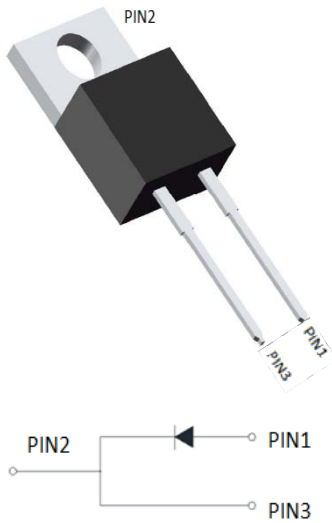


## General Purpose Rectifier Diodes



### 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 (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	30EPS16C
Device marking code			30EPS16C
Repetitive Peak Reverse Voltage	VRRM	V	1600
Average Rectified Output Current @60Hz half sine-wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>o</sub>	A	30
Surge(Non-repetitive) Forward Current @60Hz half sine-wave, 1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	300
Current Squared Time @1ms≤t≤10ms T <sub>j</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s.	373.5
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	30EPS16C
Maximum instantaneous forward voltage	VFM	V	IFM=30.0A T <sub>a</sub> =25°C	1.5
			IFM=30.0A T <sub>a</sub> =125°C	1.3
Maximum DC reverse current at rated DC blocking voltage	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =VRRM T <sub>a</sub> =25°C	5
	I <sub>RRM2</sub>	uA	V <sub>RM</sub> =VRRM T <sub>a</sub> =125°C	500
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	57



# 30EPS16C

## ■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

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

## ■ Ordering Information (Example)

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

## ■ Characteristics (Typical)

FIG1: Io-TC Curve

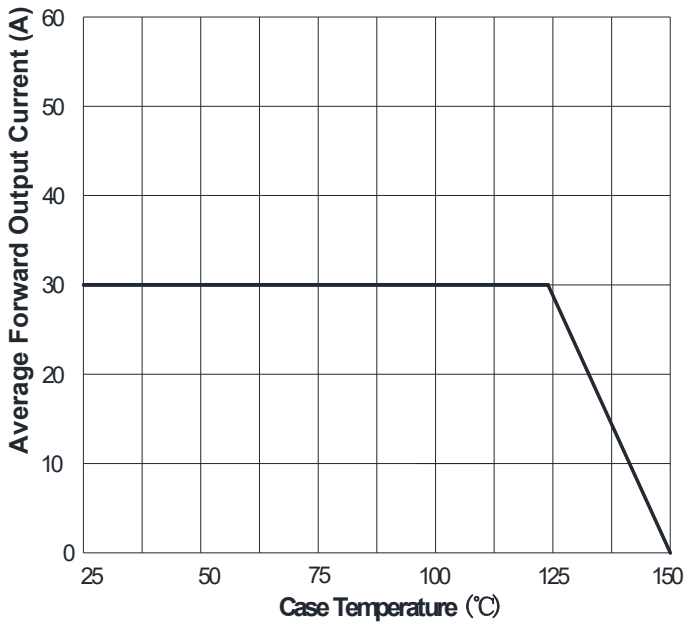


FIG2: Surge Forward Current Capability

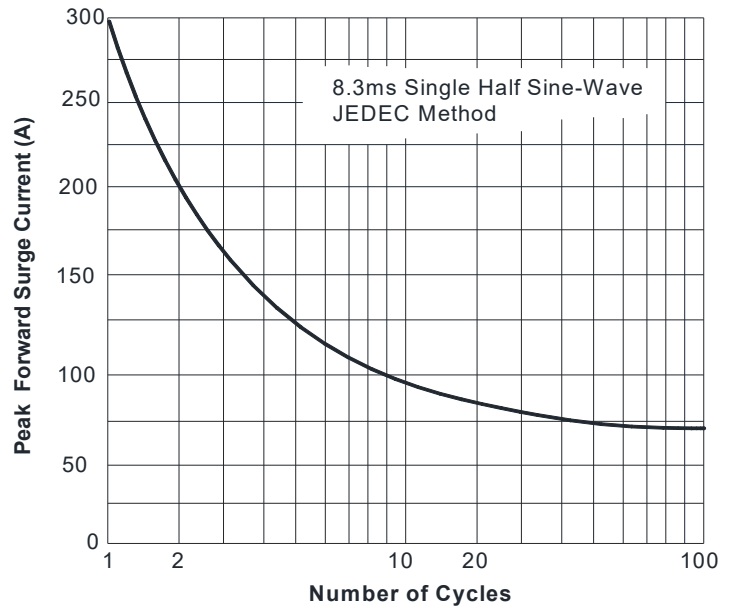


FIG3: Typical Forward Voltage

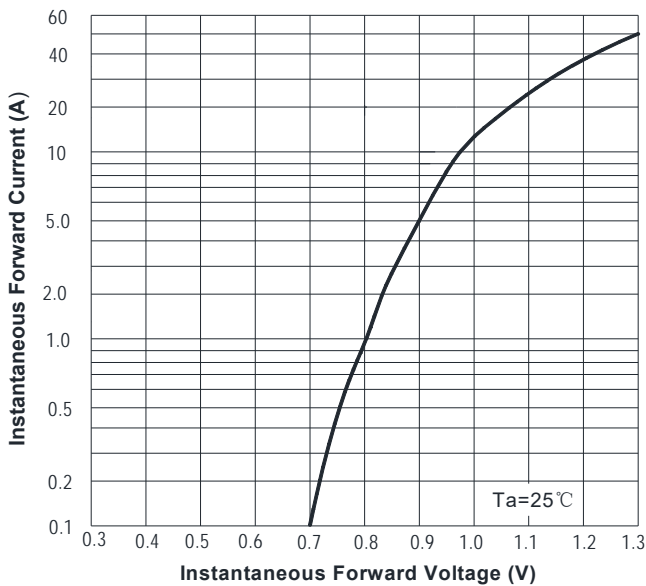
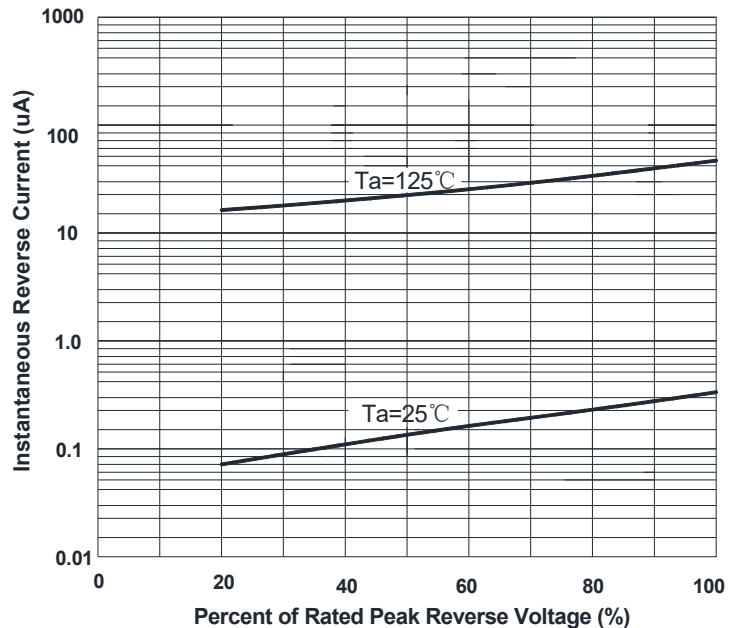
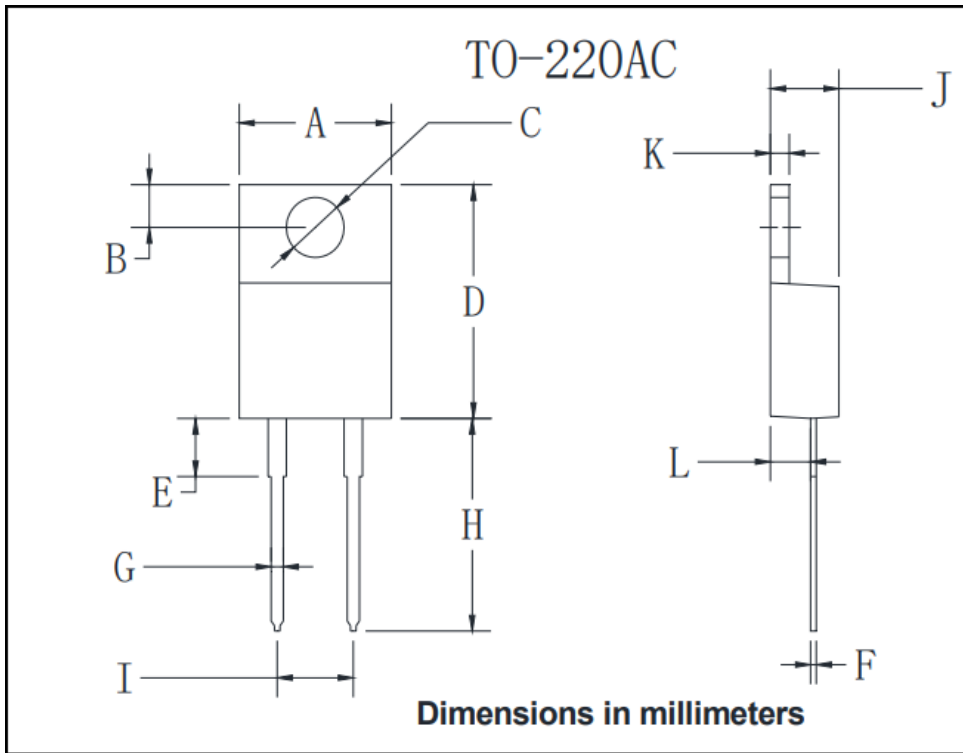


FIG4: Typical Reverse Characteristics



## ■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



## 30EPS16C

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