

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		A ² s

Marking code

Part Number	Marking code
SL145PE	L145
SL16PE	L16

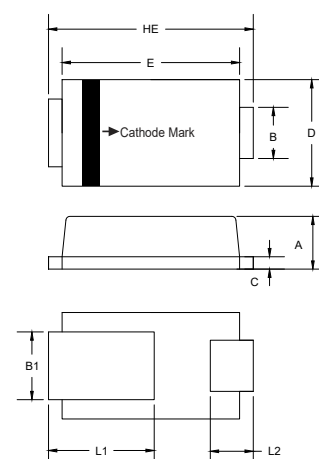
Internal Structure

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

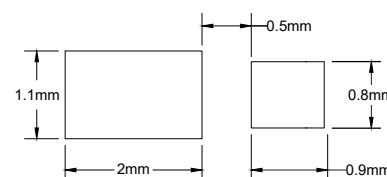
SOD-323HE



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.022	0.030	0.550	0.750	
B	0.021	0.029	0.530	0.730	
B1	0.028	0.036	0.720	0.920	
C	0.004	0.010	0.100	0.250	
D	0.047	0.055	1.200	1.400	
E	0.081	0.089	2.050	2.250	
L1	0.047	0.055	1.200	1.400	
L2	0.016	0.024	0.400	0.600	
HE	0.094	0.102	2.400	2.600	

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

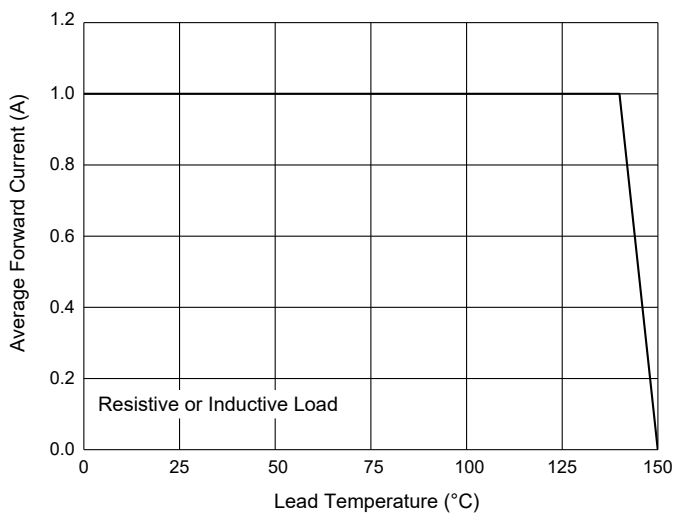


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

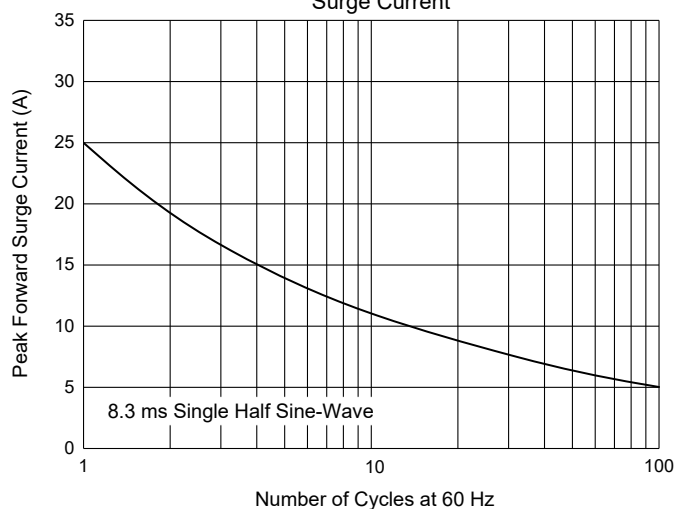


Fig. 3 - Typical Forward Characteristics

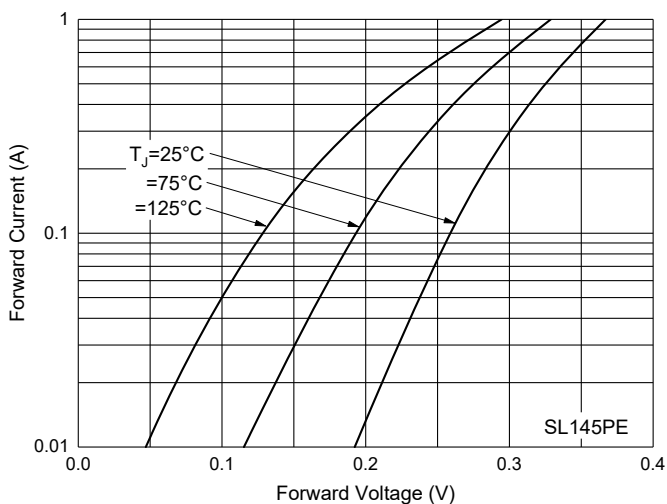


Fig. 4 - Typical Forward Characteristics

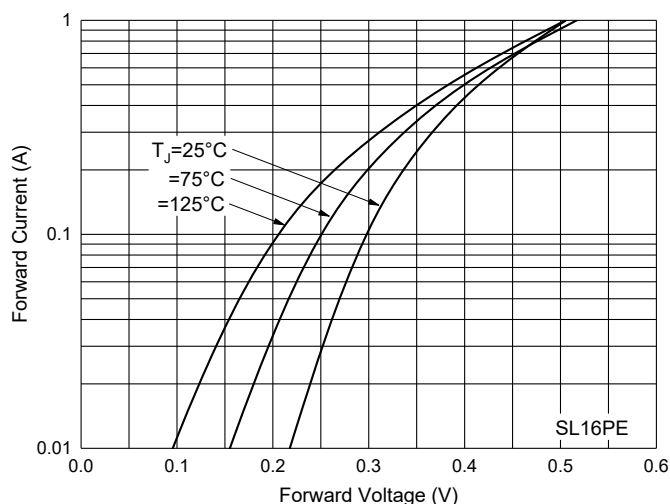


Fig. 5 - Typical Reverse Leakage Characteristics

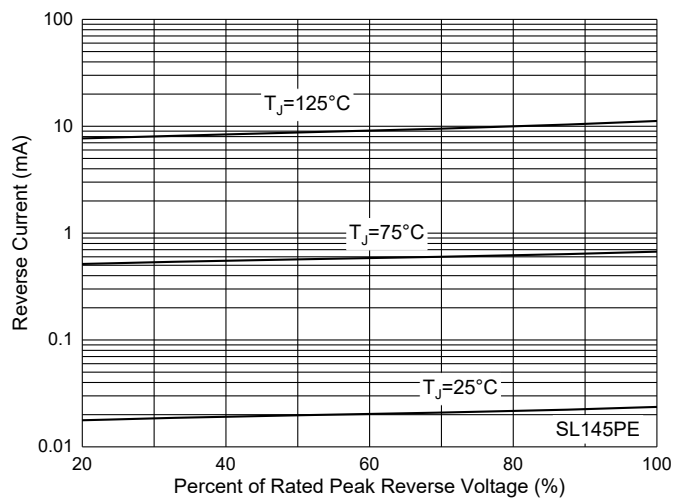
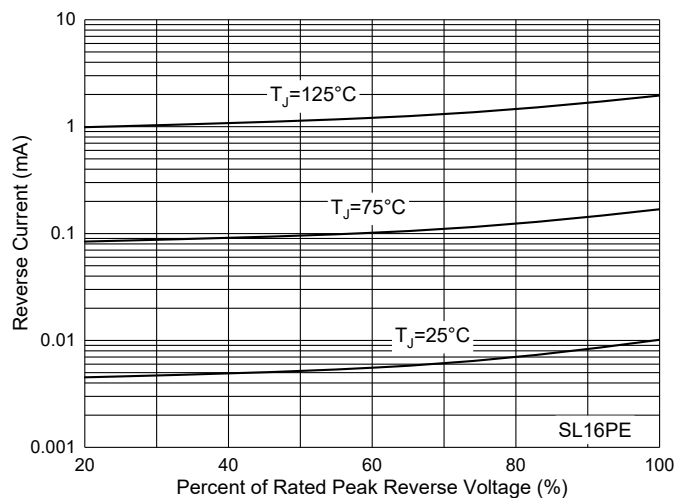


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics

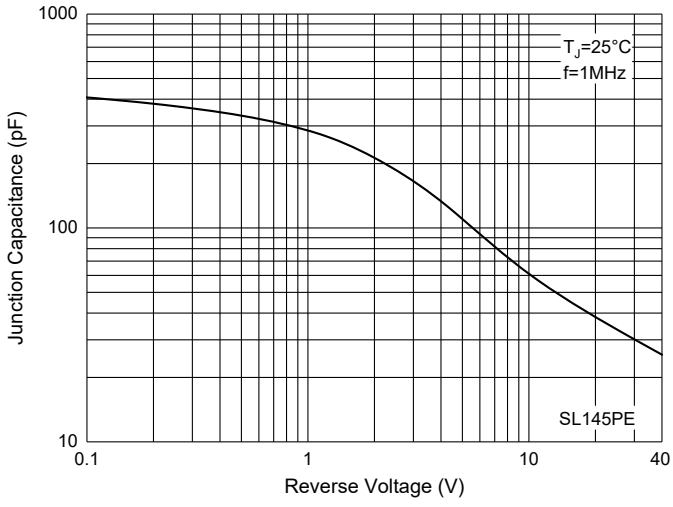
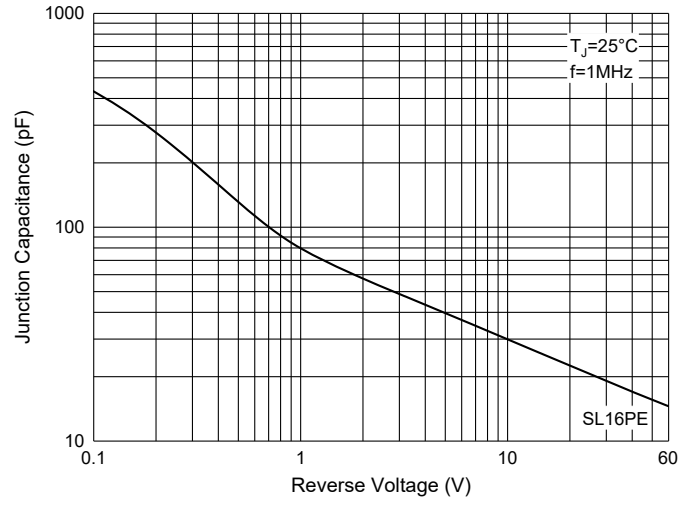


Fig. 8 - Typical Capacitance Characteristics



Ordering Information

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

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