PRELIMINARY

SOLID STATE DEVICES, INC.
14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

SDR953/3 thru SDR955/3

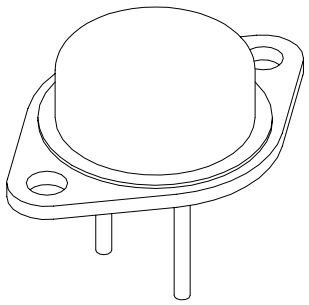
Designer's Data Sheet

50 AMPS 300 - 500 VOLTS 35 nsec HYPER FAST RECTIFIER

FEATURES:

- **Hyper Fast Recovery: 35 nsec Maximum**
- **High Surge Rating**
- **Low Reverse Leakage Current**
- **Low Junction Capacitance**
- **Hermetically Sealed Package**
- **Gold Eutectic Die Attach Available**
- **Ultrasonic Aluminum Wire Bonds**
- **TX and TXV Level Screening Available**

TO-3



Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	**SDR953/3** **SDR954/3** **SDR955/3**	V_{RRM} V_{RWM} V_R	300 400 500	**Volts**
Average Rectified Forward Current (Resistive load, 60Hz, Sine Wave, T_A = 25ºC)		**Io**	50	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25ºC)		I_{FSM}	800	**Amps**
Operating and Storage Temperature		T_{OP} **& Tstg**	-65 TO +200	**ºC**
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	1.0	**ºC/W**

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET # : RH0135B

SDR953/3 thru SDR955/3

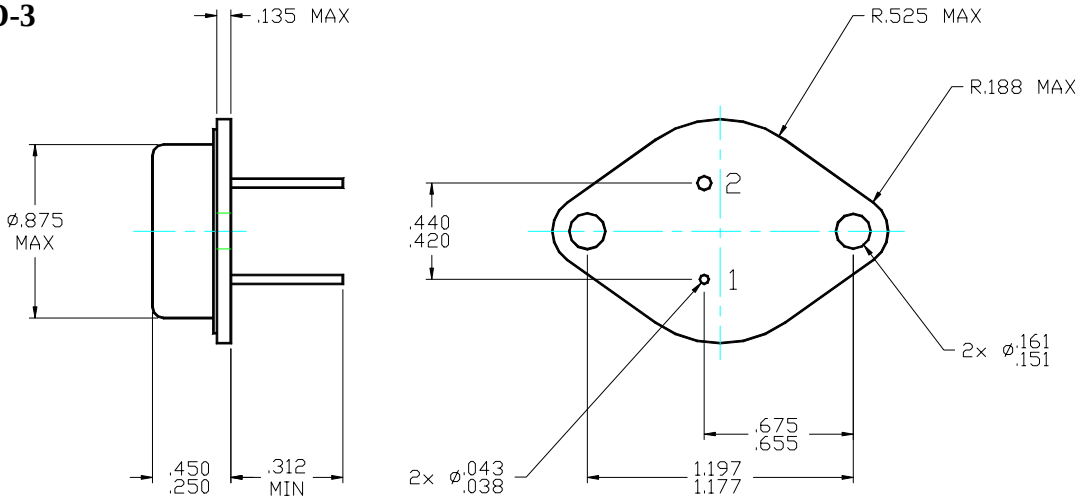
PRELIMINARY

SOLID STATE DEVICES, INC.
14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

Electrical Characteristics		SYMBOL	MIN	MAX	UNITS
Instantaneous Forward Voltage Drop (T_A = 25ºC, 300 µsec Pulse)	I_F = 25A I_F = 50A	**V_{F1}** **V_{F2}**	- -	1.20 1.45	**Vdc**
Instantaneous Forward Voltage Drop (I_F = 25A, 300 µsec Pulse)	T_A = 100ºC T_A = -55ºC	**V_{F3}** **V_{F4}**	- -	1.10 1.30	**Vdc**
Reverse Leakage Current (V_R = 80% Rated, 300µs pulse minimum)	T_A = 25ºC T_A = 100ºC	**I_{R1}** **I_{R2}**	- -	100 10	**µA** **mA**
Breakdown Voltage (I_R = 1mA, T_A = 25ºC)	**SDR953/3** **SDR954/3** **SDR955/3**	**B_{VR}**	300 400 500	- - -	**Vdc**
Junction Capacitance **(**V_R = 10 Vdc, T_A = 25ºC, f = 1MHz)		**C_J**	-	250	**pF**
Reverse Recovery Time **(**I_F = 500mA, I_R = 1.0A, I_{RR} = 250mA, T_A = 25ºC)		**t_{RR}**	-	35	**nsec**

CASE OUTLINE: TO-3

CASE: CATHODE
PIN 1: ANODE
PIN 2: ANODE



TYPICAL OPERATING CURVES

T_A= 25ºC Unless otherwise specified