

# SRS2020 - SRS20150

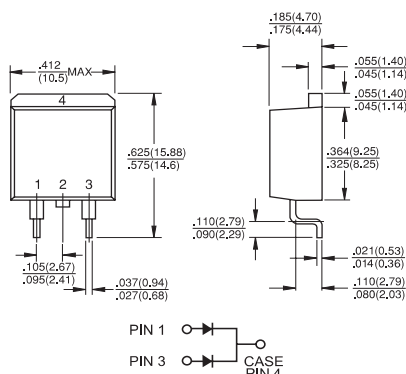
20.0 AMPS. Surface Mount Schottky Barrier Rectifiers

## D<sup>2</sup>PAK



### Features

- ✦ 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



### Mechanical Data

- ✦ Cases: D<sup>2</sup>PAK 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 at terminals
- ✦ Weight: 1.70 grams

Dimensions in inches and (millimeters)

### 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	SRS 2020	SRS 2030	SRS 2040	SRS 2050	SRS 2060	SRS 2090	SRS 20100	SRS 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 See Fig. 1	$I_{(AV)}$	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	200								A
Maximum Instantaneous Forward Voltage @ 10A	$V_F$	0.55		0.70		0.92		1.02		V
Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	$I_R$	0.5				0.1				mA
		15		10		5.0				mA
Typical Junction Capacitance (Note 2)	$C_j$	600		400		350				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.5								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-65 to +125				-65 to +150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^\circ\text{C}$

Notes: 1. Thermal Resistance from Junction to Case Per Leg  
2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SRS2020 THRU SRS20150)

FIG.1- FORWARD CURRENT DERATING CURVE

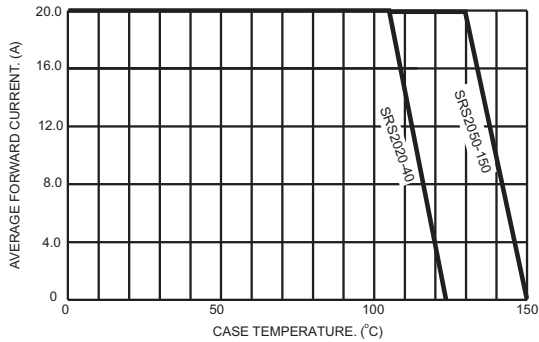


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

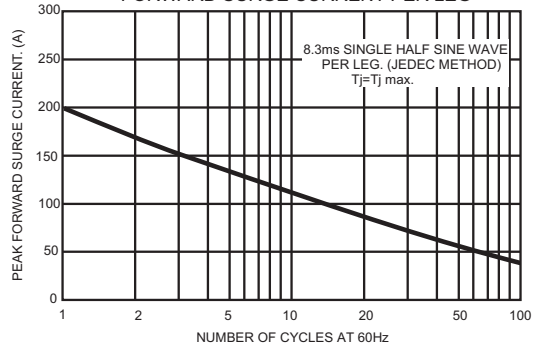


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

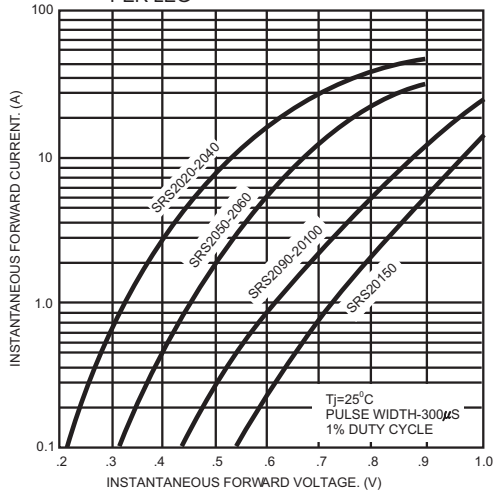


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

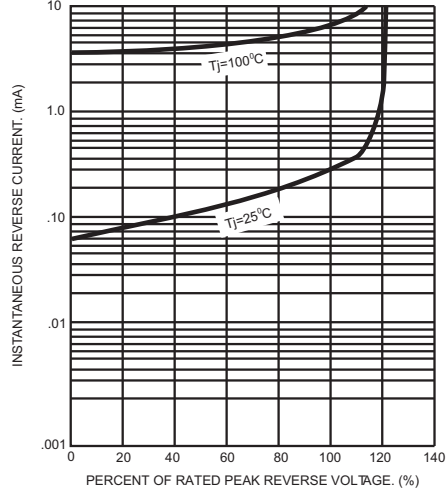


FIG.6- TYPICAL JUNCTION CAPACITANCE PER LEG

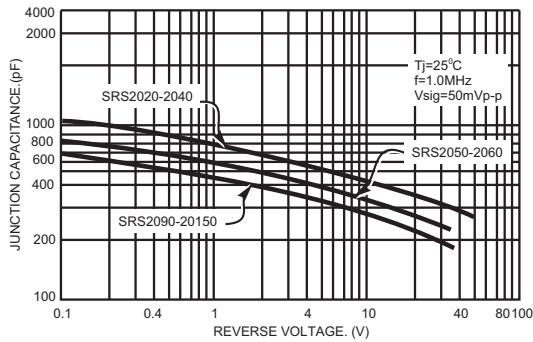


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

