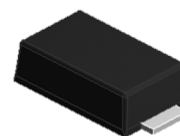


Features

- Schottky barrier diodes
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile, typical thickness 1.0mm
- AEC-Q101 qualified



eSGB
(SMAF)

Typical Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

Maximum Ratings (TA = 25 °C unless otherwise noted)				
Parameter	Symbol	LS54	LS545	Unit
Maximum repetitive peak reverse voltage	VRRM	40	45	V
Maximum RMS voltage	VRMS	28	31.5	V
Maximum DC blocking voltage	VDC	40	45	V
Maximum average forward rectified current	IF(AV) ¹⁾	5.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	150		A
Rating for fusing (t < 8.3ms)	I ² t	93.8		A ² sec
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150		°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)					
Parameter	Test Conditions	Symbol	LS54	LS545	Unit
Minimum Breakdown voltage	Ta=25°C,IR=1mA	V _{BR}	45		Volts
Maximum instantaneous forward voltage	IF=5A, Ta=25°C	VF	0.55		
	IF=5A, Ta=125°C		0.45		
Maximum DC reverse current at rated DC blocking voltage	Ta=25°C	IR	100		uA
	Ta=100°C		20		mA
Typical junction capacitance	4.0 V, 1 MHz	C _J	310		pF
Typical thermal resistance	junction to lead	R _{θJL} ¹⁾	20		°C/W

Note1, Thermal resistance from junction to lead, mounted on PCB with 8.0×8.0mm copper pads

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

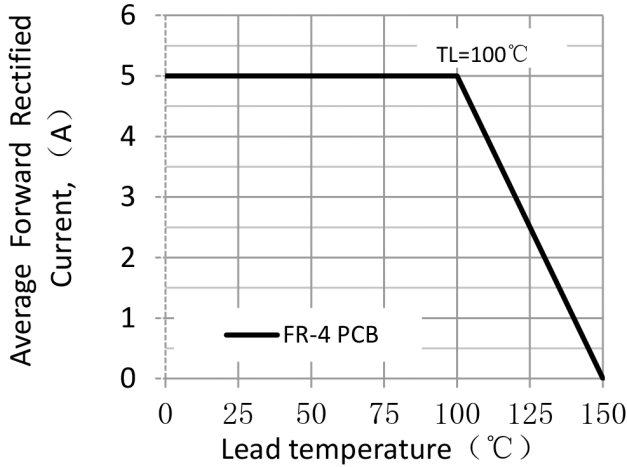


Figure 1. Forward Current Derating Curve

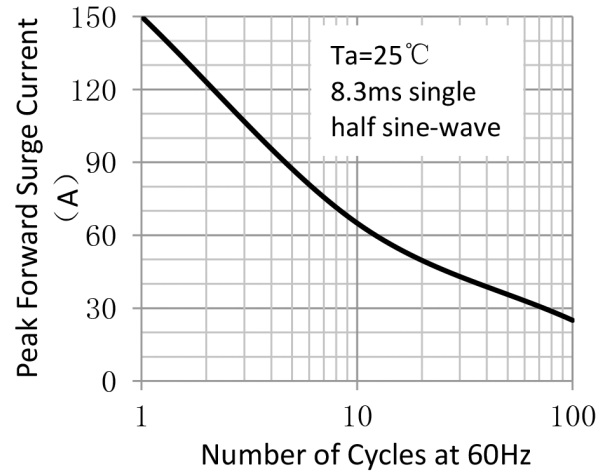


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

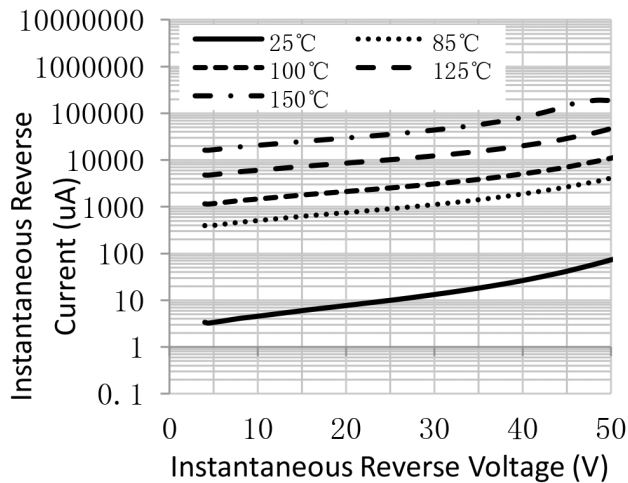


Figure 3. Typical Reverse Characteristics

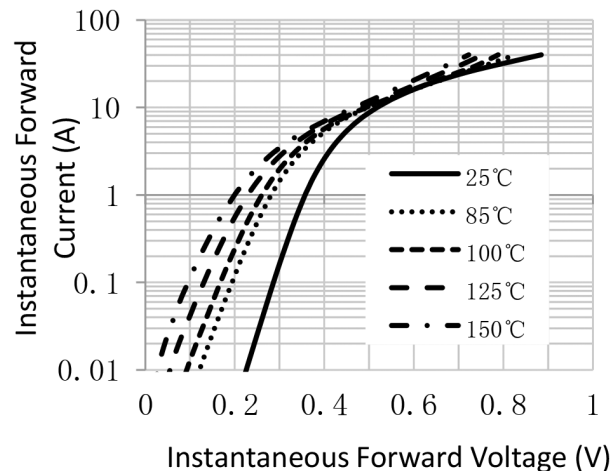


Figure 4. Typical Instantaneous Forward Characteristics

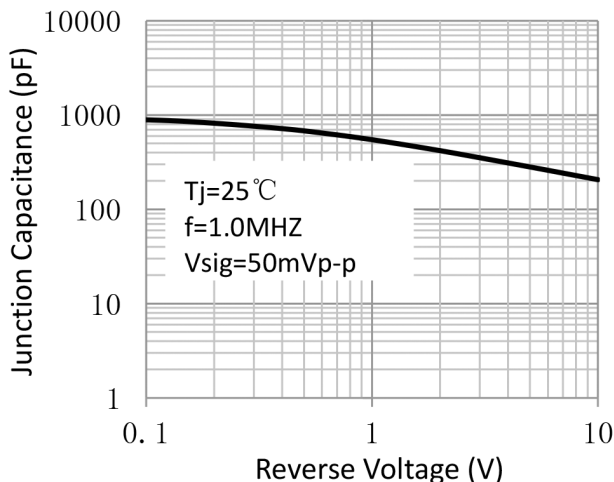
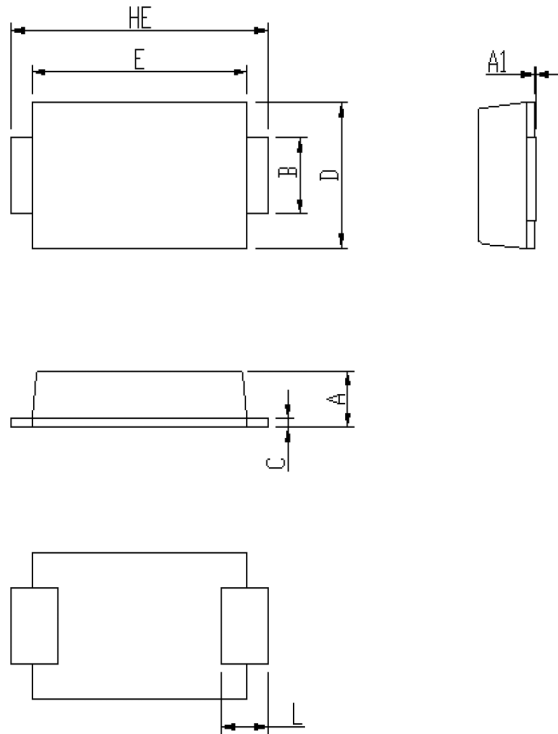


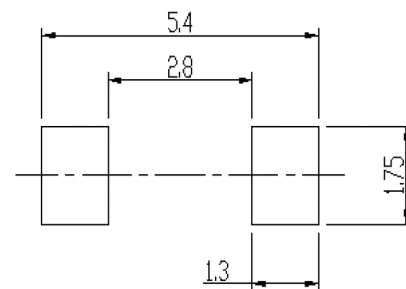
Figure 5. Typical Junction Capacitance

Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.8	1.0	0.031	0.039
HE	4.8	5.2	0.189	0.205

Soldering footprint



Packing Information

Packing quantities:

Reel size	Quantity/reel	Quantity/inner Box	Quantity/Carton
7"	3K	21K	84K
13"	10K	20K	180K

Tape & Reel Specification

