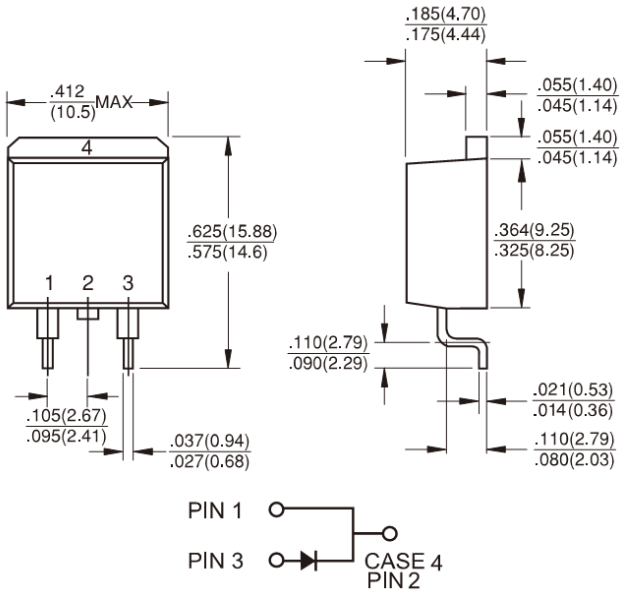
TAIWAN SEMICONDUCTOR

SRAS2020 - SRAS20150

20.0AMPS. Surface Mount Schottky Barrier Rectifiers

D^2PAK





Features

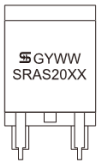
- ✧ UL Recognized File #E-326854
- ✧ For surface mounted application
- ✧ Ideal for automated pick & place
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliabbility
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ Green compound with suffix "G"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

Mechanical Data

- ✧ Case: D^2PAK 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℃/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 ℃ 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 ℃	I_R	0.5					0.1			mA
T_A=100℃		15			10		-			
T_A=125 ℃		-					5			
Typical Junction Capacitance (Note 2)	C_j	1400								pF
Typical Thermal Resistance (Note 3)	$R_{\theta jC}$	1.5								$^OC/W$
Operating Temperature Range	T_J	- 65 to + 150								^OC
Storage Temperature Range	T_{STG}	- 65 to + 150								^OC

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

TAIWAN SEMICONDUCTOR

RATINGS AND CHARACTERISTIC CURVES (SRAS2020 THRU SRAS20150)

FIG.1 FORWARD CURRENT DERATING CURVE

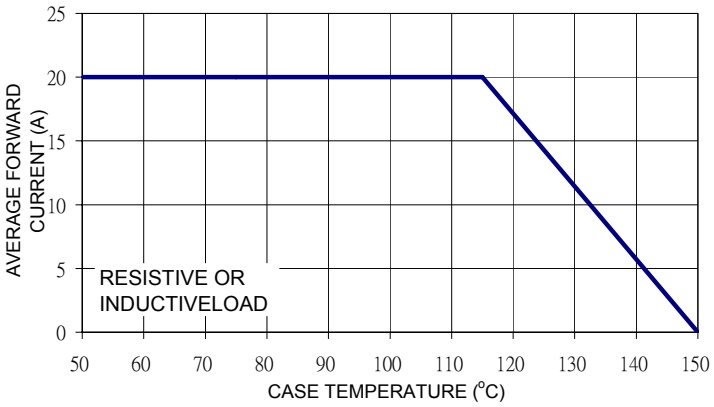


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

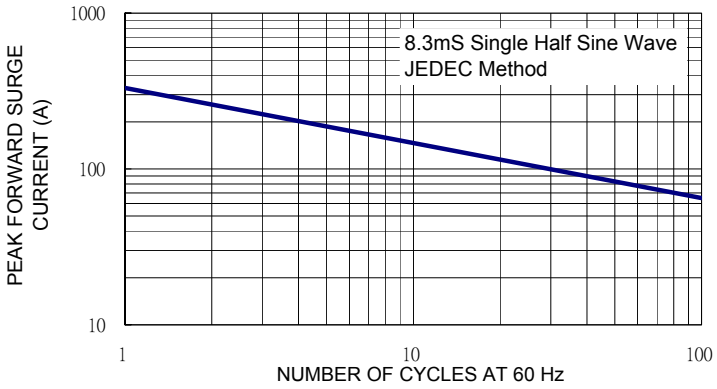


FIG. 3 TYPICAL FORWARD CHARACTERISRICS

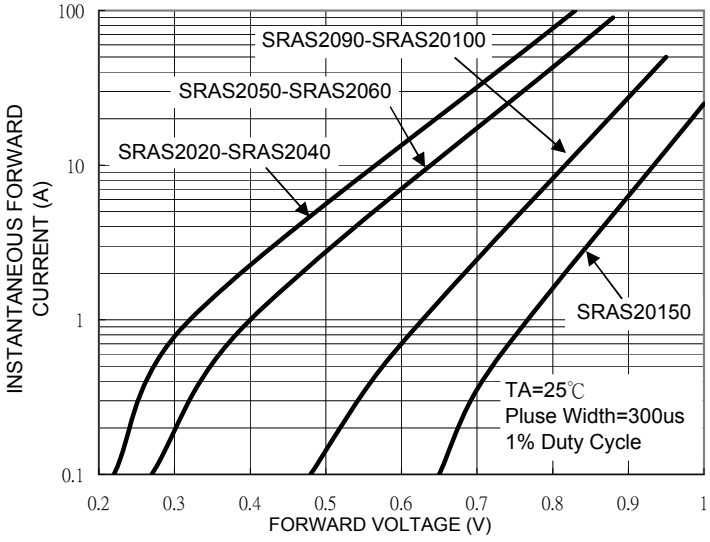


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

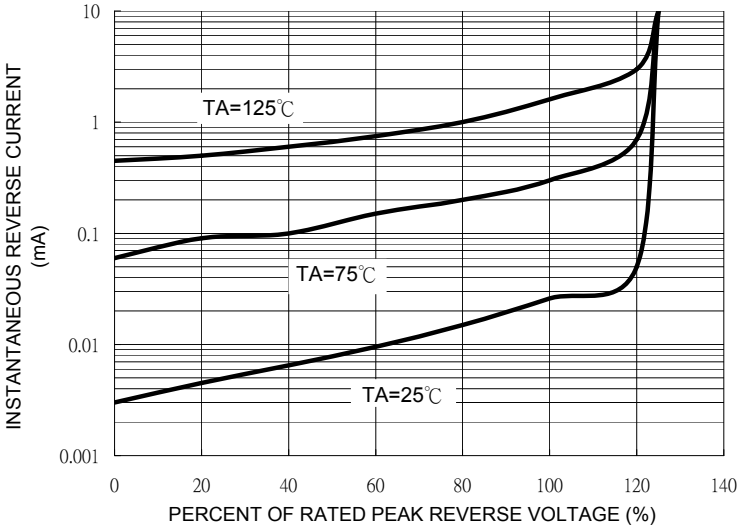


FIG. 5 TYPICAL JUNCTION CAPACITANCE

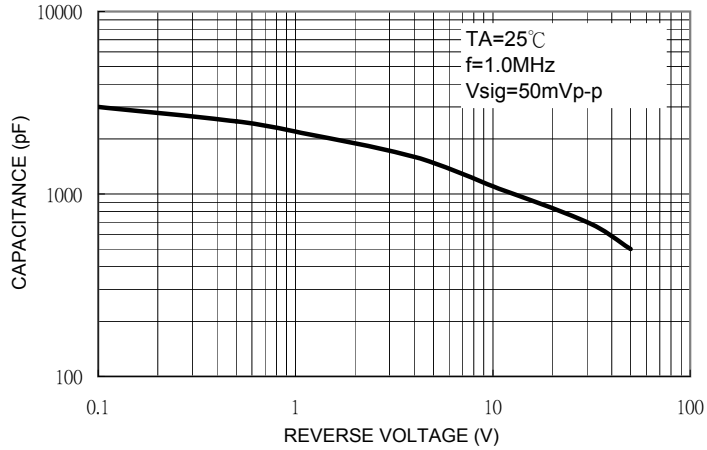


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

