

# **Schottky Barrier Rectifier**

#### **FEATURES**

- Low forward voltage drop
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

## **MECHANICAL DATA**

Case: DO-201AD

Molding compound, UL flammability classification rating 94V-0 Base P/N with suffix "G" on packing code - halogen-free Base P/N with prefix "H" on packing code - AEC-Q101 qualified **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test,

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Weight: 1.1g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)											
PARAMETER	SYMBOL	SR 302	SR 303	SR 304	SR 305	SR 306	SR 309	SR 310	SR 315	SR 320	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	90	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	3							Α		
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80				А					
Maximum instantaneous forward voltage (Note 1) @ 3 A	V <sub>F</sub>	0.55 0.70		70	0.85		0.9	95	V		
Maximum reverse current @ rated VR T <sub>J</sub> =25 ℃		0.5 0.1									
T <sub>J</sub> =100°C	I <sub>R</sub>	10		5		-			mA		
T <sub>J</sub> =125 ℃		_		-		2					
Voltage rate of change (Rated $V_R$ )	dV/dt	10000			V/µs						
Typical thermal resistance	$R_{ heta JC} \ R_{ heta JA}$	15 50			°C/W						
Operating junction temperature range	T <sub>J</sub>	- 55 to +125 - 55 to +150				οС					
Storage temperature range	T <sub>STG</sub>	- 55 to +150			оС						

Note 1: Pulse test with PW=300µs, 1% duty cycle

Document Number: D1308007 Version: I13



ORDERING INFORMATION							
PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING		
	QUALIFIED		CODE				
SR3xx (Note 1)	Prefix "H"	A0		DO-201AD	500 / Ammo box		
		R0	Suffix "G"	DO-201AD	1,250 / 13" Paper reel		
		В0		DO-201AD	500 / Bulk packing		
		X0		DO-201AD	Forming		

Note 1: "xx" defines voltage from 20V (SR302) to 200V (SR320)

EXAMPLE								
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION			
SR306 A0	SR306		A0					
SR306 A0G	SR306		A0	G	Green compound			
SR306HA0	SR306	Н	A0		AEC-Q101 qualified			

#### **RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

0

25

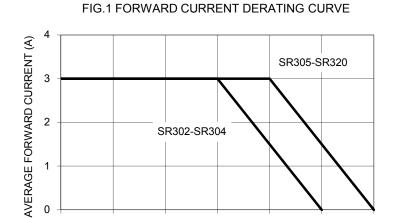


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

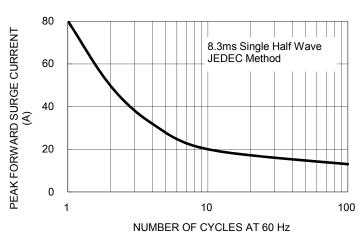


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

75

LEAD TEMPERATURE (°C)

100

125

150

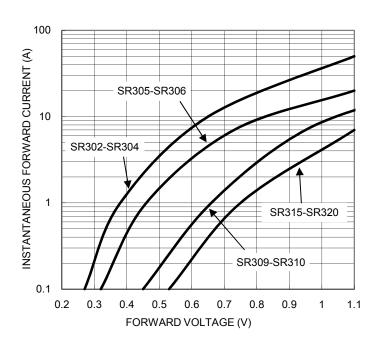
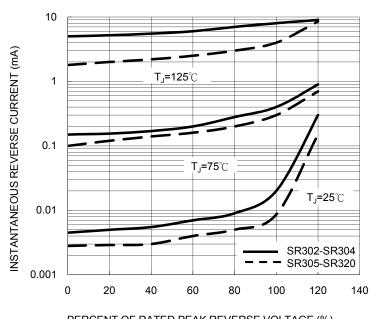


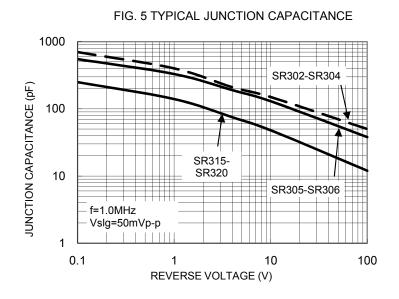
FIG. 4 TYPICAL REVERSE CHARACTERISTICS

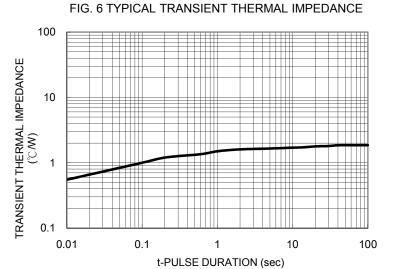


PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

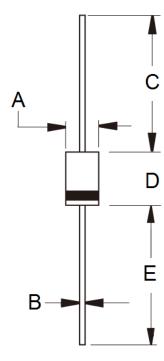
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### **PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit	(mm)	Unit (inch)			
DIIVI.	Min	Max	Min	Max		
Α	5.00	5.60	0.197	0.220		
В	1.20	1.30	0.048	0.052		
С	25.40	-	1.000	-		
D	8.50	9.50	0.335	0.375		
Е	25.40	-	1.000	-		

## MARKING DIAGRAM



P/N = Specific Device Code G = Green Compound

YWW = Date Code F = Factory Code



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