

- 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

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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SR 502	SR 503	SR 504	SR 505	SR 506	SR 509	SR 510
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	90	100
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	63	70
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	90	100
Maximum average forward rectified current	$I_{F(AV)}$	5						
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120						
Maximum instantaneous forward voltage (Note 1) @ 5 A	V_F	0.55		0.70		0.85		
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	0.5					0.1	
		15		10		-		
		-		-		5		
Voltage rate of change (Rated V_R)	dV/dt	10000						
Typical thermal resistance	$R_{\theta JC}$	6						
	$R_{\theta JA}$	35						
Operating junction temperature range	T_J	- 55 to +125			- 55 to +150			
Storage temperature range	T_{STG}	- 55 to +150						

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

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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	DE
SR506 A0	SR506		A0		
SR506 A0G	SR506		A0	G	Gr
SR506HA0	SR506	H	A0		AEC

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

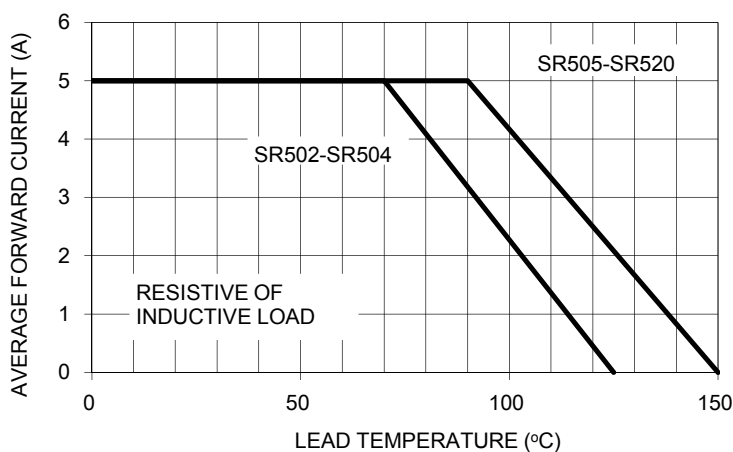


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

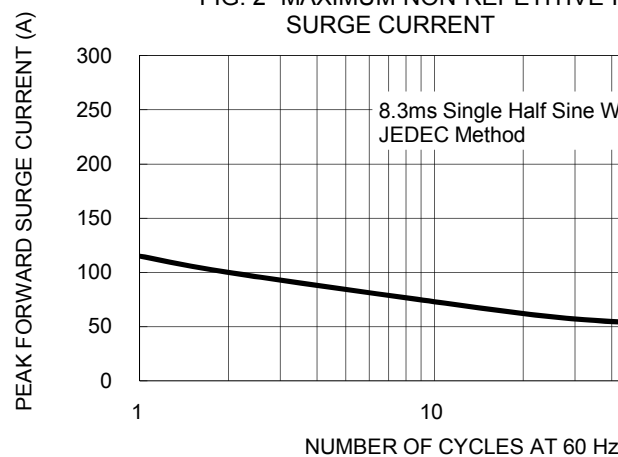


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

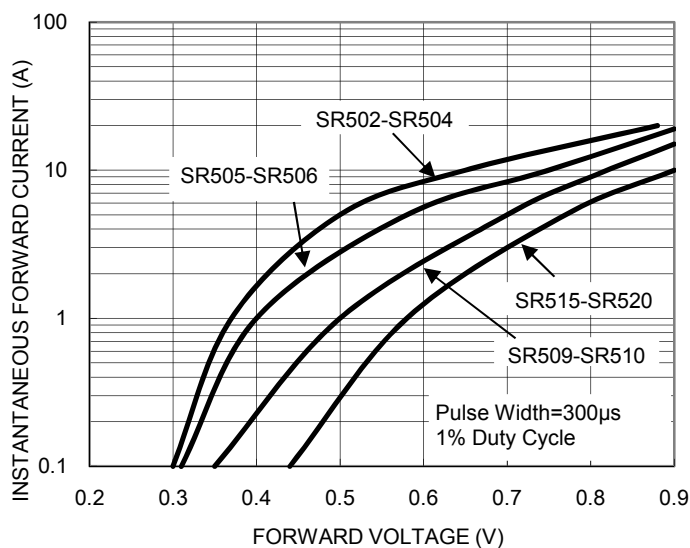
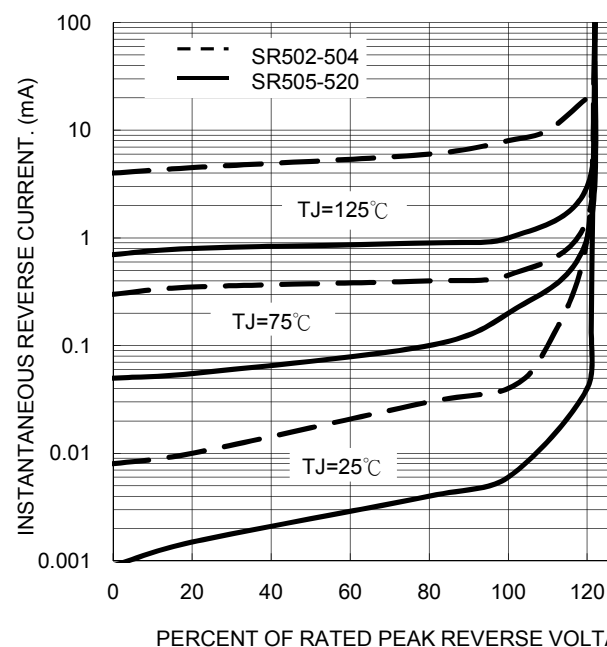
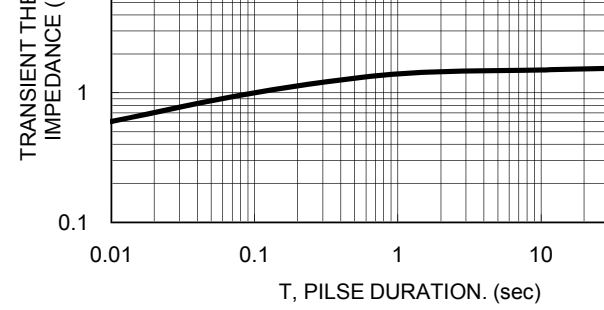
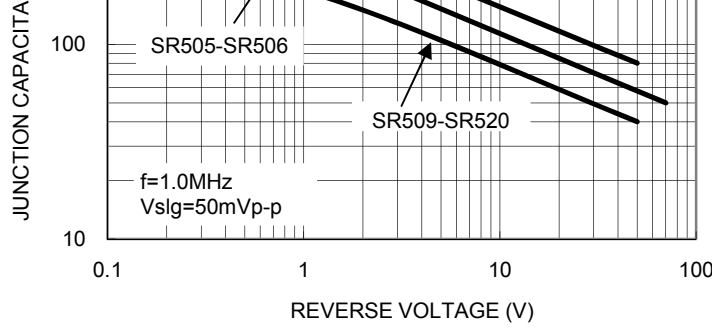
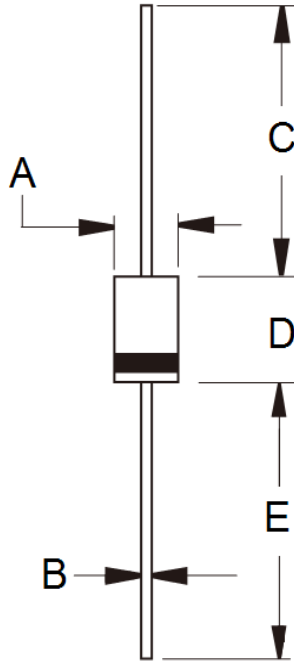


FIG. 4- TYPICAL REVERSE CHARACTERISTICS



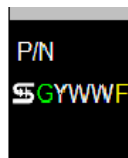


PACKAGE OUTLINE DIMENSIONS



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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