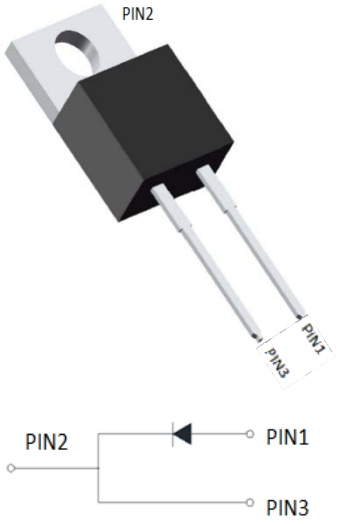
General Purpose Rectifier Diodes



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-220AC
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: As marked

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

PARAMETER	SYMBOL	UNIT	30EPS16C
Device marking code			30EPS16C
Repetitive Peak Reverse Voltage	V_{RRM}	V	1600
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc (FIG.1)	I_o	A	30
Surge(Non-repetitive) Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	300
Current Squared Time @1ms≤t≤10ms Tj=25℃	I^2t	A^2s.	373.5
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	30EPS16C
Maximum instantaneous forward voltage	V_{FM}	V	I_{FM}=30.0A T_a=25℃	1.5
			I_{FM}=30.0A T_a=125℃	1.3
Maximum DC reverse current at rated DC blocking voltage	I_{RRM1}	uA	V_{RM}=V_{RRM} T_a=25℃	5
	I_{RRM2}	uA	V_{RM}=V_{RRM} T_a=125℃	500
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	57

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

PARAMETER		SYMBOL	UNIT	30EPS16C
Thermal Resistance	Between junction and ambient	$R_{\theta J-A}$	℃/W	30
	Between junction and case	$R_{\theta J-C}$		0.7

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
30EPS16C	Approximate 6.0	50	1000	5000	Tube

■Characteristics (Typical)

FIG.1: Io-TC Curve

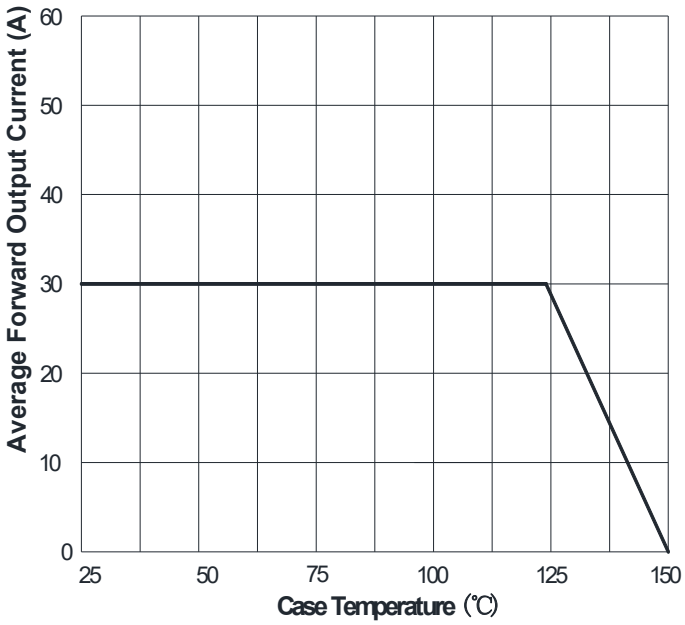


FIG2:Surge Forward Current Capability

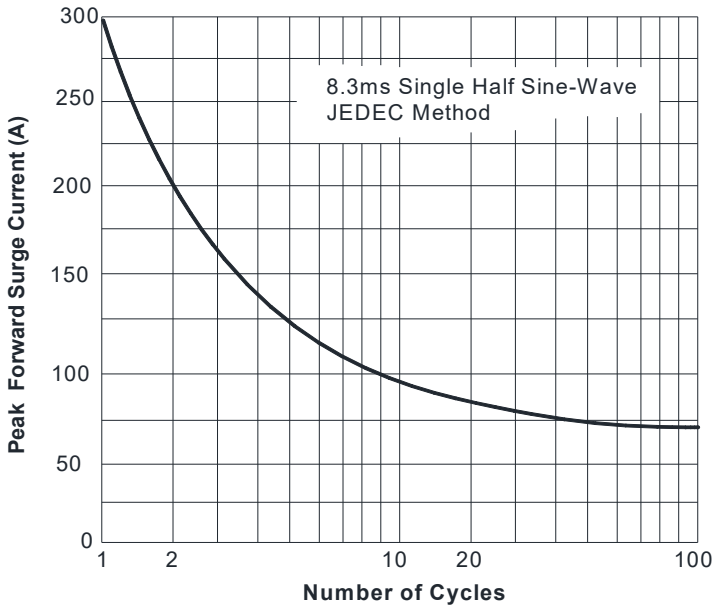


FIG3: Typical Forward Voltage

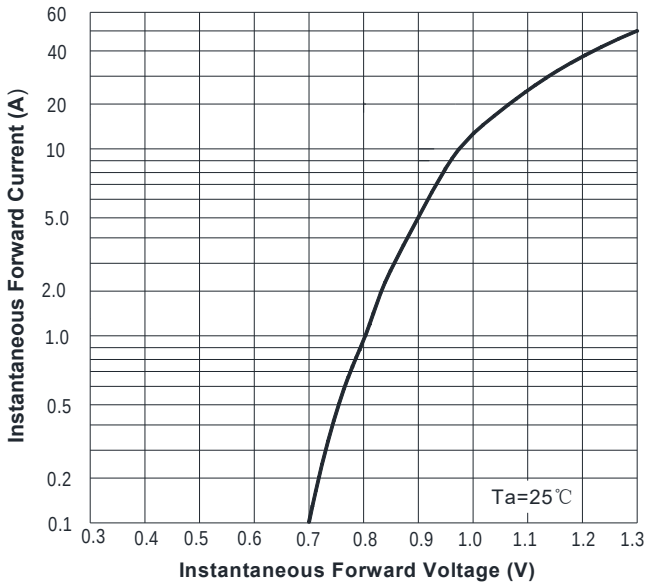
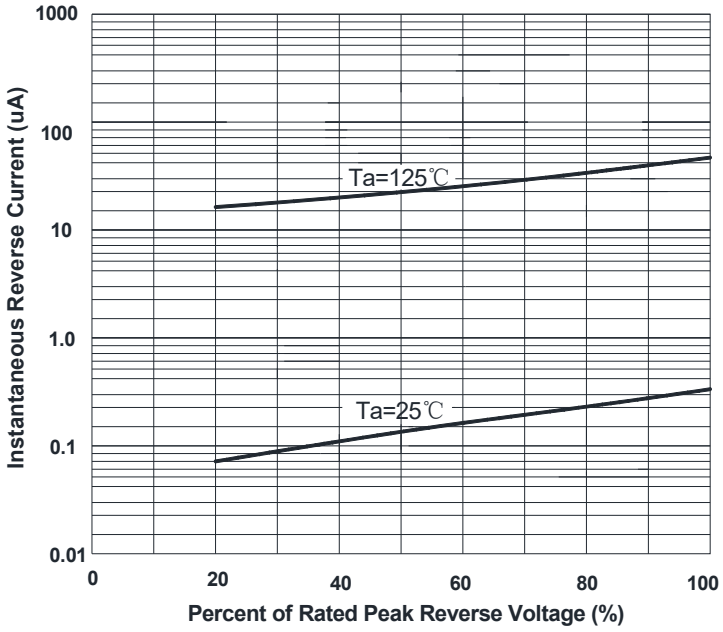
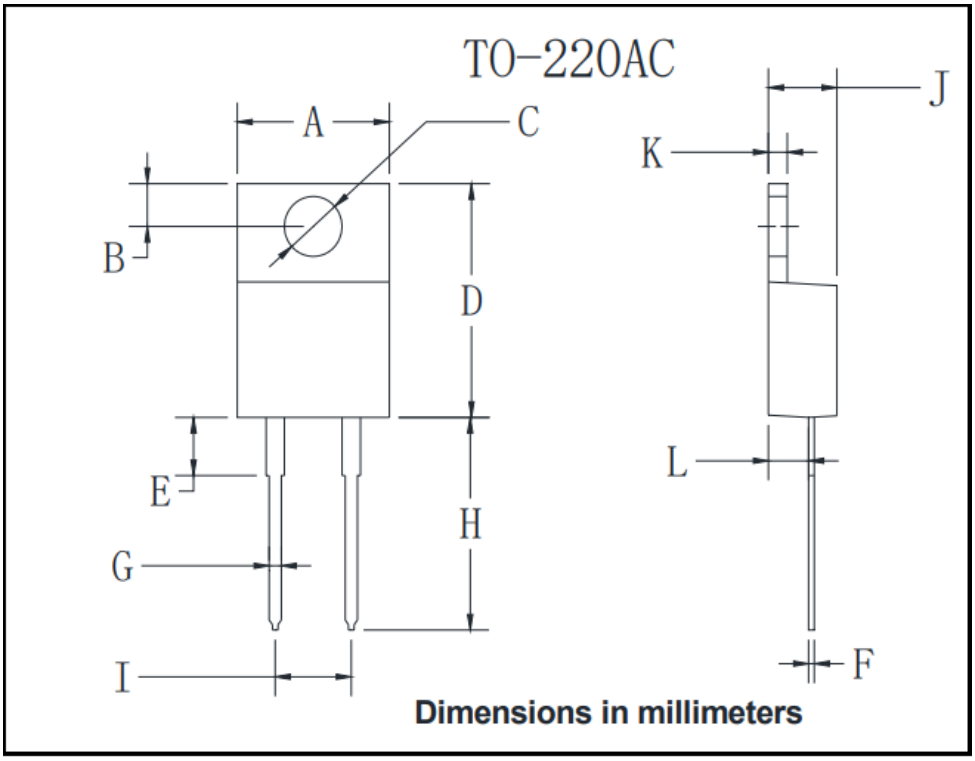


FIG.4: Typical Reverse Characteristics



■Outline Dimensions



TO-220AC		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.75	4.05
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.3	13.9
I	4.86	5.26
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79

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