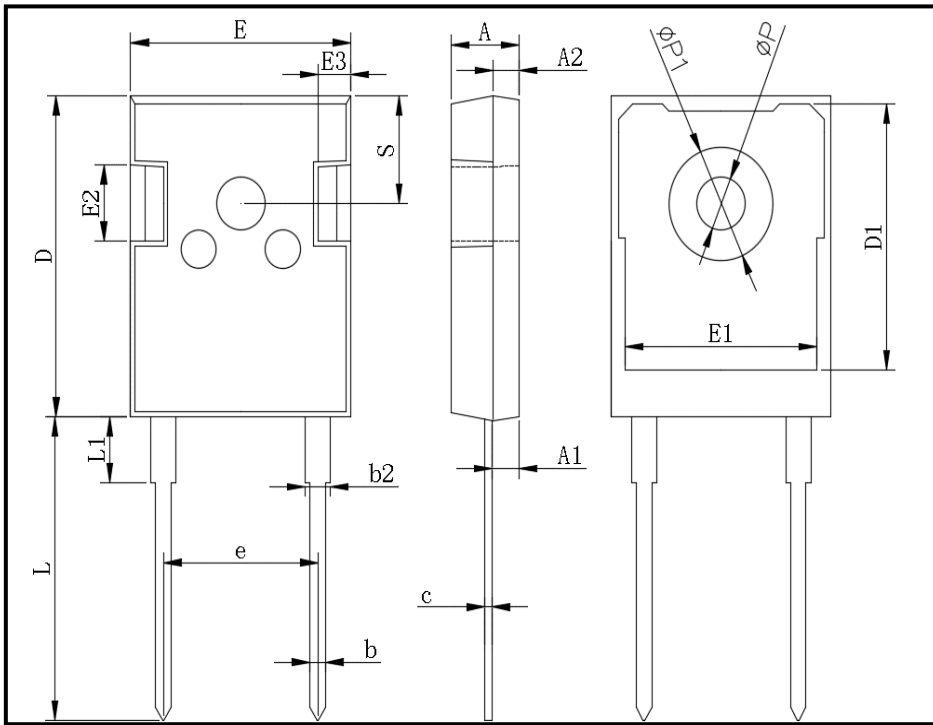
FIG.4: Typical Reverse Characteristics





90EPS22

■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
φ P	3.40	3.80
φ P1	-	7.30
S	6.15BSC	



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