



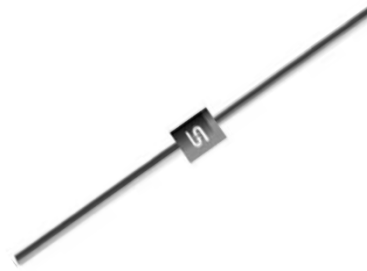
**THE DATASHEET OF  
SR506 A0G**



## 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



**DO-201AD**



### 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:** 1.1 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)												
PARAMETER	SYMBOL	SR 502	SR 503	SR 504	SR 505	SR 506	SR 509	SR 510	SR 515	SR 520	UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	90	100	150	200	V	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	63	70	105	140	V	
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	90	100	150	200	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	5									A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	120									A	
Maximum instantaneous forward voltage (Note 1) @ 5 A	V <sub>F</sub>	0.55			0.70		0.85		1.05		V	
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25 °C T <sub>J</sub> =100 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	0.5					0.1					mA
		15			10		-					
		-			-		5		1			
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000									V/μs	
Typical thermal resistance	R <sub>θJC</sub>	6									°C/W	
	R <sub>θJA</sub>	35										
Operating junction temperature range	T <sub>J</sub>	- 55 to +125				- 55 to +150						°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150									°C	

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

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SR5xx (Note 1)	Prefix "H"	A0	Suffix "G"	DO-201AD	500 / Ammo box
		R0		DO-201AD	1,250 / 13" Paper reel
		B0		DO-201AD	500 / Bulk packing
		X0		DO-201AD	Forming

Note 1: "xx" defines voltage from 20V (SR502) to 200V (SR520)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SR506 A0	SR506		A0		
SR506 A0G	SR506		A0	G	Green compound
SR506HA0	SR506	H	A0		AEC-Q101 qualified

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

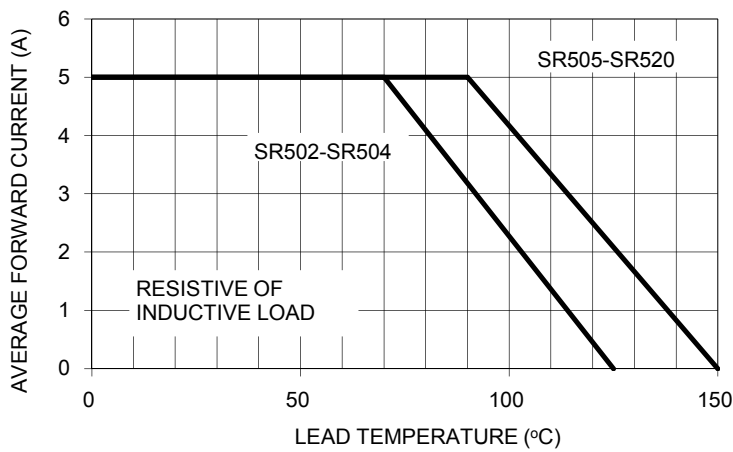


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

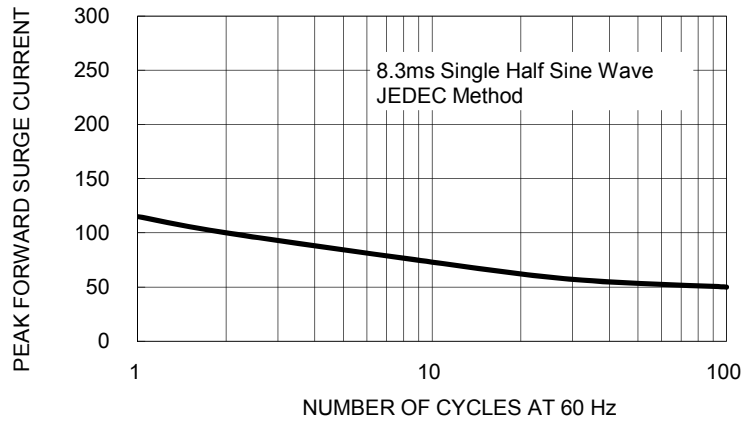


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

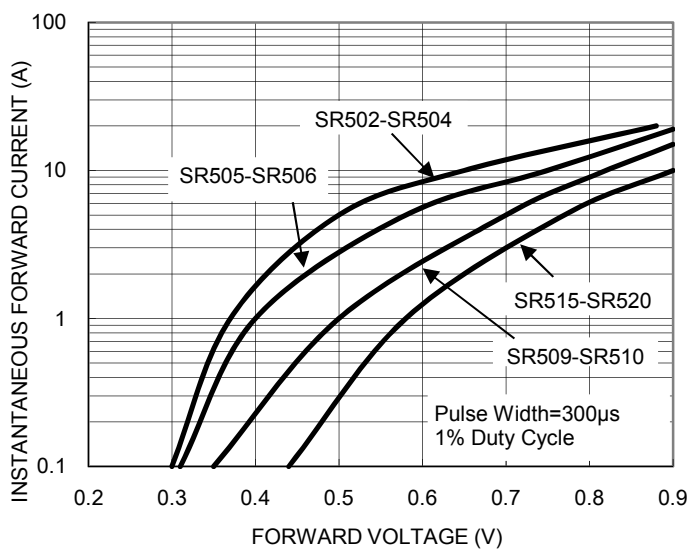


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

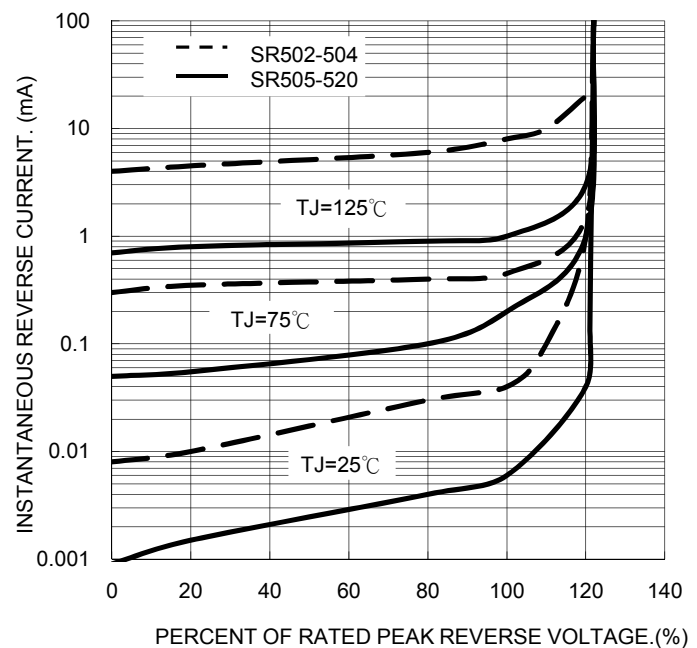


FIG. 5- TYPICAL JUNCTION CAPACITANCE

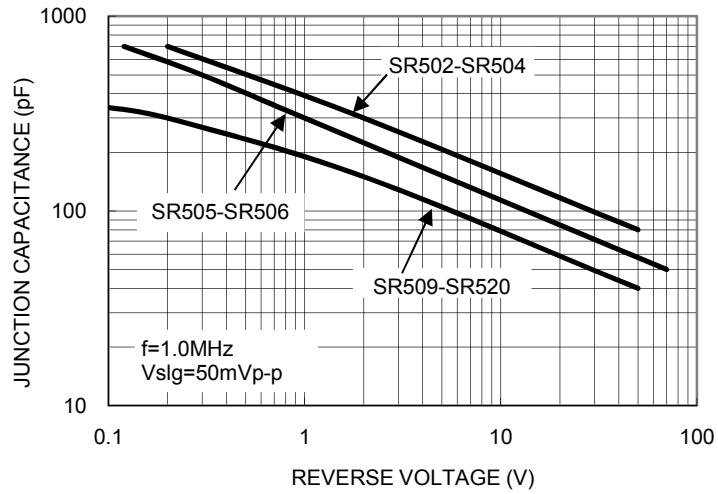
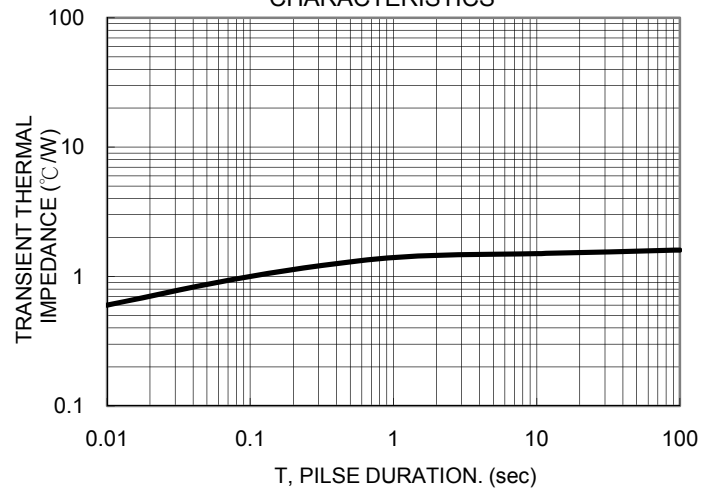
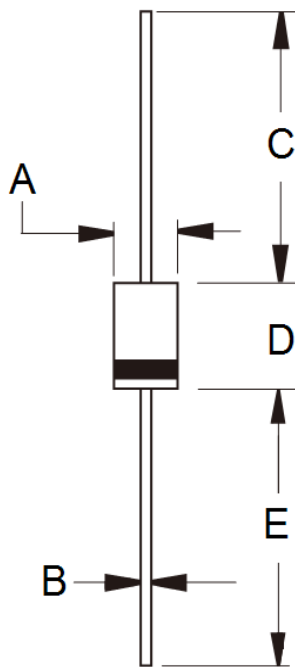


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.00	5.60	0.197	0.220
B	1.20	1.30	0.048	0.052
C	25.40	-	1.000	-
D	8.50	9.50	0.335	0.375
E	25.40	-	1.000	-

MARKING DIAGRAM



P/N = Specific Device Code  
 G = Green Compound  
 YWW = Date Code  
 F = Factory Code

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