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# 8A, 20V - 150V Surface Mount Schottky Barrier Rectifiers

#### **FEATURES**

- Low power loss, high efficiency
- Ideal for automated placement
- 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







#### **MECHANICAL DATA**

Case: TO-263AB (D<sup>2</sup>PAK)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020 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

Weight: 1.37 g (approximately)

## TO-263AB (D<sup>2</sup>PAK)



DADAMETED	OVMBOL	SRAS	SRAS	SRAS	SRAS	SRAS	SRAS	SRAS	SRAS	I UNIT I
PARAMETER	SYMBOL	820	830	840	850	860	890	8100	8150	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	90	100	150	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	8					Α			
Peak forward surge current, 8.3 ms single half sine-way superimposed on rated load	/e I <sub>FSM</sub>	150				Α				
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 8 A	V <sub>F</sub>		0.55		0.	70		0.95		V
T <sub>J</sub> =25°C					0	.1	•			
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =100°C	I <sub>R</sub>			5				-		mA
T <sub>J</sub> =125°C			-			5		ļ		
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000					V/µs			
Typical thermal resistance	$R_{ heta JC}$	3				°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 <sup>(*)</sup>	PACKAGE	PACKING	
SRAS8xx	н	RN	G	D <sup>2</sup> PAK	800 / 13" Paper reel	
(Note 1)	"	MN		DPAK	800 / 13" Plastic reel	

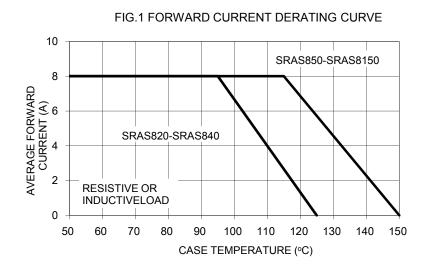
Note 1: "xx" defines voltage from 20V (SRAS820) to 150V (SRAS8150)

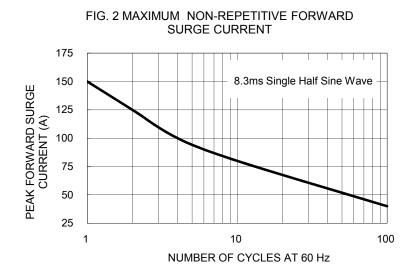
<sup>\*:</sup> Optional available

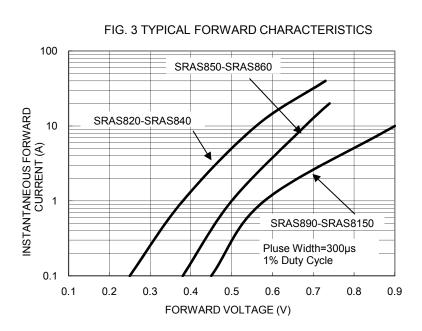
EXAMPLE						
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION	
SRAS860HRNG	SRAS860	Н	RN	G	AEC-Q101 qualified Green compound	

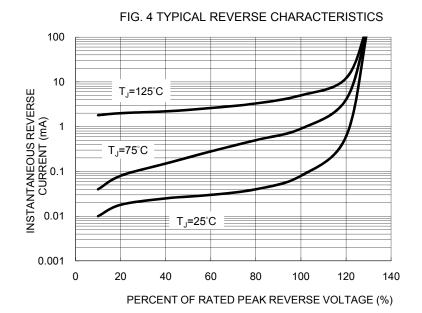
#### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)









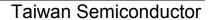




FIG. 5 TYPICAL JUNCTION CAPACITANCE

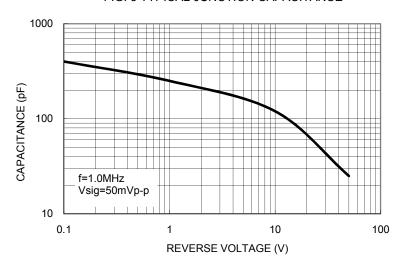
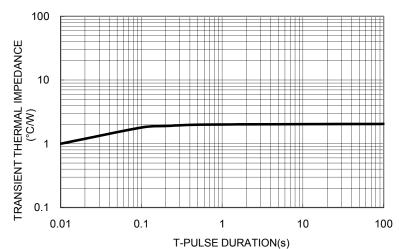
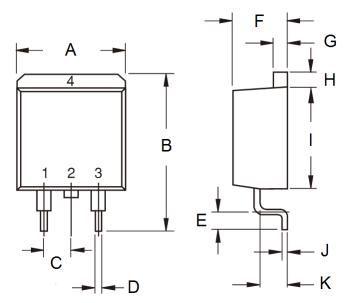


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

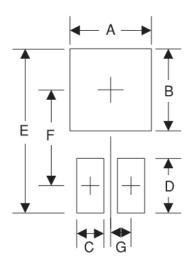


# PACKAGE OUTLINE DIMENSIONS TO-263AB (D<sup>2</sup>PAK)



DIM.	Unit	(mm)	Unit (inch)		
DIW.	Min Max		Min	Max	
Α	-	10.5	-	0.413	
В	14.60	15.88	0.575	0.625	
С	2.41	2.67	0.095	0.105	
D	0.68	0.94	0.027	0.037	
E	2.29	2.79	0.090	0.110	
F	4.44	4.70	0.175	0.185	
G	1.14	1.40	0.045	0.055	
Н	1.14	1.40	0.045	0.055	
I	8.25	9.25	0.325	0.364	
J	0.36	0.53	0.014	0.021	
K	2.03	2.79	0.080	0.110	

## SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
Α	10.8	0.425
В	8.3	0.327
С	1.1	0.043
D	3.5	0.138
E	16.9	0.665
F	9.5	0.374
G	2.5	0.098

## **MARKING DIAGRAM**



P/N = Specific Device Code

G = Green Compound

YWW = Date Code

F = Factory Code





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