



PRELIMINARY

SOLID STATE DEVICES, INC.

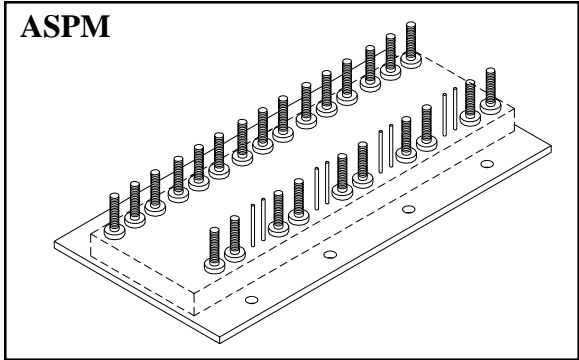
14005 Stage Road * Santa Fe Springs, Ca 90670
 Phone: (562) 404-4474 * Fax: (562) 404-1773

DESIGNER'S DATA SHEET

SPMR451-01

**180 AMPS/600 VOLTS
 5 CELLS
 SRM POWER MODULE**

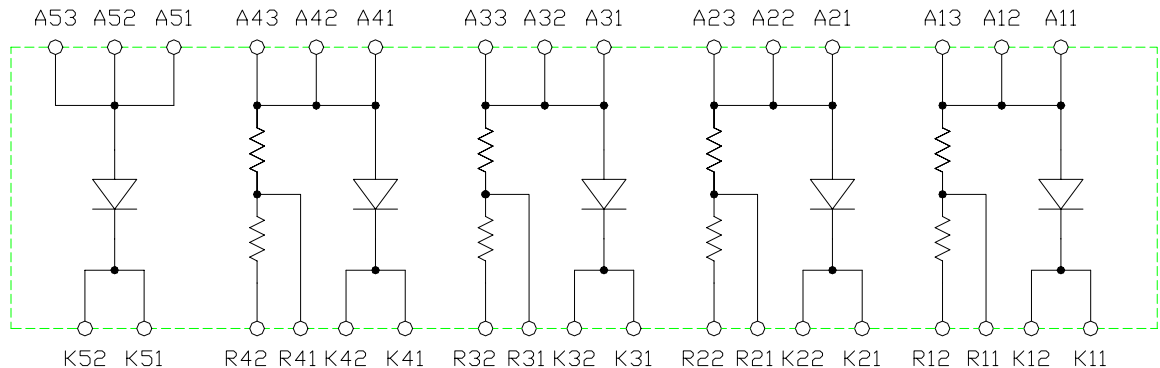
- FEATURES:**
- **Application: Power Input Module for Power Controller.**
 - **Fail-Safe Configuration Utilizing Multiple Cell Design.**
 - **Low Mechanical Stress Design.**
 - **Hermetic Sealed Construction for Aerospace Applications.**
 - **Excellent Thermal Management.**
 - **Low Forward Voltage (V_F).**
 - **Voltage Monitor Included for Customer Specified Ratio.**
 - **Full Power Screened Hermetic Discretes.**
 - **TX, TXV, and S-Level Screening Available.**
 - **Consult Factory for Other Configurations and Terminal Styles.**



MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage, per Cell	V_{RM} V_{RWM} V_R	600	Volts
Average Rectified Forward Current, per Cell (Non-repetitive, $t = 8.3$ ms Pulse)	I_O	180	Amps
Peak Surge Current, per Cell (Non-repetitive, $t = 8.3$ ms Pulse, $T_J = 25^\circ C$)	I_{FSM}	750	Amps
Operating Temperature Range	T_{OP}	-55 TO +150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 TO +150	$^\circ C$
Thermal Resistance, Junction to Base, per Cell	Θ_{JB}	0.30	$^\circ C/W$

ELECTRICAL SCHEMATIC



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

DATA SHEET #: PM0003A

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ELECTRICAL CHARACTERISTICS @ $T_J = 25^\circ\text{C}$, per Cell (Unless Otherwise Specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT
Instantaneous Forward Voltage Drop ($I_F = 180\text{A}, T_B = 25^\circ\text{C}$)	V_{F1}	-	2.5	Volts
	V_{F2}	-	2.8	
Reverse Leakage ($V_R = 600\text{V}, T_B = 25^\circ\text{C}$)	I_{R1}	-	100	μAmps
	I_{R2}	-	1000	
Insulation Resistance (All terminals to Base @ 1000V)	R_{INSUL1}	1	-	$\text{G}\Omega$
Insulation Resistance (Between Cells @ 1000V)	R_{INSUL2}	1	-	$\text{G}\Omega$
Resistance of Series Resistors	R_{SER}	215	225	$\text{k}\Omega$
Resistance of Monitor Resistors	R_{MON}	4.4	4.6	$\text{k}\Omega$

PACKAGE OUTLINE: ASPM

Tolerances

(Unless specified):

.XX $\pm .03$

.XXX $\pm .010$

