

Features

- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Cases: TO-220AC 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: 1.90 grams

Ordering Information(example)

Part No.	Package	Packing	Packing code	Packing code (Green)
SRA2020	TO-220AC	50 / TUBE	C0	C0G

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	SRA 2020	SRA 2030	SRA 2040	SRA 2050	SRA 2060	SRA 2090	SRA 20100	SRA 20150	Units
Maximum Recurrent 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}	300								A
Maximum Instantaneous Forward Voltage (Note 1) @ 20A	V _F	0.55			0.70		0.92		1.02	V
Maximum D.C. Reverse Current at Rated DC Blocking Voltage	I _R	0.5					0.1			mA
@ T _A =25 °C		15					10		-	mA
@ T _A =100 °C		-					5.0			mA
Typical Thermal Resistance	R _{θJC}	1.5								°C/W
Operating Junction Temperature Range	T _J	- 65 to + 125				- 65 to + 150				°C
Operating Temperature Range - In DC forward mode	T _J	≤200								°C
Storage Temperature Range	T _{STG}	- 65 to + 150								°C

Note 1 : Pulse Test : 300 us Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (SRA2020 THRU SRA20150)

FIG.1 FORWARD CURRENT DERATING CURVE

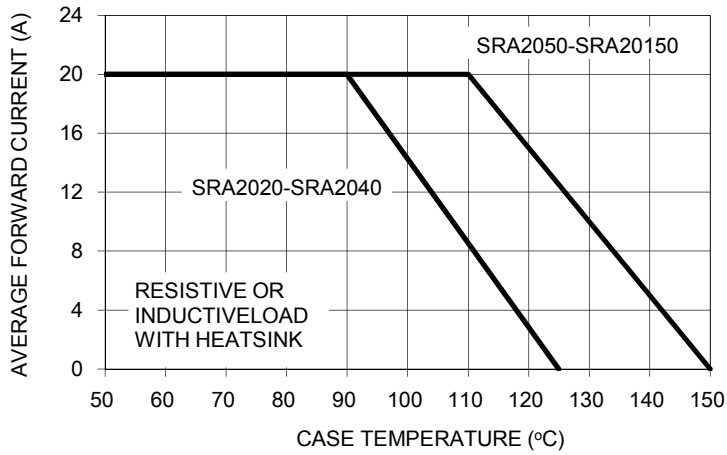


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

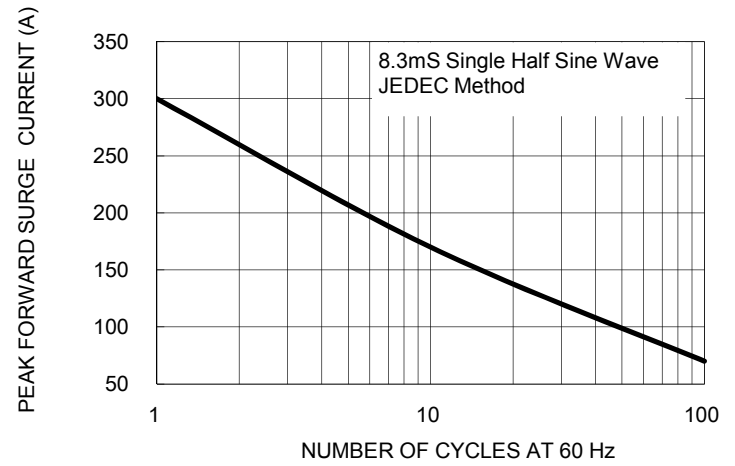


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

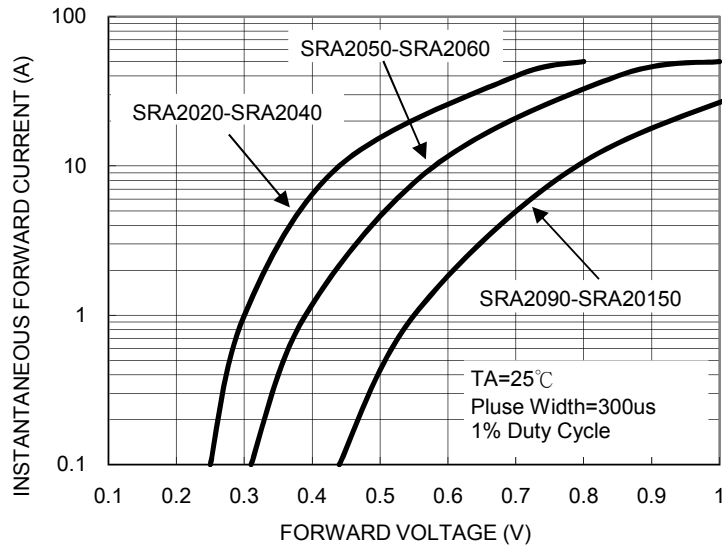


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

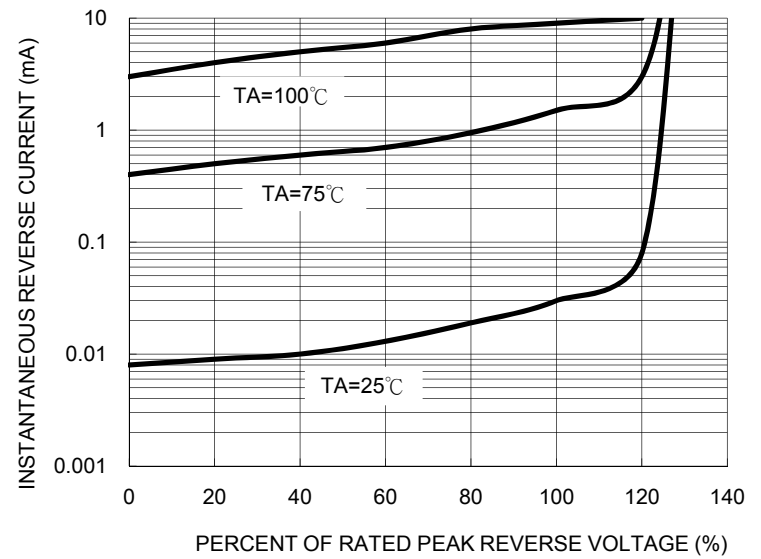


FIG. 5 TYPICAL JUNCTION CAPACITANCE

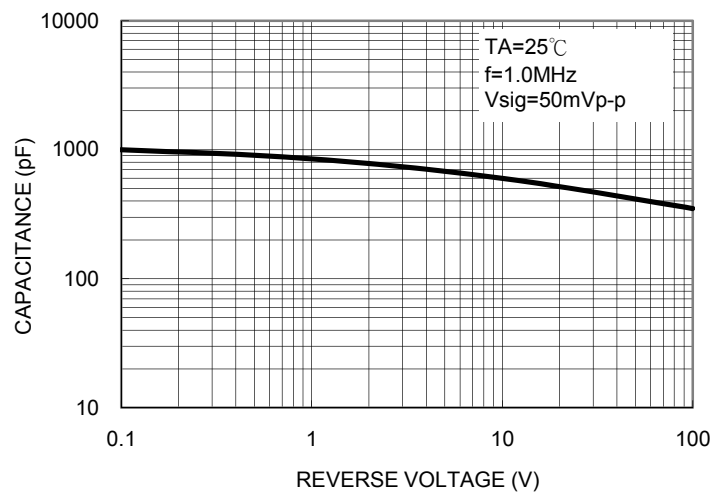
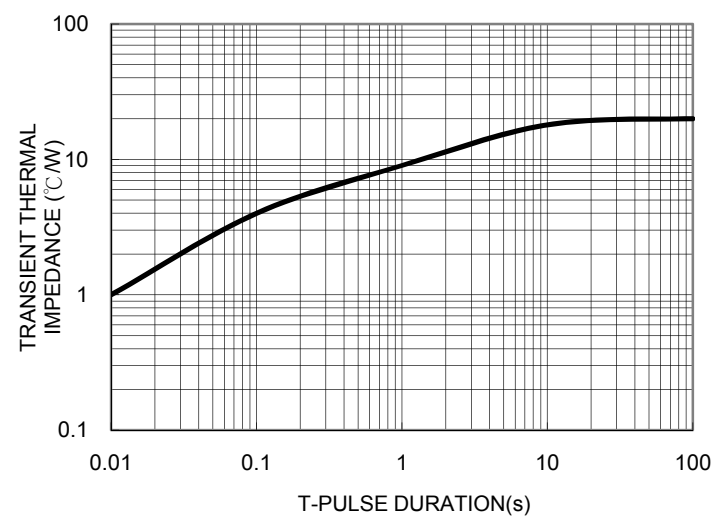


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

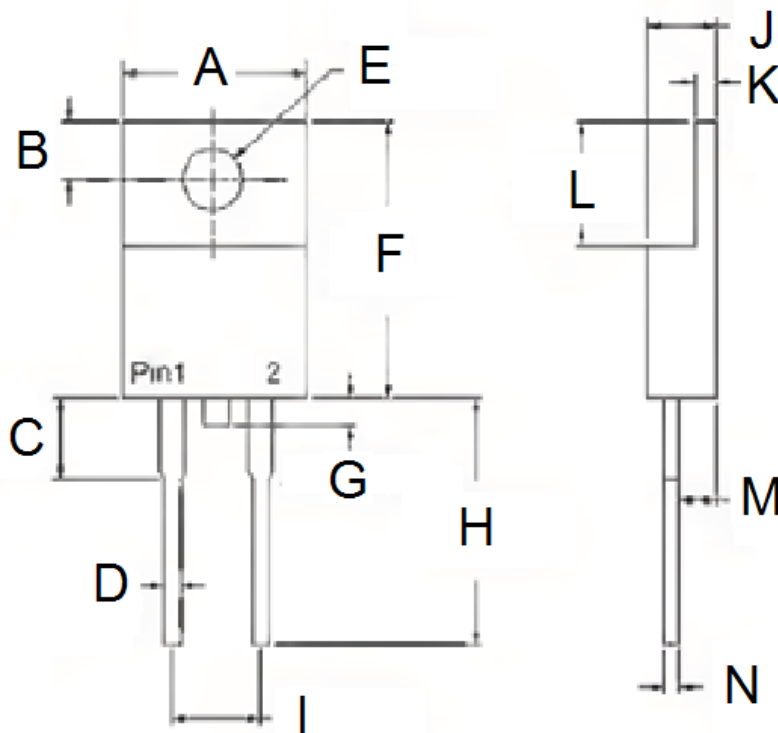


Ordering information

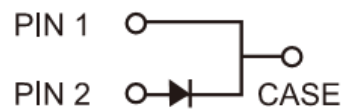
Part No.	Package	BULK Packing	Packing code	Packing code (Green)
SRA20xx	TO-220AC	50 / TUBE	C0	C0G

Note: "xx" is Device Code from "20" thru "150".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	-	1.60	-	0.063
H	13.19	14.79	0.519	0.582
I	4.95	5.20	0.195	0.205
J	4.42	4.76	0.174	0.187
K	1.14	1.40	0.045	0.055
L	5.84	6.86	0.230	0.270
M	2.20	2.80	0.087	0.110
N	0.35	0.64	0.014	0.025



Marking Diagram



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

Mouser Electronics

Authorized Distributor

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[Taiwan Semiconductor:](#)

[SRA20100](#) [SRA20150](#) [SRA2020](#) [SRA2030](#) [SRA2040](#) [SRA2050](#) [SRA2060](#) [SRA2090](#)