1A,50-1000V Standard 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



iSGP (SOD-323HE)

Applications

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

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

Parameter	Symbol	AGN1AQ	AGN1BQ	AGN1DQ	AGN1GQ	AGN1JQ	AGN1KQ	AGN1MQ	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	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}	20							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	RθJA	84	°C /W
Thermal Resistance, Junction to Lead	RθJL	3	°C /W

Electrical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	AGN1AQ	AGN1BQ	AGN1DQ	AGN1GQ	AGN1JQ	AGN1KQ	AGN1MQ	Unit
Forward Drop Voltage	VF	I_F=1A	1.1							V
Reverse leakage current @VR	IR	T_J =25℃	5							uA
		T_J =125℃	50							
Typical junction capacitance	CJ	4.0 V 1 MHZ	4.8					3.7		pF
Typical reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	1							uS

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)

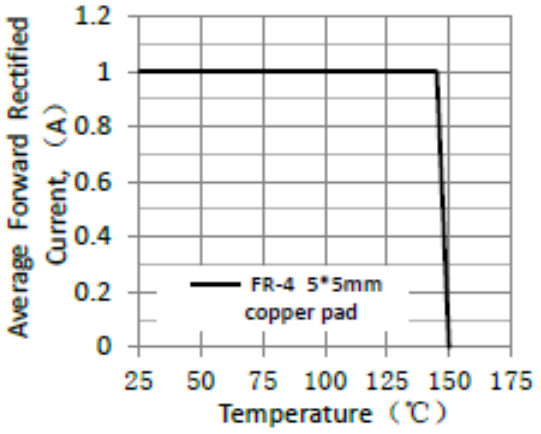


Figure 1.Forward Current Derating Curve

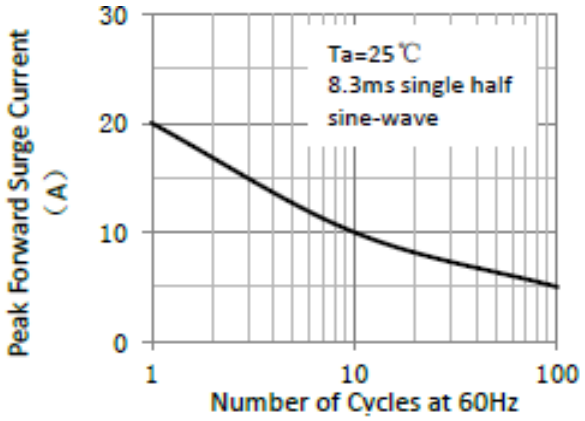


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

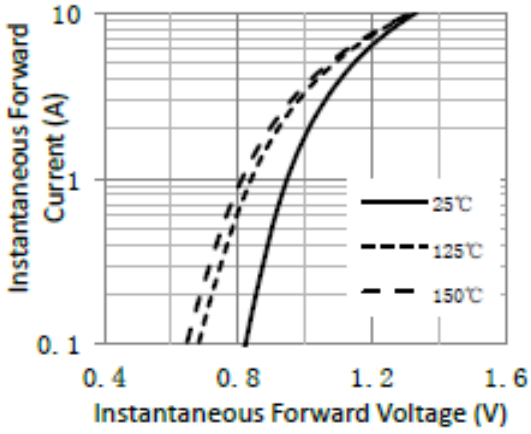


Figure 3. Typical Instantaneous Forward Characteristics

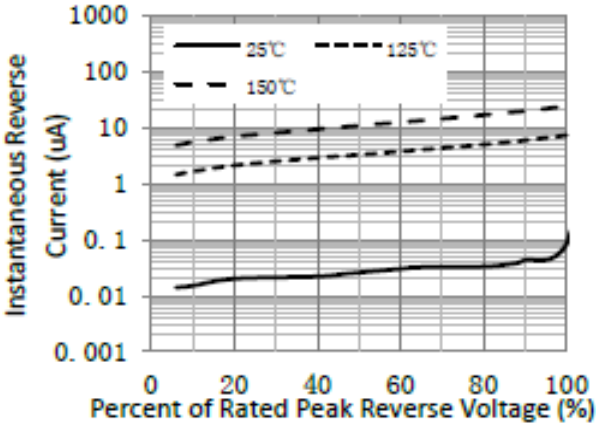


Figure 4. Typical Reverse Characteristics

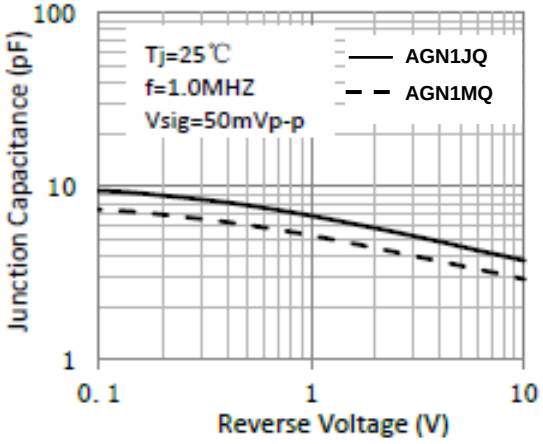
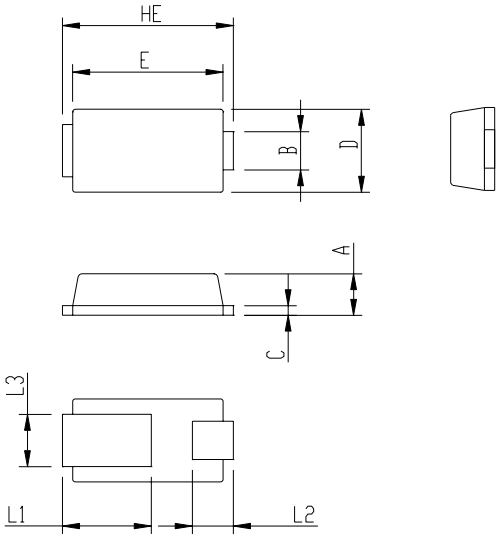


Figure 5. Typical Junction Capacitance

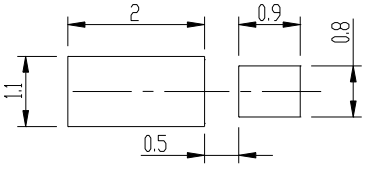
Package Outline Dimensions

in inches (millimeters)

iSGP (SOD-323HE)



iSGP (SOD-323HE)		
	MIN	MAX
A	0.60	0.73
B	0.55	0.75
C	0.10	0.25
D	1.20	1.40
E	2.10	2.30
HE	2.30	2.70
L1	1.10	1.50
L2	0.40	0.75
L3	0.75	1.00



Revision History

Document Version	Date of release	Discroption of changes
Rev.A	2026.06.11	Released Datasheet

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