

## Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- High Current Capability
- For Surface Mount Application
- 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
		SK52A HE3-L	SK53A HE3-L	SK54A HE3-L	SK55A HE3-L	SK56A HE3-L	SK58A HE3-L	SK510A HE3-L	
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	20	30	40	50	60	80	100	
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Average Rectified Forward Current	$I_{F(AV)}$	5							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	100							A
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	$I^2t$	41.5							A <sup>2</sup> s

## Marking Code

Part Number	Marking Code
SK52AHE3-L	SK52A
SK53AHE3-L	SK53A
SK54AHE3-L	SK54A
SK55AHE3-L	SK55A
SK56AHE3-L	SK56A
SK58AHE3-L	SK58A
SK510AHE3-L	SK510A

## Internal Structure

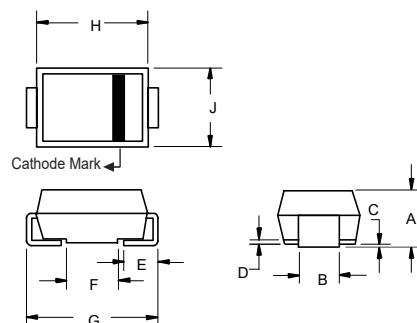
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	<p>XXXX = Marking Code YYWW = Date Code</p>	
2	Anode		

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.

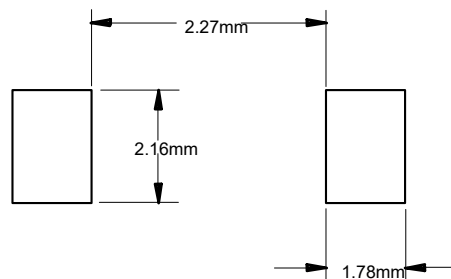
# 5 Amp Surface Mount Schottky Rectifier 20 to 100 Volts

## SMA (DO-214AC)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

## 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
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		80		°C/W

Note:  
 1.Mounted on P.C.B. with 8 mm x 8 mm copper pad areas.

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SK52AHE3-L ~ SK54AHE3-L SK55AHE3-L ~ SK56AHE3-L SK58AHE3-L ~ SK510AHE3-L	$V_F$	$I_F=5A; T_J=25^{\circ}C$			0.55 0.75 0.85	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.1 20	mA
Junction Capacitance SK52AHE3-L ~ SK54AHE3-L SK55AHE3-L ~ SK56AHE3-L SK58AHE3-L ~ SK510AHE3-L	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		265 215 150		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

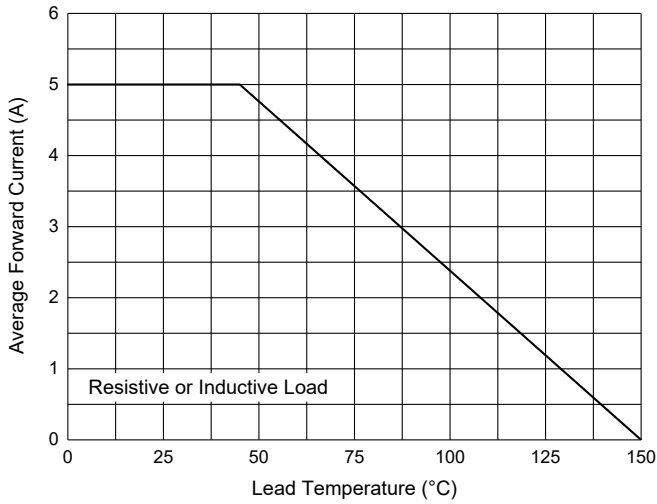


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

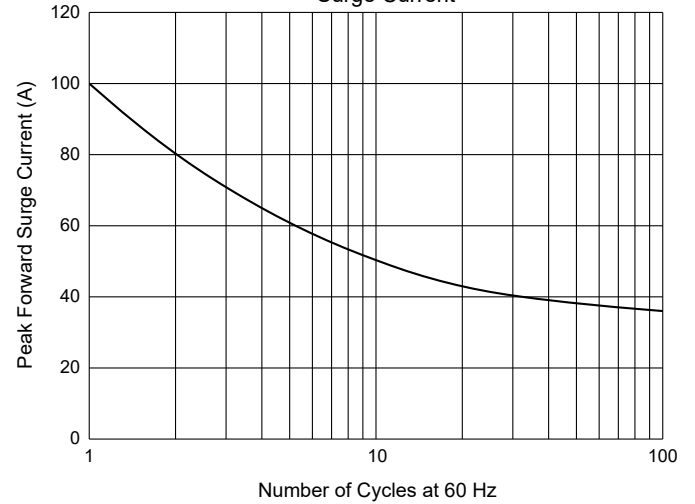


Fig. 3 - Typical Forward Characteristics

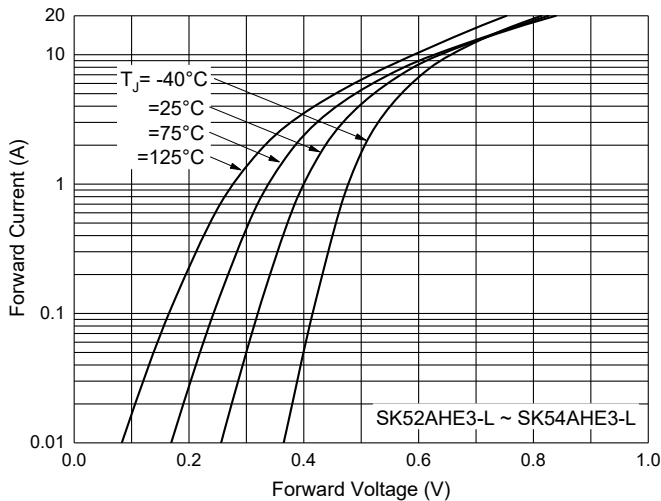


Fig. 4 - Typical Reverse Leakage Characteristics

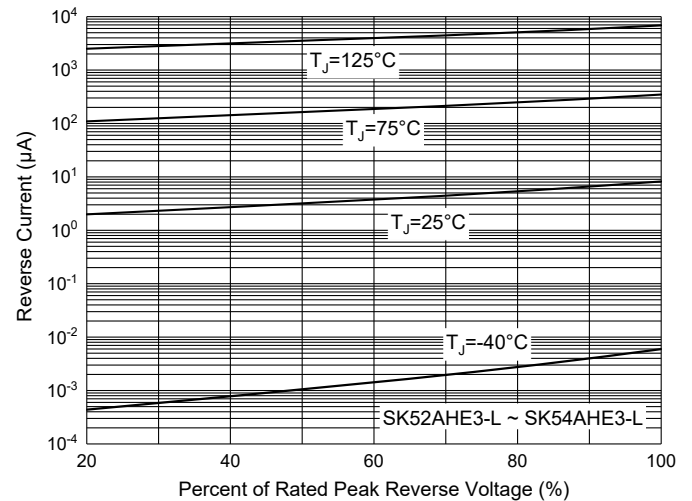


Fig. 5 - Typical Forward Characteristics

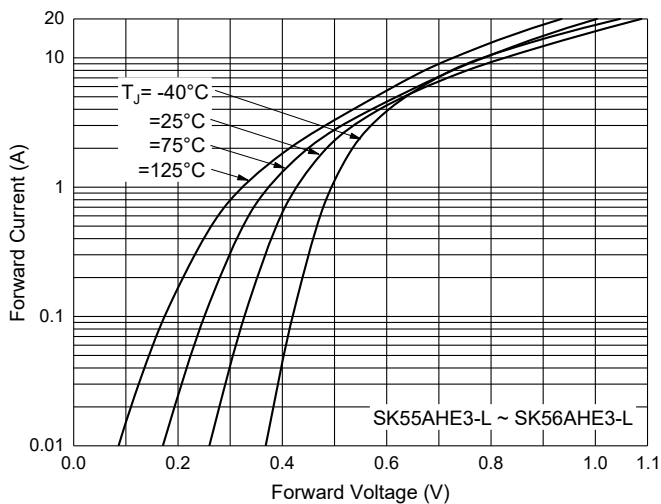
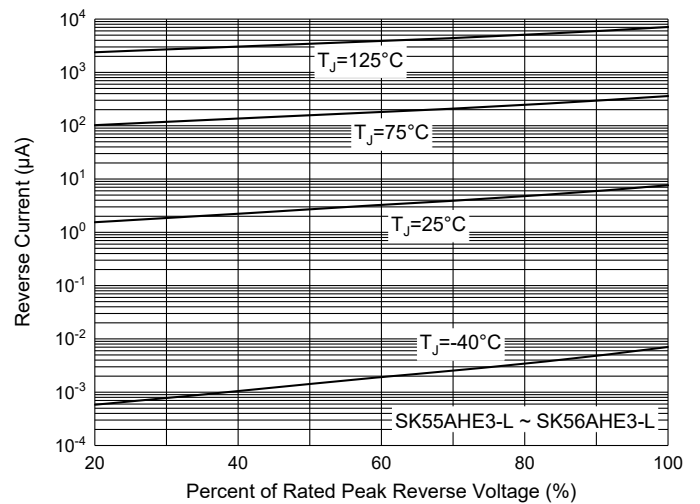


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Forward Characteristics

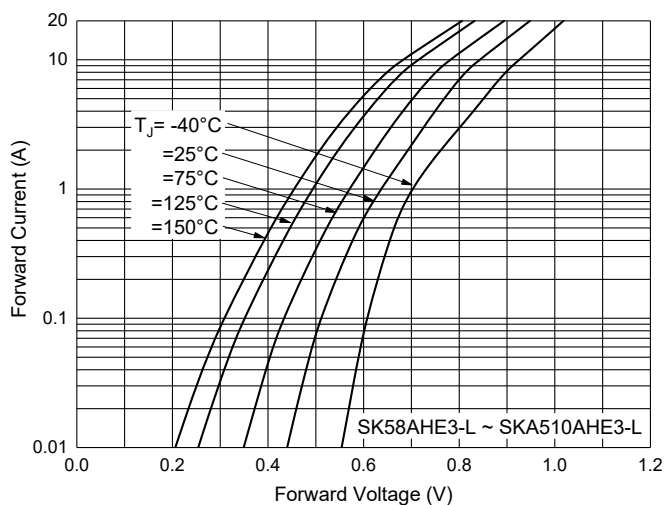


Fig. 8 - Typical Reverse Leakage Characteristics

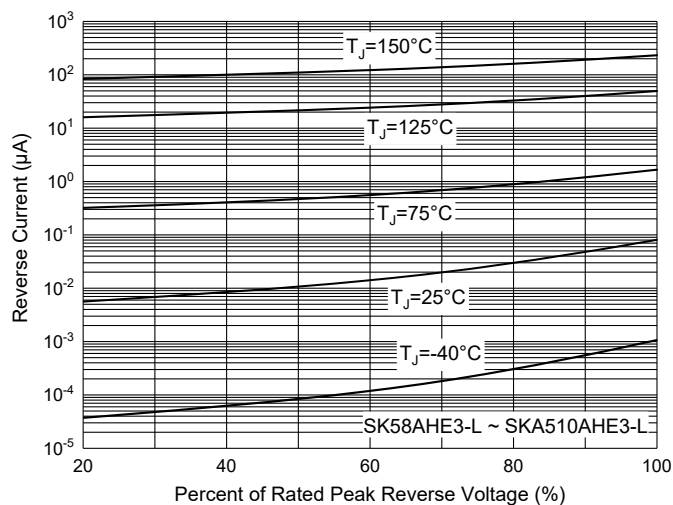


Fig. 9 - Capacitance Characteristics

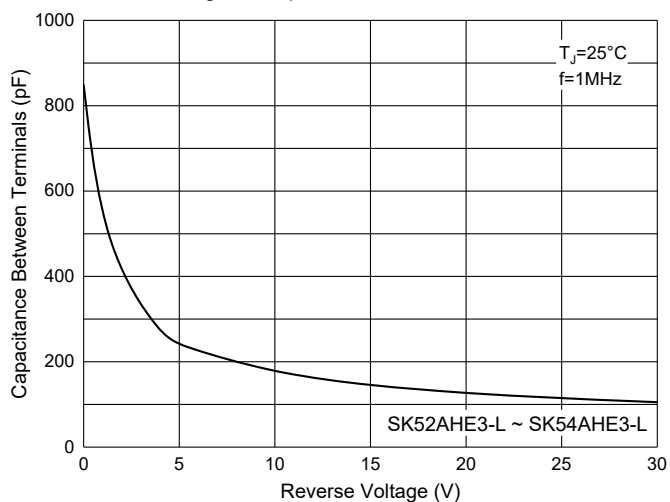


Fig. 10 - Capacitance Characteristics

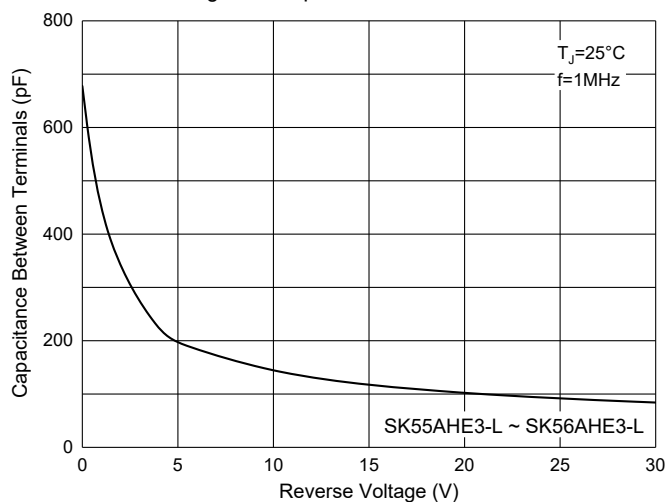
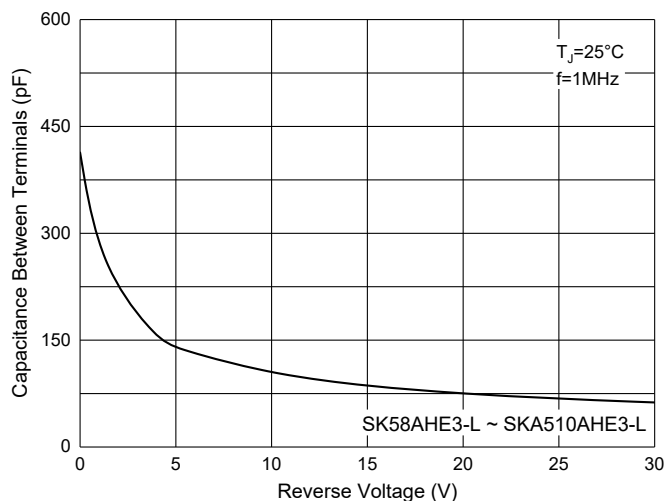


Fig. 11 - Capacitance Characteristics



### Ordering Information

Device	Packing
SK52AHE3-LTP ~ SK510AHE3-LTP	Tape&Reel:5Kpcs/Reel

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