

## Features

- ◇ UL Recognized File # E-326243
- ◇ Dual rectifier construction, positive center-tap
- ◇ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◇ Metal silicon junction, majority carrier conduction
- ◇ Low power loss, high efficiency
- ◇ High current capability, low VF
- ◇ High surge reliability
- ◇ Epitaxial construction
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◇ High temperature soldering guaranteed:  
260°C/10 seconds, 0.17"(4.3mm) lead lengths at 5 lbs., (2.3kg) tension
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode



## Mechanical Data

- ◇ Cases: JEDEC TO-3P/TO-247AD molded plastic
- ◇ Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Mounting position: Any
- ◇ Weight: 6.12 grams

## Ordering Information (example)

Part No.	Package	Packing	Packing code	Green Compound Packing code
SR3020PT	TO-3P	30 / TUBE	C0	C0G

## 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	SR 3020 PT	SR 3030 PT	SR 3040 PT	SR 3050 PT	SR 3060 PT	SR 3090 PT	SR 30100 PT	SR 30150 PT	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	$I_{F(AV)}$	30								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) @ 15 A	$V_F$	0.55		0.70		0.90		1.00		V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	1.0				0.5				mA
		20		15		10				mA
Typical Junction Capacitance (Note 2)	$C_j$	750		500		340				pF
Typical Thermal Resistance Per Leg	$R_{\theta JC}$	1.5								°C/W
Operating Junction Temperature Range	$T_J$	- 65 to + 125				- 65 to + 150				°C
Storage Temperature Range	$T_{STG}$	- 65 to + 150								°C

Note 1 : 300 us Pulse Width, 2% Duty Cycle

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

RATINGS AND CHARACTERISTIC CURVES (SR3020PT THRU SR30150PT)

FIG. 1- FORWARD CURRENT DERATING CURVE

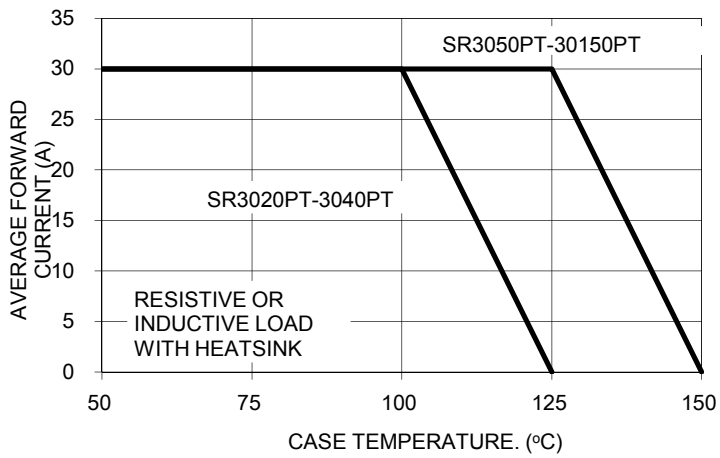


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

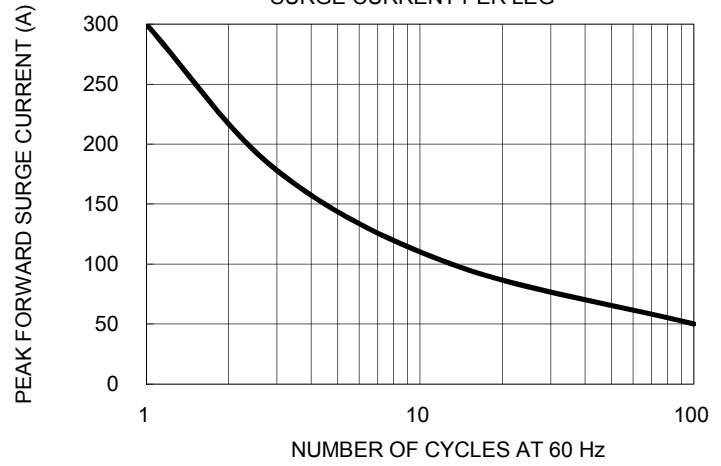


FIG. 3- TYPICAL FORWARD CHARACTERISTICS PER LEG

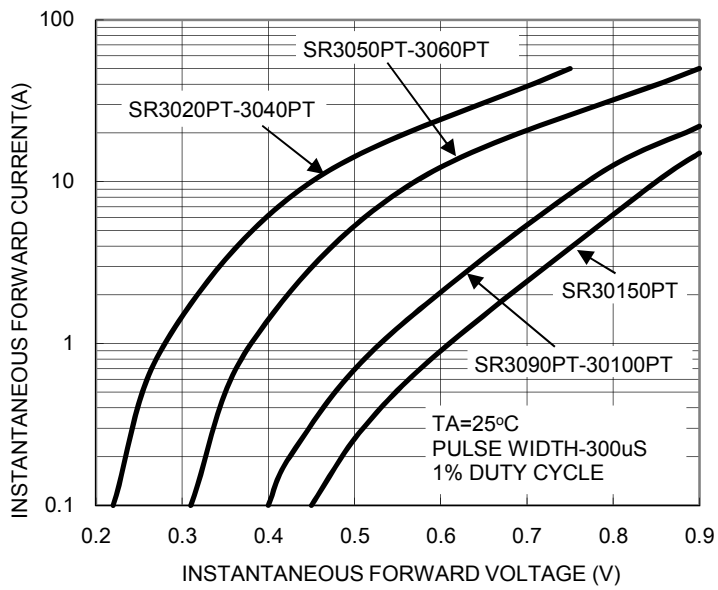


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

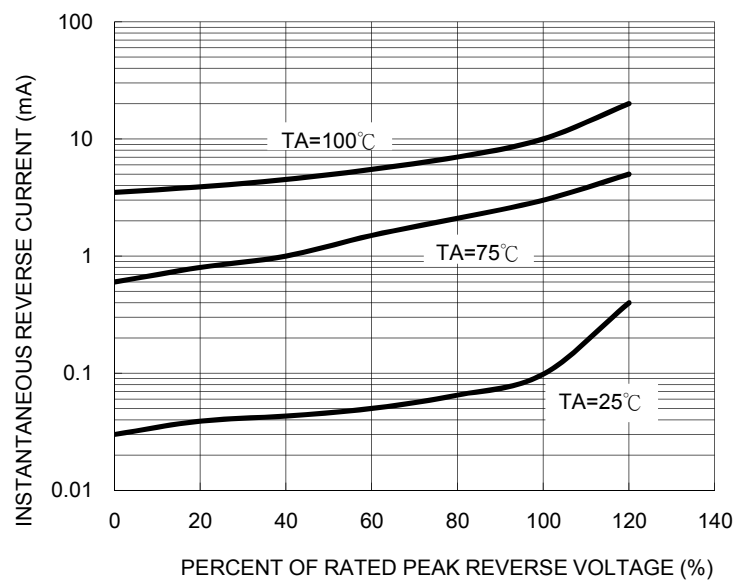


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

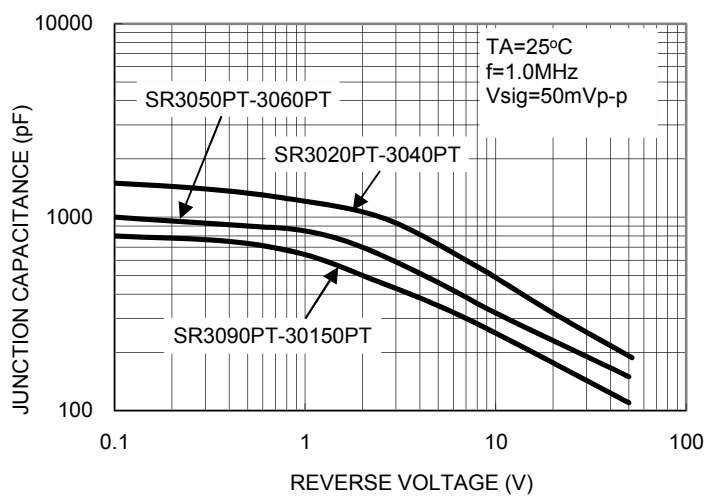
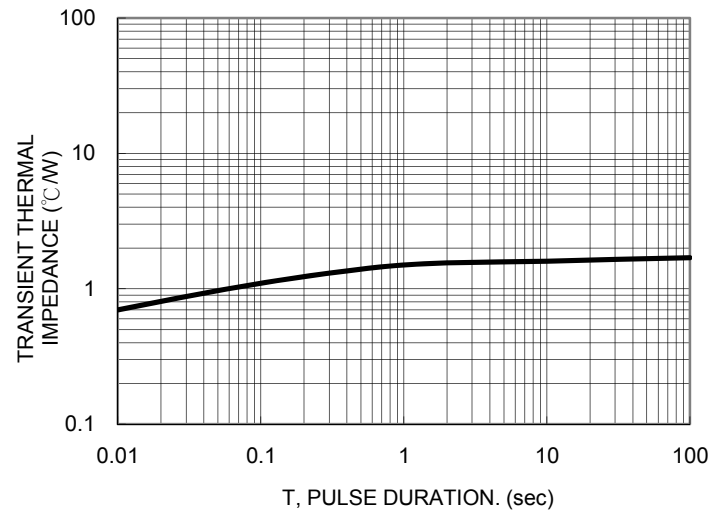


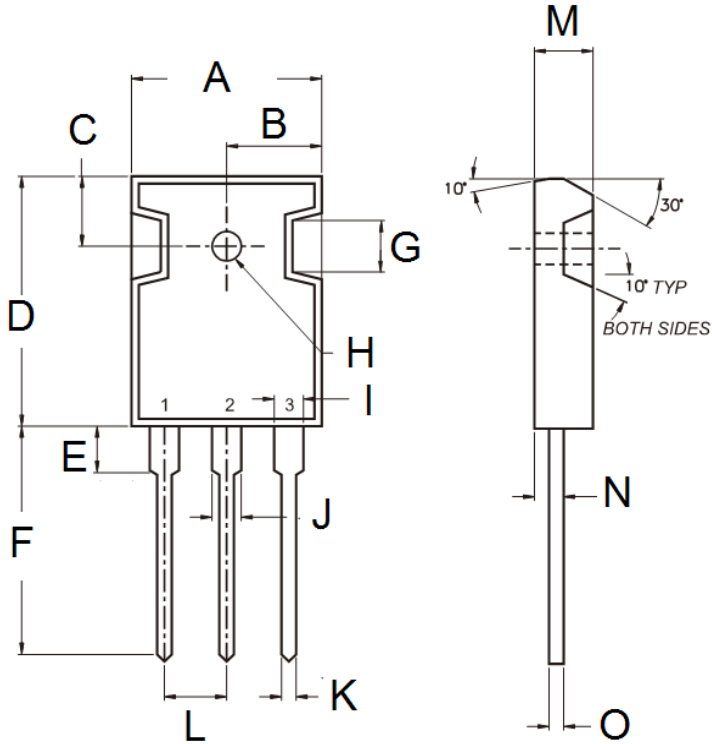
FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



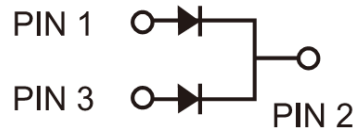
**Ordering information**

Part No.	Package	BULK Packing	Packing code	Green Compound Packing code
SR30xxPT	TO-3P	30 / TUBE	C0	C0G

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

**Dimensions**


DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030


**Marking Diagram**


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