

SRAS2020 - SRAS20150

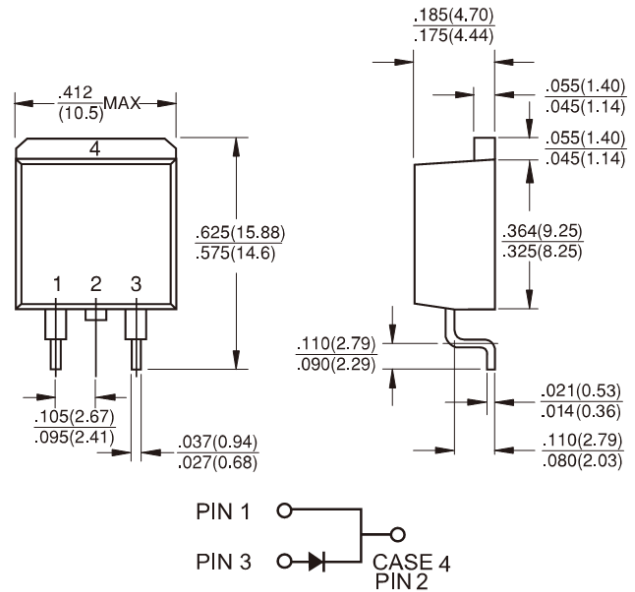
20.0AMPS. Surface Mount Schottky Barrier Rectifiers

D²PAK



Features

- ✧ UL Recognized File #E-326854
- ✧ For surface mounted application
- ✧ Ideal for automated pick & place
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Case: D²PAK molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.25", (6.35mm) from case
- ✧ Weight: 1.70 grams

Dimensions in inches and (millimeters)

Marking Diagram



- SRAS20XX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SRAS 2020	SRAS 2030	SRAS 2040	SRAS 2050	SRAS 2060	SRAS 2090	SRAS 20100	SRAS 20150	Unit
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 _{F(AV)}	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	330								A
Maximum Instantaneous Forward Voltage (Note 1) @ 20A	V _F	0.57			0.70		0.92		1.02	V
Maximum Reverse Current @ Rated VR T _A =25 °C T _A =100 °C T _A =125 °C	I _R	0.5					0.1			mA
		15			10		-			
		-					5			
Typical Junction Capacitance (Note 2)	C _j	1400								pF
Typical Thermal Resistance (Note 3)	R _{θJC}	1.5								°C/W
Operating Temperature Range	T _J	- 65 to + 150								°C
Storage Temperature Range	T _{STG}	- 65 to + 150								°C

Note 1: Pulse Test with PW=300u sec, 1% Duty Cycle

Note 2: Measure at 1MHz and Applied Reverse Voltage of 4.0V D.C.

Note 3: Mounted on Heatsink Size of 2" x 3" x 0.25" Al-Plate

RATINGS AND CHARACTERISTIC CURVES (SRAS2020 THRU SRAS20150)

FIG.1 FORWARD CURRENT DERATING CURVE

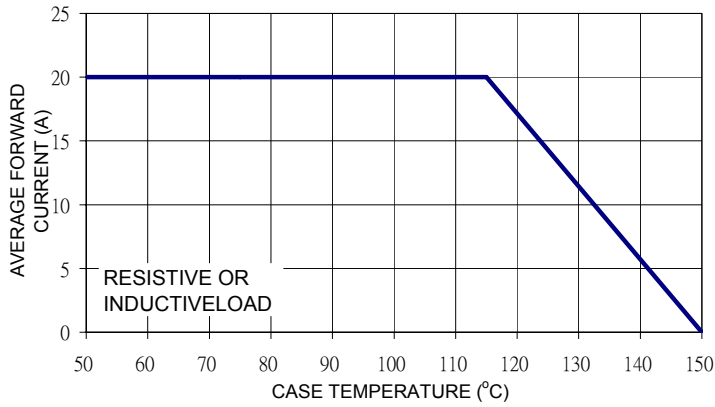


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

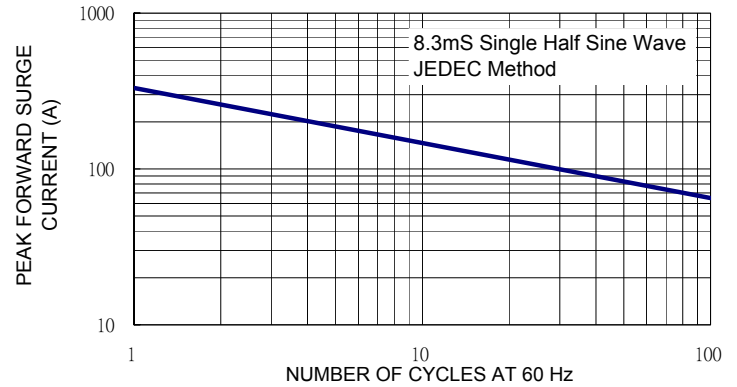


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

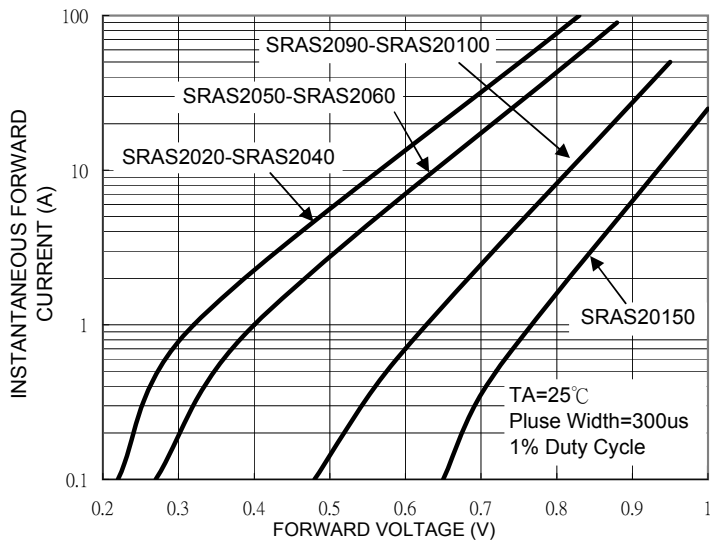


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

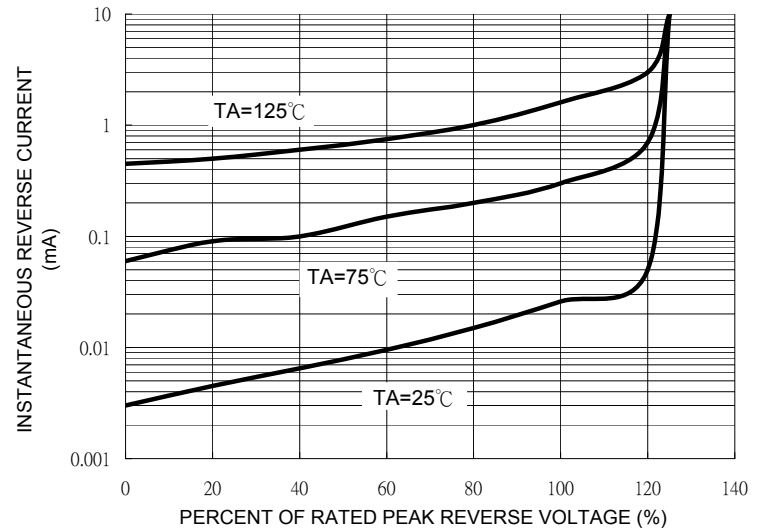


FIG. 5 TYPICAL JUNCTION CAPACITANCE

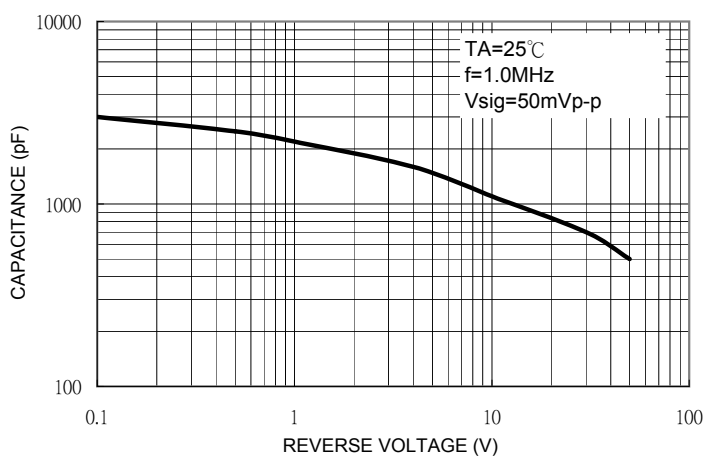


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

