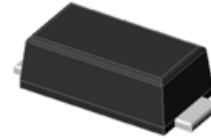


1A,40-100V Schottky Barrier Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Super Low VF Schottky barrier diodes
- Very low profile - typical height of 1.0 mm
- 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 available



eSGA(SOD-123FL)

Applications

For use of fast switching in RF module, lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	AFS14	AFS16	AFS1B	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	40	60	100	V
Working peak reverse voltage	V _{RWM}	40	60	100	V
Maximum DC blocking voltage	V _{DC}	40	60	100	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}	30			A
Operating junction temperature range	T _J	-55 to +125	-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}	100	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	20	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	20	°C /W

Electrical Specifications (T _A =25°C unless otherwise noted)						
Parameter	Symbol	Test Conditions	AFS14	AFS16	AFS1B	Unit
Forward Drop Voltage (Note1)	V _F	I _F =0.5A	0.45	0.55	0.75	V
		I _F =1A	0.50	0.70	0.81	
Reverse leakage current @V _R	I _R	T _J =25°C	200		150	uA
		T _J =125°C	30	20		mA
Typical junction capacitance	C _J	4.0 V, 1 MHz	55	33	31	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)

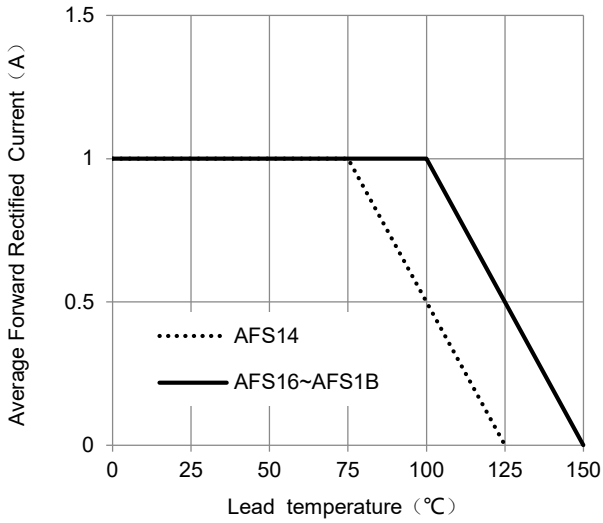


Fig.1 - Forward Current Derating Curve

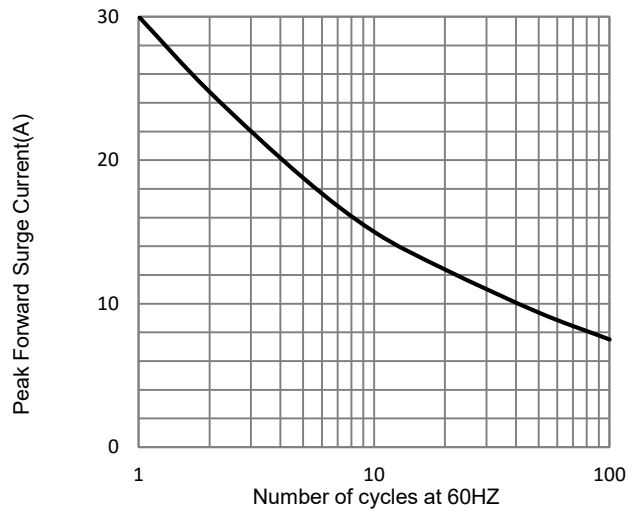


Fig.2 - Maximum Non-Repetitive Surge Current

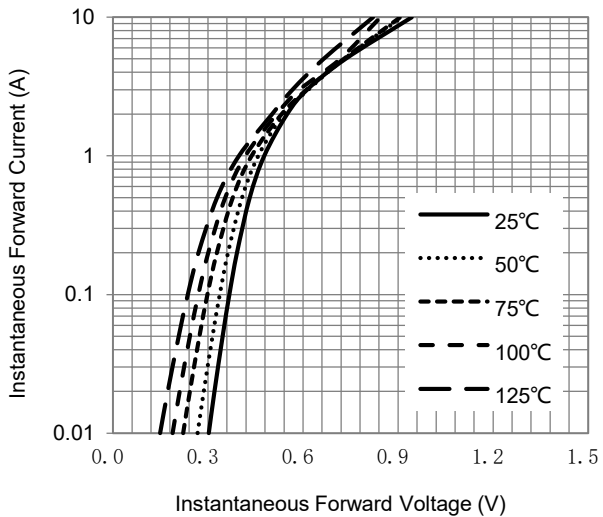


Fig.3 - Typical Forward Voltage Characteristics (AFS14)

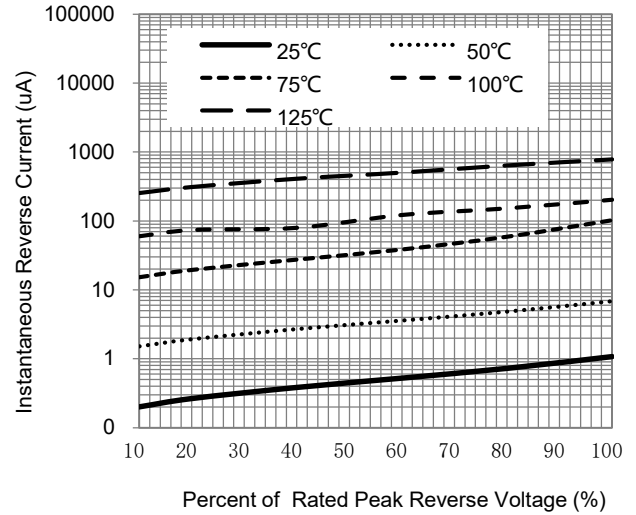


Fig.4 - Typical Reverse Current Characteristics (AFS14)

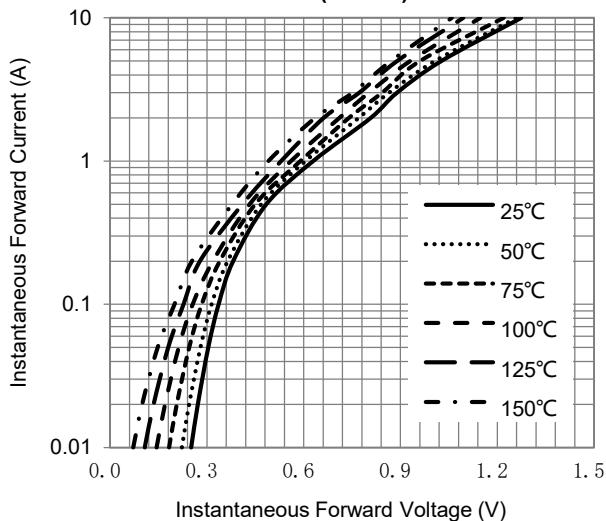


Fig.5 - Typical Forward Voltage Characteristics (AFS16)

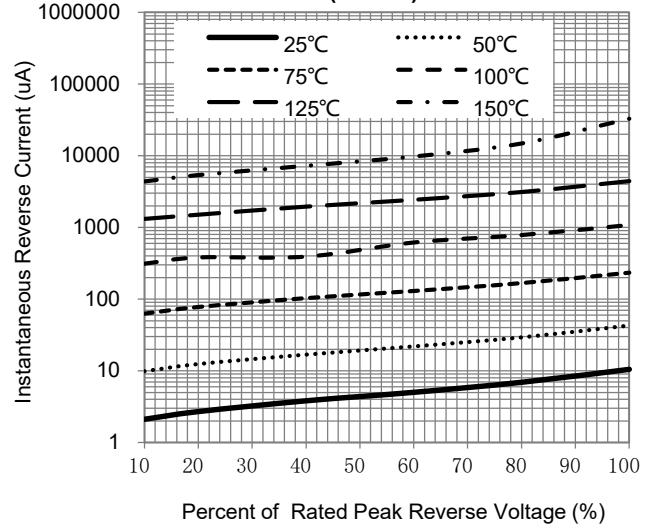


Fig.6 - Typical Reverse Current Characteristics (AFS16)

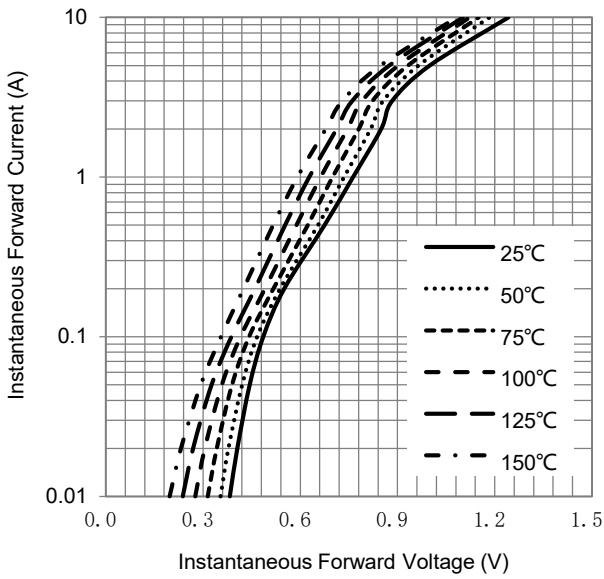


Fig.7 –Typical Forward Voltage Characteristics (AFS1B)

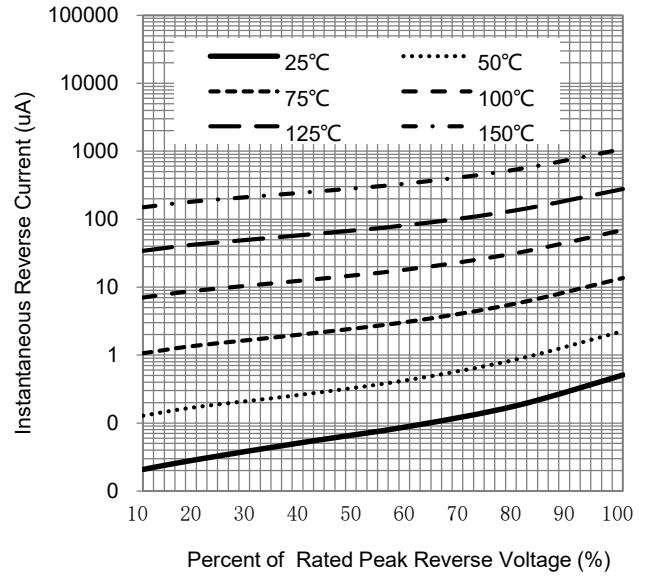


Fig.8 –Typical Reverse Current Characteristics (AFS1B)

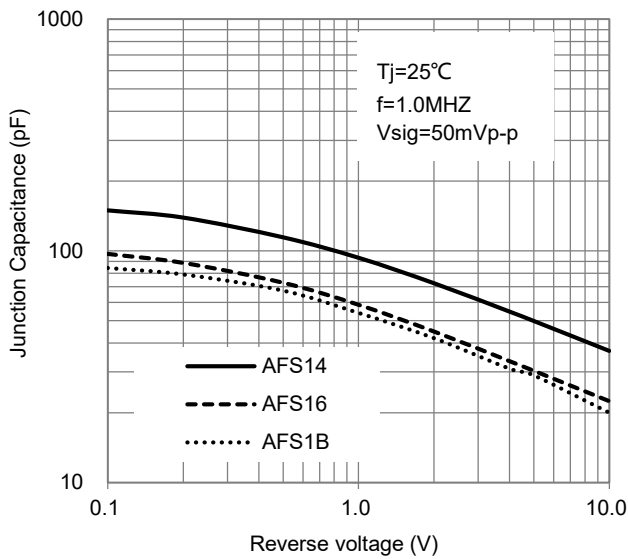
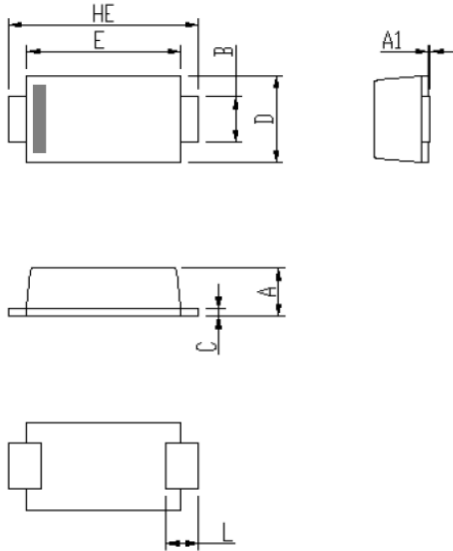


Fig.9 –Typical Junction Capacitance

Package Outline Dimensions

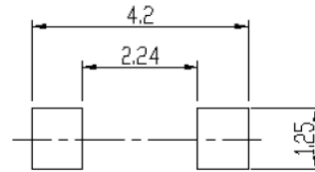
in inches (millimeters)

eSGA (SOD-123FL)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.07.13	Modify document format
Rev.C	2023.10.23	Modify document format

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