

SRS1020 - SRS10150

10.0 AMPS. Surface Mount Schottky Barrier Rectifiers

D²PAK

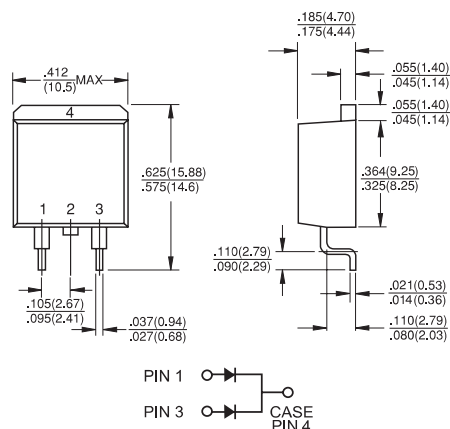


Features

- ✦ 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: D²PAK molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Terminals: Pure tin plated, Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✦ Polarity: As marked
- ✦ High temperature soldering guaranteed: 260°C/10 seconds at terminals
- ✦ Weight: 1.70grams



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 1020	SRS 1030	SRS 1040	SRS 1050	SRS 1060	SRS 1090	SRS 10100	SRS 10150	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	$I_{(AV)}$	10								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120								A
Maximum Instantaneous Forward Voltage @5A	V_F	0.55		0.70		0.90		1.00		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	400								pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.0								$^\circ\text{C/W}$
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 (SRS1020 THRU SRS10150)

FIG.1- FORWARD CURRENT DERATING CURVE

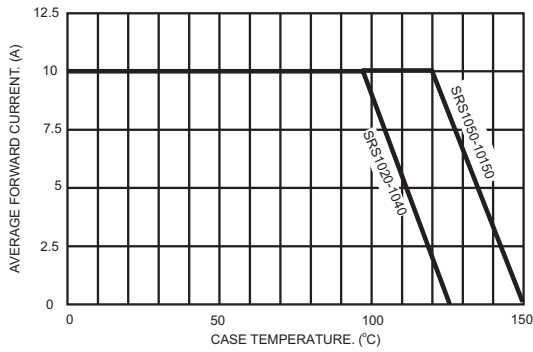


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

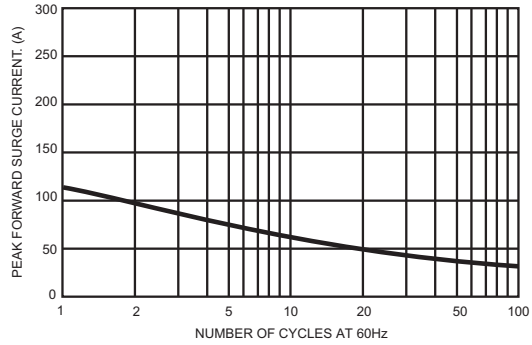


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

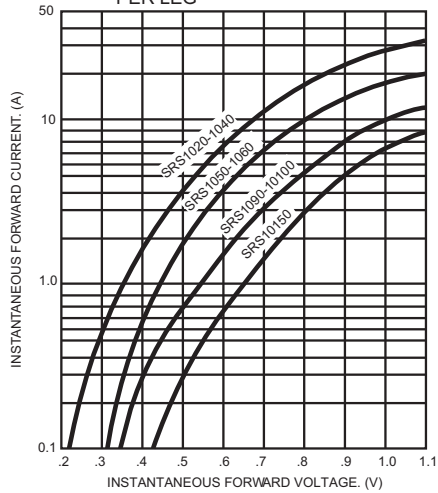


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

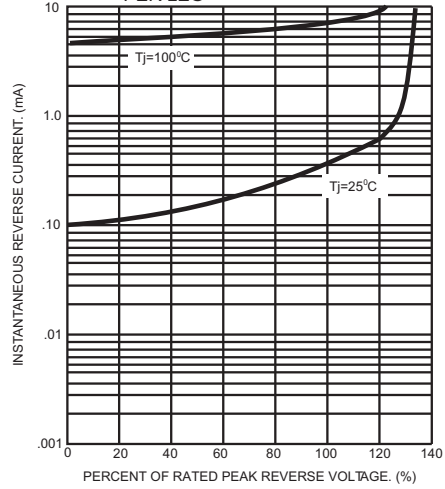


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

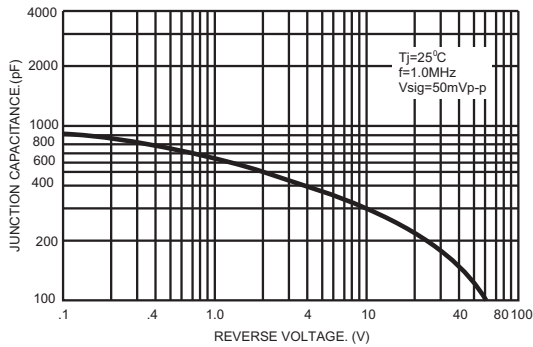


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

