

## 8A, 20V - 150V Isolated Schottky Barrier Rectifiers

### FEATURES

- Low power loss, high efficiency
- Guard ring for over-voltage protection
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



### MECHANICAL DATA

**Case:** ITO-220AC

Molding compound: UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

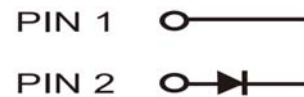
Meet JESD 201 class 2 whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm max.

**Weight:** 1.7 g (approximately)

**ITO-220AC**



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)											
PARAMETER	SYMBOL	SRAF 820	SRAF 830	SRAF 840	SRAF 850	SRAF 860	SRAF 890	SRAF 8100	SRAF 8150	UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	90	100	150	V	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	63	70	105	V	
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	90	100	150	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	8								A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150								A	
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 8A	V <sub>F</sub>	0.55			0.70		0.85		0.95	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				
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000								V/μs	
Typical thermal resistance	R <sub>θJC</sub>	5								°C/W	
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=300μs, 1% duty cycle

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
SRAF8xx (Note 1)	H	C0	G	ITO-220AC	50 / Tube

Note 1: "xx" defines voltage from 20V (SRAF820) to 150V (SRAF8150)

\*: Optional available

EXAMPLE					
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SRAF860HC0G	SRAF860	H	C0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

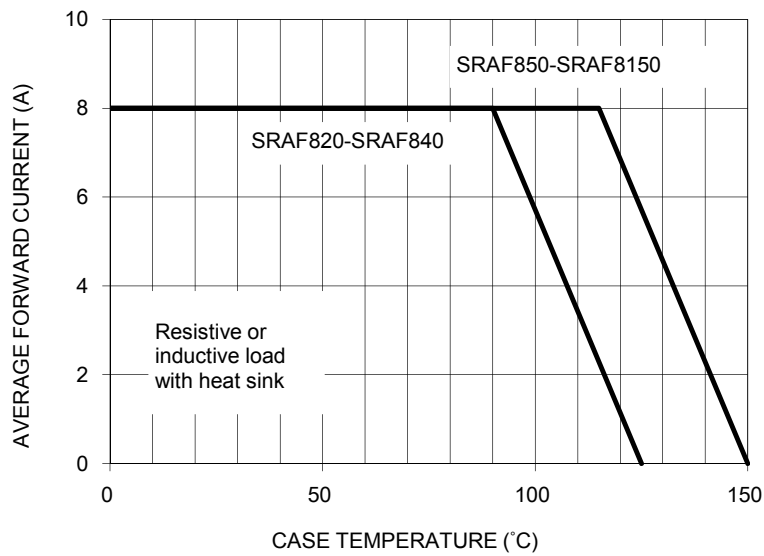


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

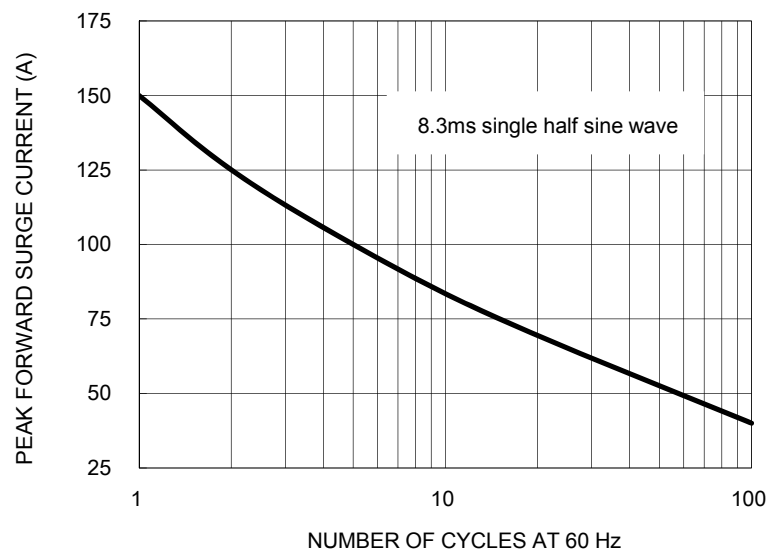


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

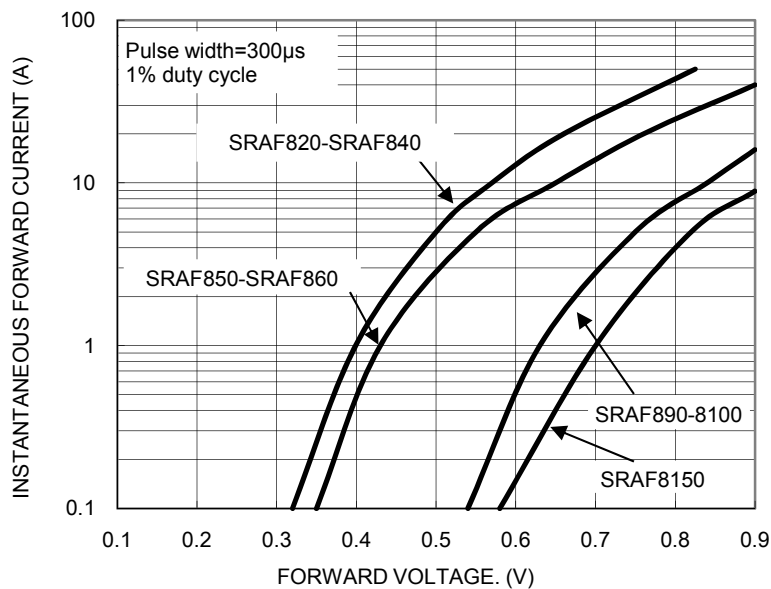


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

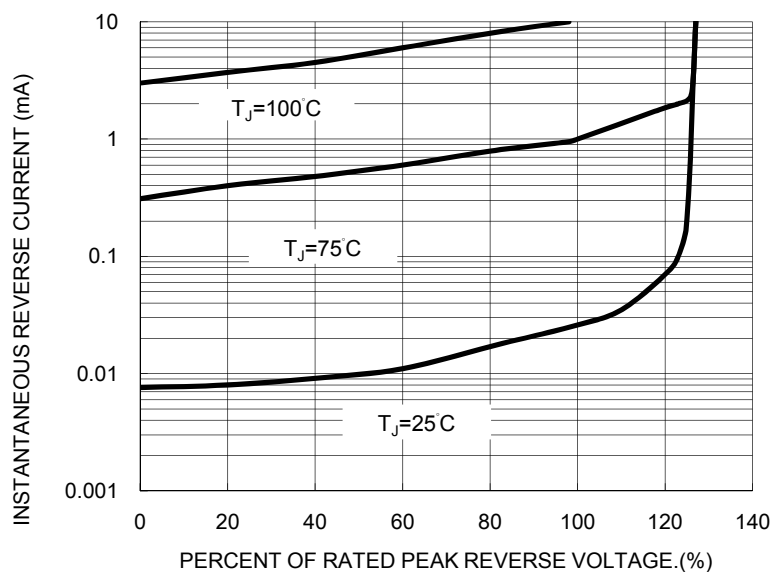


FIG. 5 TYPICAL JUNCTION CAPACITANCE

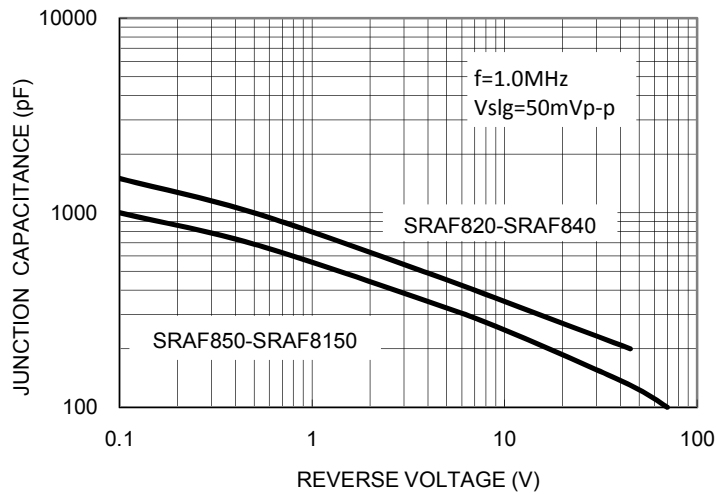
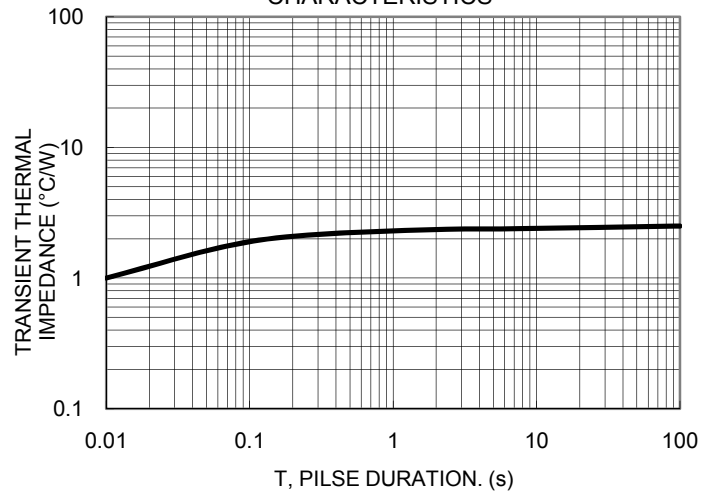
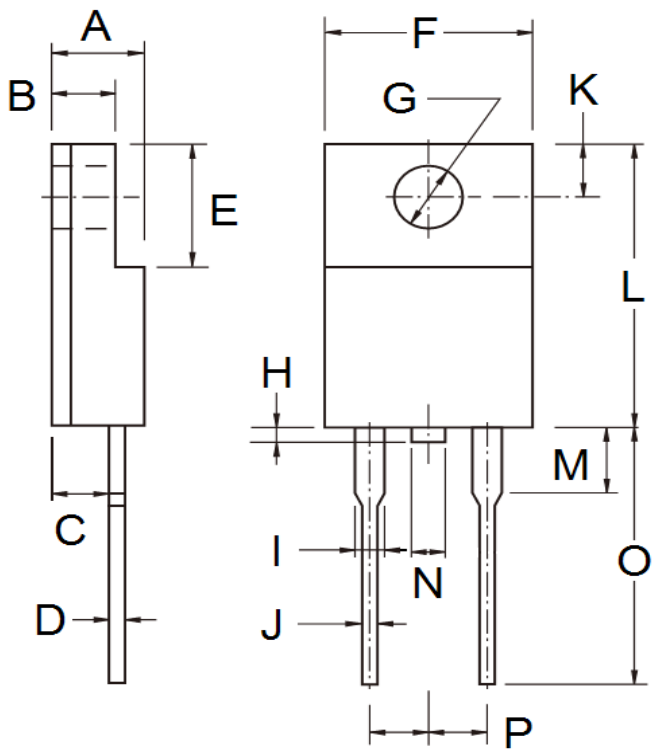


FIG. 6 TYPICAL TRANSIENT THERMAL CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

ITO-220AC



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.10	0.098	0.122
C	2.30	2.90	0.091	0.114
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.00	1.60	0.000	0.063
I	0.95	1.45	0.037	0.057
J	0.50	0.90	0.020	0.035
K	2.40	3.20	0.094	0.126
L	14.80	15.50	0.583	0.610
M	-	4.10	-	0.161
N	-	1.80	-	0.071
O	12.60	13.80	0.496	0.543
P	4.95	5.20	0.195	0.205

MARKING DIAGRAM



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

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