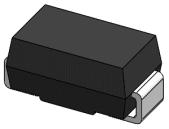
1A,50-1400V High Efficient Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds
- AEC-Q101 qualified

RoHS
COMPLIANT



SMA(DO-214AC)

Applications

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

Maximum Ratings & Electrical Characteristics (TA=25℃ unless otherwise noted)

Parameter	Symbol	AHS1A	AHS1B	AHS1D	AHS1F	AHS1G	AHS1J	AHS1K	AHS1M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	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 +150								°C
Storage temperature range	T_{STG}	-55 to +150								°C

Thermal-Mechanical Specifications (TA=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	90	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	20	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	25	°C /W

Electrical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	AHS1A	AHS1B	AHS1D	AHS1F	AHS1G	AHS1J	AHS1K	AHS1M	Unit
Forward Drop Voltage	V_F	I_F=1A	1.0				1.3	1.7			V
Reverse leakage current @V_R	I_R	T_J =25℃	5								uA
		T_J =125℃	100								
Typical junction capacitance	C_J	4.0 V, 1 MHZ	6.5								pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	50				75				nS

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℃ unless otherwise noted)

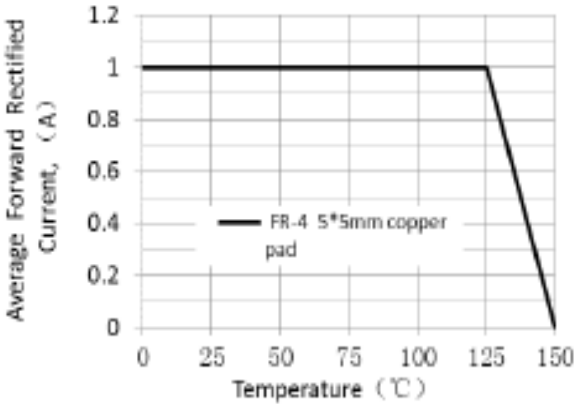


Figure 1.Forward Current Derating Curve

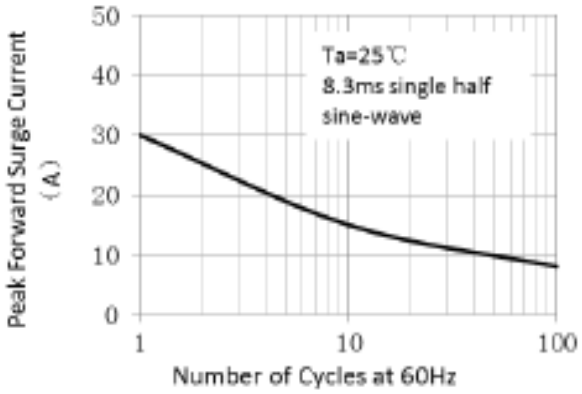


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

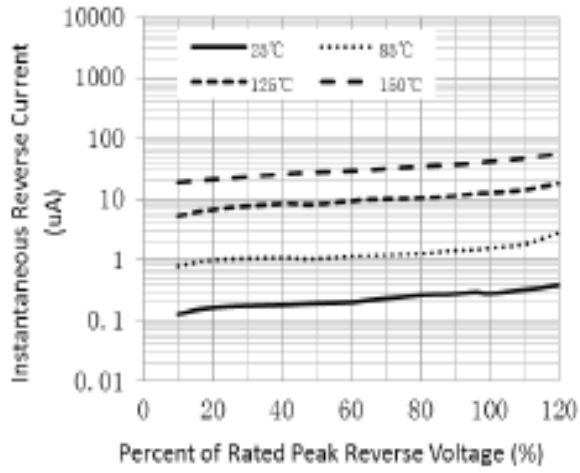


Figure 3. Typical Reverse Characteristics

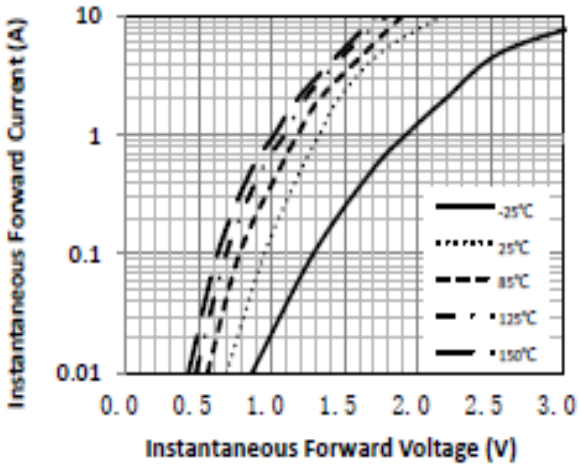


Figure 4. Typical Instantaneous Forward Characteristics

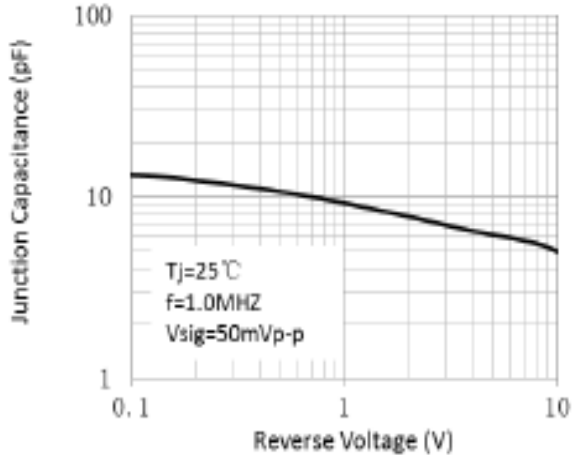
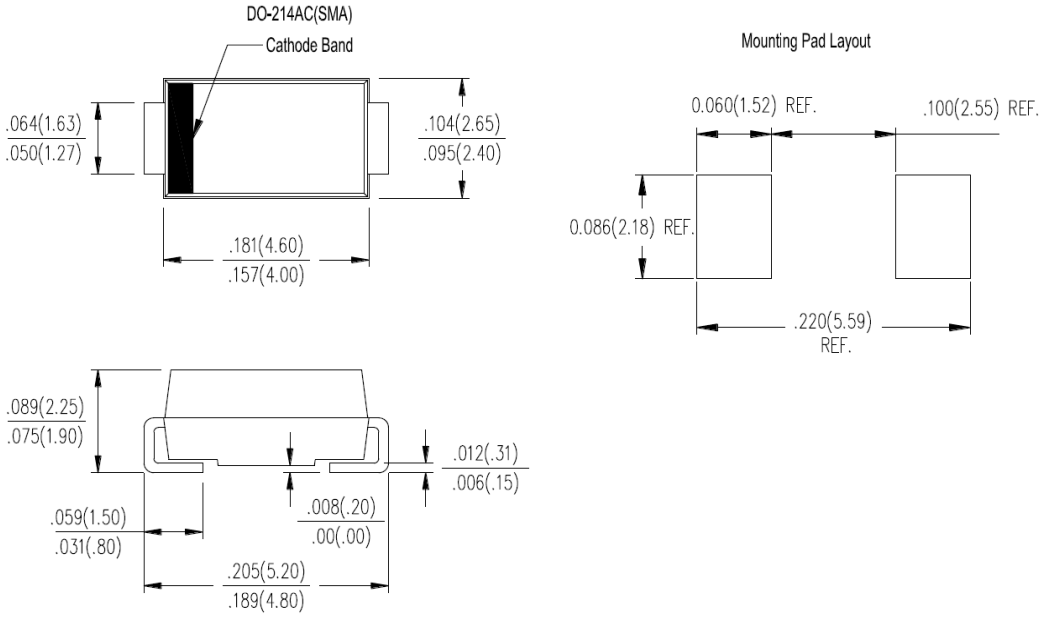


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format

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