



## 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-247-2L

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 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	45EPS16
Device marking code			45EPS16
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	1600
Average Rectified Output Current @60Hz half sine-wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>o</sub>	A	45
Surge(Non-repetitive) Forward Current @60Hz half sine-wave, 1 cycle, T <sub>j</sub> =25	I <sub>FSM</sub>	A	600
Current Squared Time @1ms t 10ms T <sub>j</sub> =25	I <sup>2</sup> t	A <sup>2</sup> s.	1494
Storage Temperature	T <sub>stg</sub>		-55 ~ +150
Junction Temperature	T <sub>j</sub>		-55 ~ +150

### Electrical Characteristics T<sub>a</sub>=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	45EPS16
Maximum instantaneous forward voltage	V <sub>FM</sub>	V	I <sub>FM</sub> =45.0A T <sub>a</sub> =25	1.4
			I <sub>FM</sub> =45.0A T <sub>a</sub> =125	1.3
Maximum DC reverse current at rated DC blocking voltage	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25	10
	I <sub>RRM2</sub>	mA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub>	



# 45EPS16

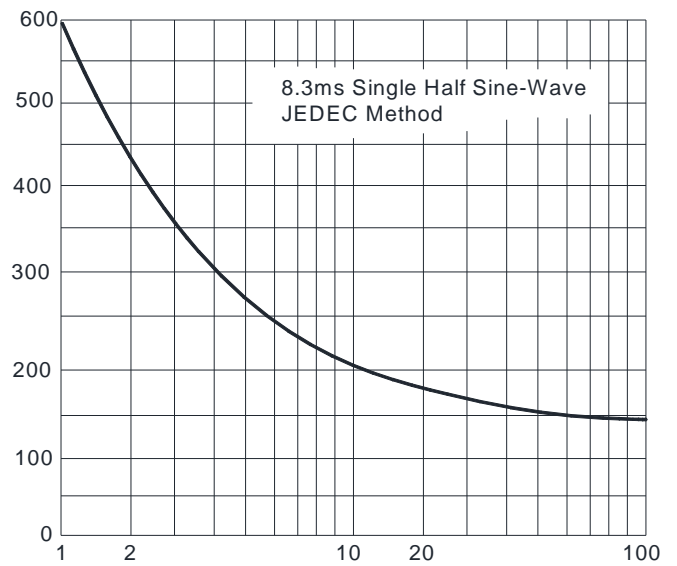
## Thermal Characteristics $T_a=25$ Unless otherwise specified

PARAMETER		SYMBOL	UNIT	45EPS16
Thermal Resistance	Between junction and ambient	$R_{JA}$	/W	40
	Between junction and case	$R_{JC}$		5

## Ordering Information (Example)

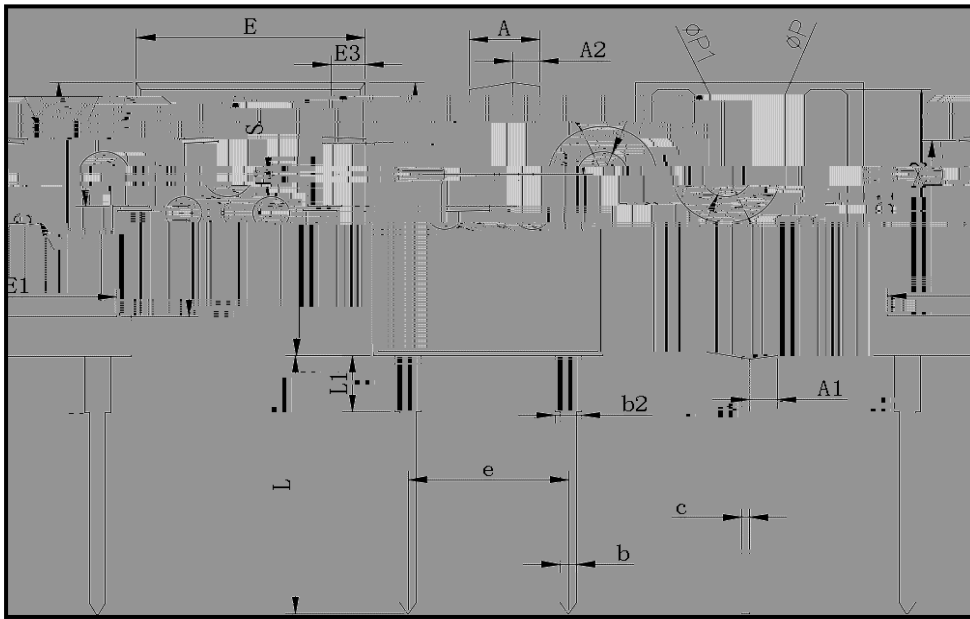
PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
45EPS16	Approximate 6.0	30	360	1800	Tube

## Characteristics (Typical)





Outline Dimensions



TO-247-2L		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.00	1.40
b2	1.91	2.21
c	0.50	0.70
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	10.88 TYP	
L	19.62	20.22
L1	-	4.30
P	3.40	3.80
P1	-	7.30
S	6.15 TYP	

