

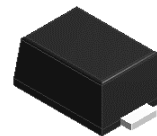
1A,20-60V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds
- AEC-Q101 qualified



RoHS
COMPLIANT



eSGP(SOD-323F)

Applications

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

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)						
Parameter	Symbol	ASGP0120SD	ASGP0130SD	ASGP0140SD	ASGP0160SD	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	60	V
Maximum RMS voltage	V _{RMS}	14	21	28	42	V
Maximum DC blocking voltage	V _{DC}	20	30	40	60	V
Maximum average forward rectified current	I _{F(AV)}	1				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	25				A
Operating junction temperature range	T _J	-55 to +150				°C
Storage temperature range	T _{STG}	-55 to +150				°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	120	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	40	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	40	°C /W



ASGP0120SD thru ASGP0160SD

GOOD-ARK Electronics

Electrical Specifications (T _A =25°C unless otherwise noted)							
Parameter	Symbol	Test Conditions	ASGP0120SD	ASGP0130SD	ASGP0140SD	ASGP0160SD	Unit
Forward Drop Voltage	V _F	I _F =1A T _A =25°C	0.55			0.70	V
		I _F =1A T _A =125°C	0.48			0.60	
Reverse leakage current @V _R	I _R	T _J =25°C	50				uA
		T _J =125°C	10				mA
Typical junction capacitance	C _J	4.0 V 1 MHz	60				pF

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

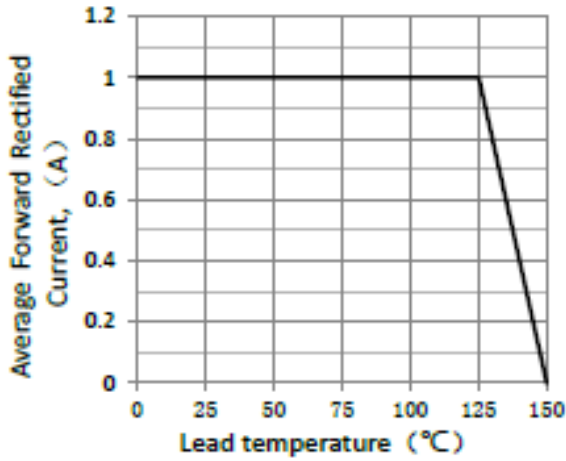


Figure 1. Forward Current Derating Curve

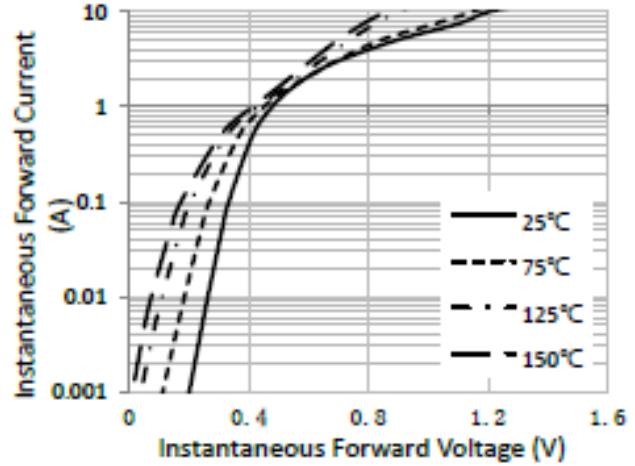


Figure 2. Typical Instantaneous Forward Characteristics (SGP0120SD thru SGP0140SD)

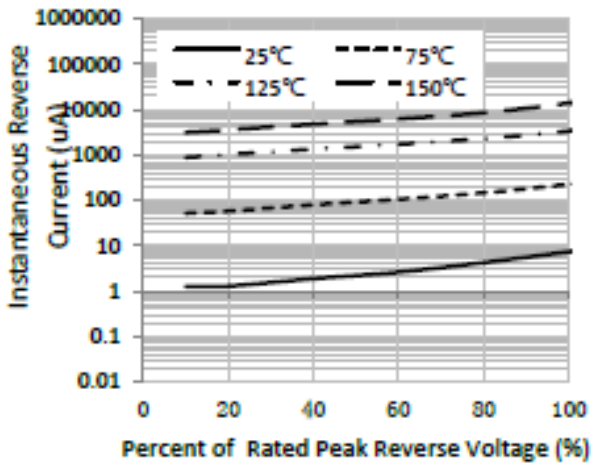


Figure 3. Typical Reverse Characteristics

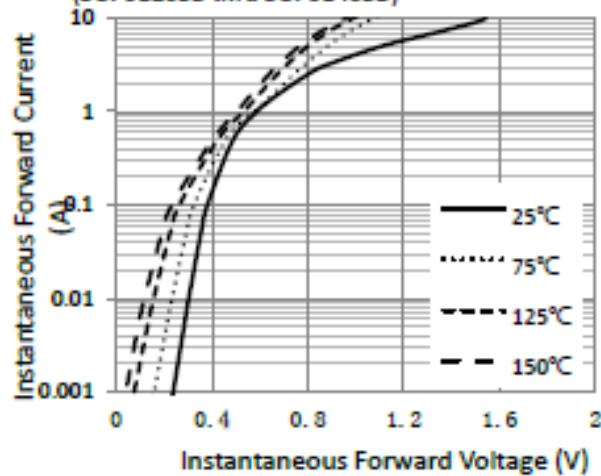


Figure 4. Typical Instantaneous Forward Characteristics (SGP0160SD)

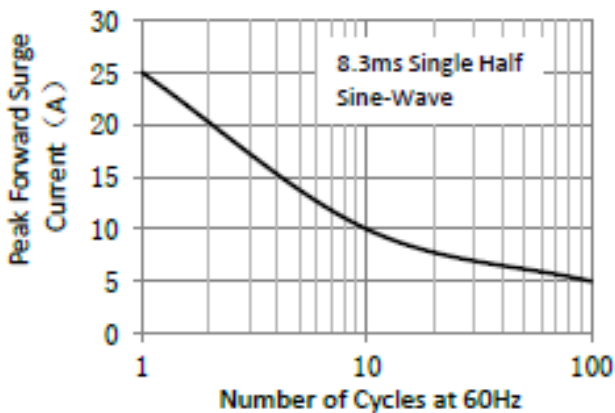


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

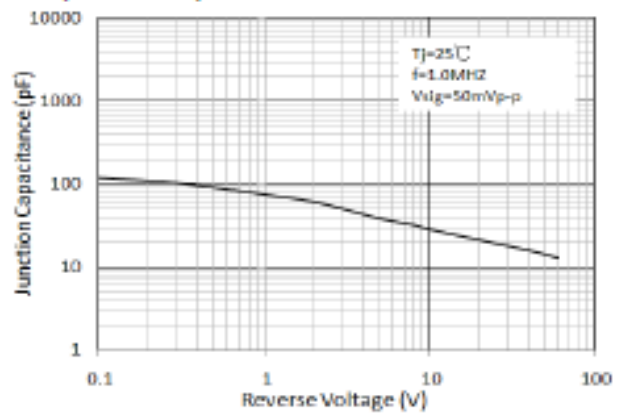
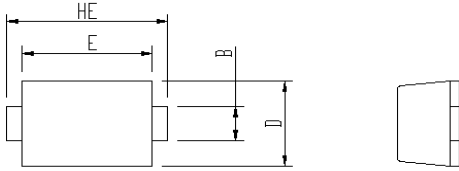


Figure 6. Typical Junction Capacitance

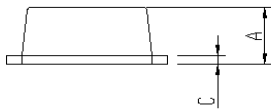
Package Outline Dimensions

in inches (millimeters)

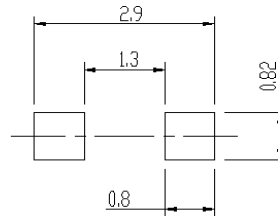
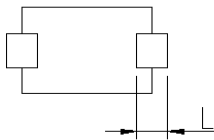
eSGP (SOD-323F)



Package	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
B	0.5	0.7	0.020	0.028
C	0.1	0.25	0.004	0.010
D	1.4	1.6	0.055	0.063
E	2.0	2.2	0.079	0.087
L	0.35	0.65	0.014	0.026
HE	2.4	2.8	0.094	0.110



Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.24	Modify document format



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