Solid State Devices, Inc.
14701 Firestone Blvd. * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SSR2040 Series

Designer's Data Sheet

Part Number / Ordering Information 1/

SSR2040 __ __

- **Screening**2/ ___ = None, TX = TX Level, TXV = TXV Level, S = S Level
- **Package** S.5 = SMD.5, G = Cerpack

20 AMP EXTREMELY LOW VF SCHOTTKY RECTIFIER

40 VOLTS

FEATURES:

- Very Low Forward Voltage Drop for High Efficiency: 0.28 V @ 5 A, 125°C
- Low Leakage Temperature Coefficient
- High Power Small Footprint Surface Mount Packages
- TX, TXV, and Space Level Screening Available2/

MAXIMUM RATINGS3/		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage		V_{RRM} V_{RWM} V_R	40	**V**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C)		I_O	20	**A**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	200	**A**
Operating and Storage Temperature		T_{OP} & T_{stg}	-55 to 175	**°C**
Maximum Thermal Resistance Junction to Case	SMD.5 (S.5) Cerpack (G)	$R_{\theta JC}$	1 1.5	**°C/W**

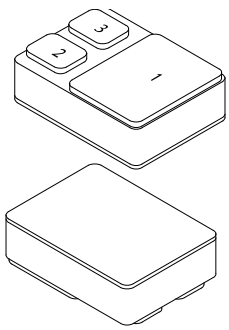
Notes:

1/ For ordering information, price, operating curves, and availability – contact factory.

2/ Screening based on MIL-PRF-19500. Screening flows available on request.

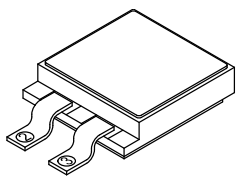
3/ Pins 2 and 3 connected together.

SMD.5 (S.5)



Pin 1 = cathode
Pins 2, 3 = anode

Cerpack (G)



Bottom pad = cathode
Pins 2, 3 = anode

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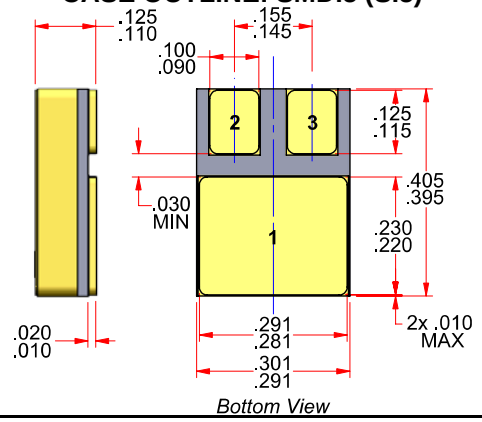
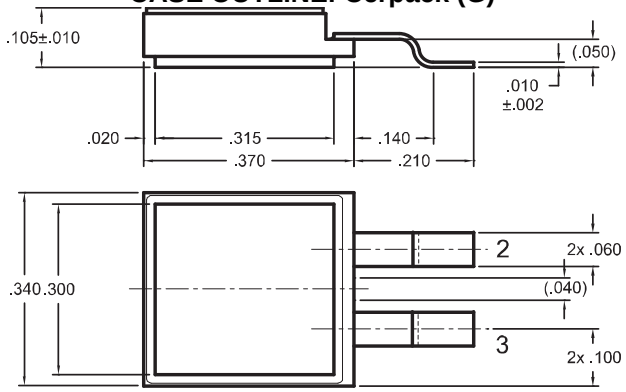
ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop (I_F = 5 A_{DC}, 300 - 500 µsec Pulse)	T_A = -55°C T_A = 25°C T_A = 125°C	V_{F1} V_{F2} V_{F3}	- - -	0.50 0.42 0.32	- 0.50 0.40	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 10 A_{DC}, 300 - 500 µsec Pulse)	T_A = -55°C T_A = 25°C T_A = 125°C	V_{F4} V_{F5} V_{F6}	- - -	0.56 0.48 0.40	0.65 0.55 0.48	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 20 A_{DC}, 300 - 500 µsec Pulse)	T_A = -55°C T_A = 25°C T_A = 125°C	V_{F7} V_{F8} V_{F9}	- - -	0.68 0.58 0.54	- 0.65 0.62	V_{DC}
Reverse Leakage Current (Rated V_R, 300 µsec pulse minimum)	T_A = 25°C T_A = 100°C T_A = 125°C	I_{R1} I_{R2} I_{R3}	- - -	30 4.5 16	100 15 50	µA mA mA
Junction Capacitance (T_A = 25°C, f = 1 MHz)	V_R = 5 V V_R = 10 V	C_{J1} C_{J2}	- -	3500 1400	4000 2000	pF

CASE OUTLINE: SMD.5 (S.5)



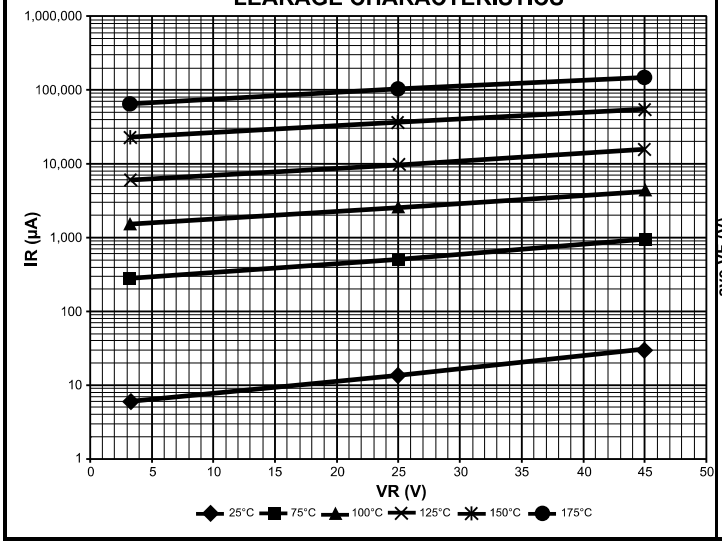
Bottom View

CASE OUTLINE: Cerpack (G)

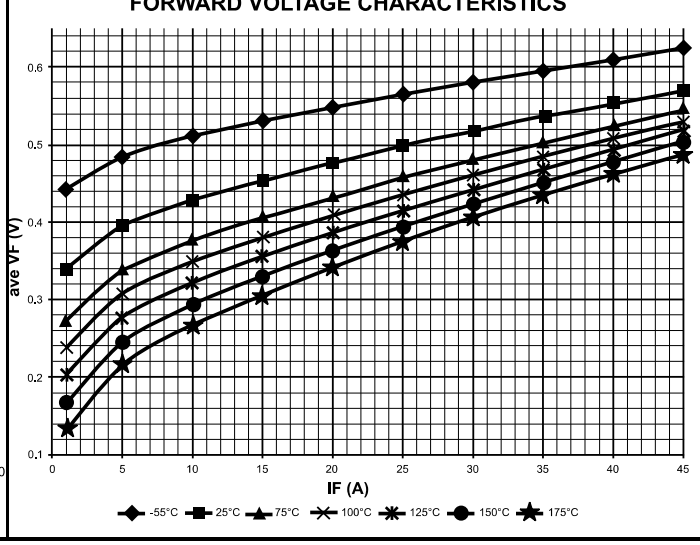


Bottom View

LEAKAGE CHARACTERISTICS



FORWARD VOLTAGE CHARACTERISTICS



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

DATA SHEET #: SH0070B | **DOCX**