

## Features

- Halogen Free. "Green" Device (Note 1)
- Low Profile Package
- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)



## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		SL145PE	SL16PE	
Peak Repetitive Reverse Voltage	$V_{RRM}$	45	60	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{RMS}$	31.5	42	V
Average Rectified Forward Current @ $T_L=140^{\circ}\text{C}$	$I_{F(AV)}$	1		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	25		A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	2.59		$\text{A}^2\text{s}$

## Marking code

Part Number	Marking code
SL145PE	L145
SL16PE	L16

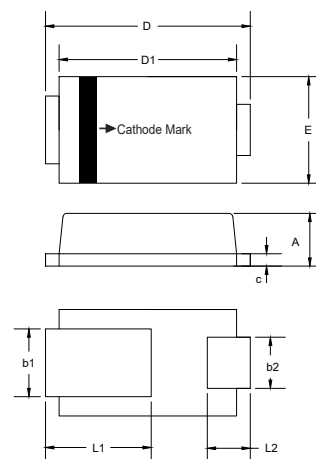
## Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	Cathode	 XXXX = Marking code	
2	Anode		

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

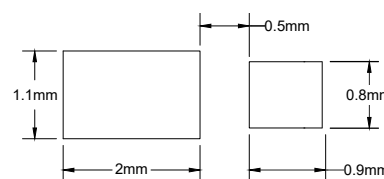
# 1 Amp Low VF Schottky Rectifier 45 to 60 Volts

## SOD-323HE



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.024	0.029	0.60	0.73	
b1	0.030	0.039	0.75	1.00	
b2	0.022	0.030	0.55	0.75	
c	0.004	0.010	0.10	0.25	
D	0.091	0.106	2.30	2.70	
D1	0.083	0.091	2.10	2.30	
E	0.047	0.055	1.20	1.40	
L1	0.043	0.059	1.10	1.50	
L2	0.020	0.028	0.50	0.70	

## SUGGESTED SOLDER PAD LAYOUT



## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		25		°C/W
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		20		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		105		°C/W

Note:

1. Mounted on P.C.B. with 5mm\*5mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SL145PE	$V_F$	$I_F=0.5A; T_J=25^{\circ}C$ $I_F=0.5A; T_J=125^{\circ}C$ $I_F=1A; T_J=25^{\circ}C$ $I_F=1A; T_J=125^{\circ}C$		0.32 0.22 0.36 0.29	0.40  0.45	V
SL16PE		$I_F=0.5A; T_J=25^{\circ}C$ $I_F=0.5A; T_J=125^{\circ}C$ $I_F=1A; T_J=25^{\circ}C$ $I_F=1A; T_J=125^{\circ}C$		0.40 0.37 0.50 0.50	0.45  0.55	
Reverse Current						
SL145PE	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$		0.03 12	0.2 100	mA
SL16PE		at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$		0.01 2	0.1 30	
Junction Capacitance						
SL145PE	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		135		pF
SL16PE				42		

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

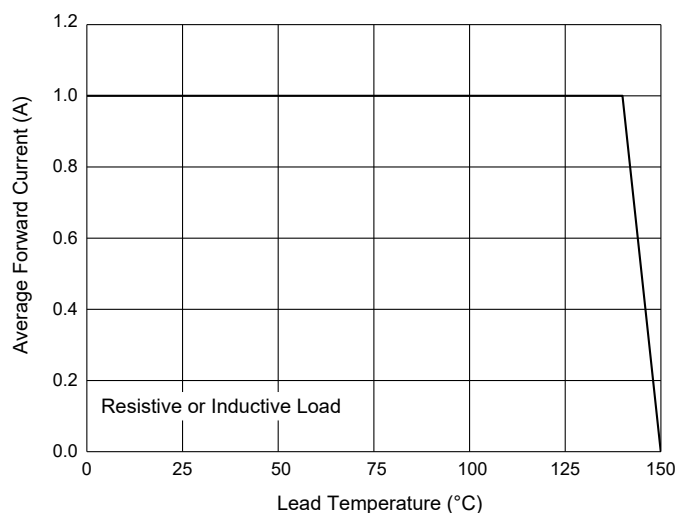


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

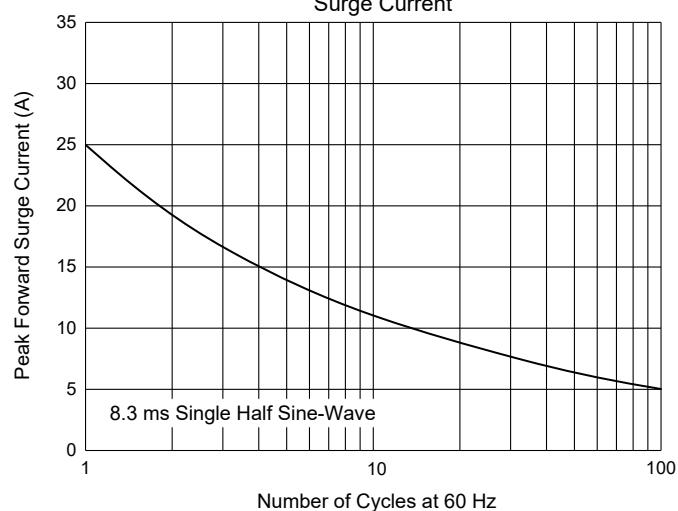


Fig. 3 - Typical Forward Characteristics

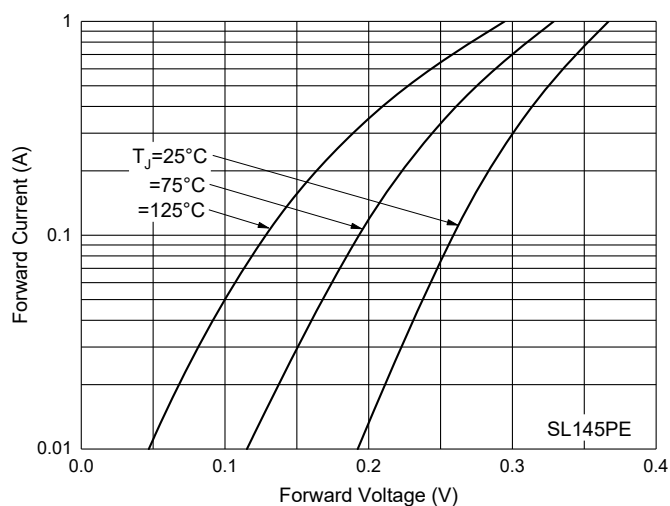


Fig. 4 - Typical Forward Characteristics

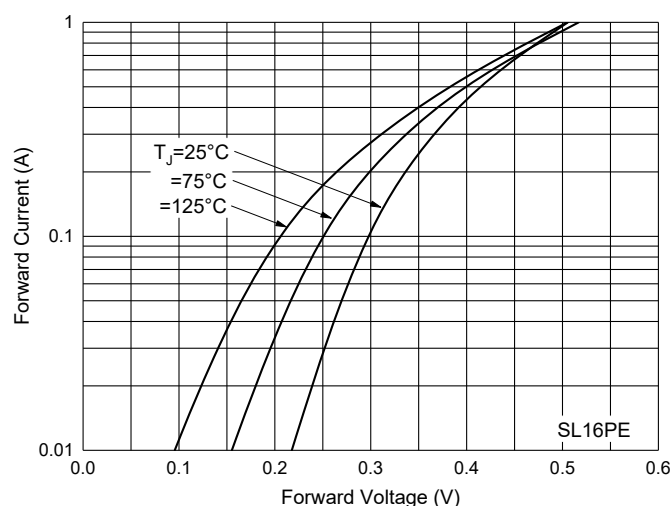


Fig. 5 - Typical Reverse Leakage Characteristics

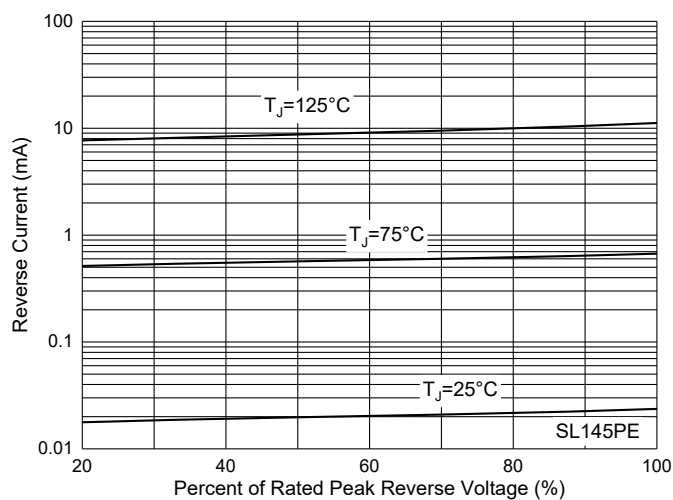
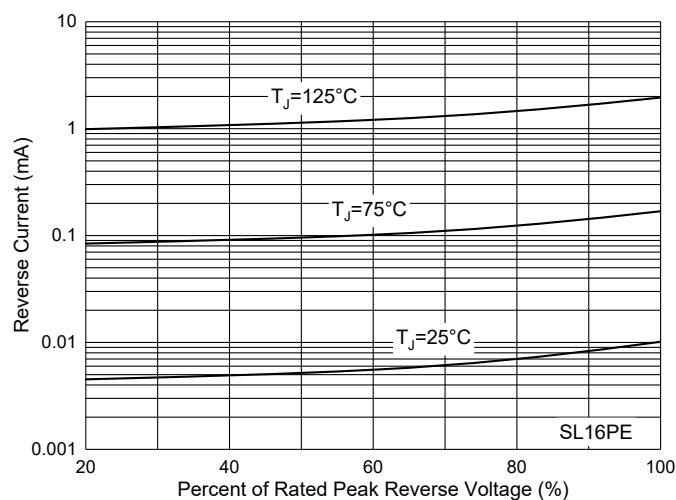


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics

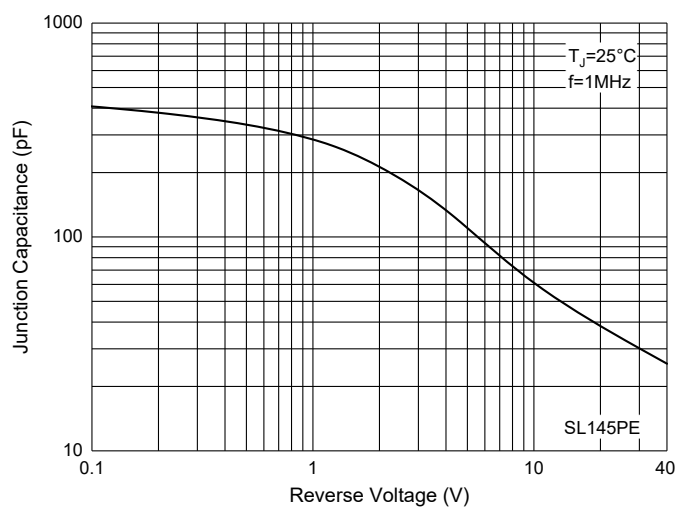
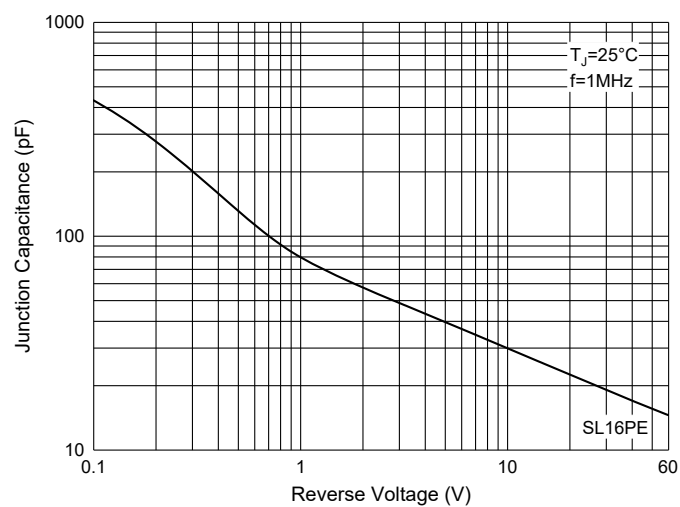


Fig. 8 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:4.5Kpcs/Reel

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