SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SPBM505-4.2x1
SPBM505-4.2x4

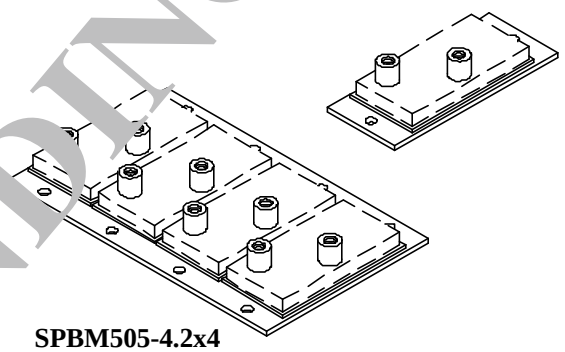
DESIGNER'S DATA SHEET

300 AMPS DISCHARGE
20 AMPS CHARGE CURRENT
PROGRAMABLE
BATTERY BYPASS MODULE

FEATURES:

- **Programable Charge Voltage (V_{FC}), Consult Factory**
- **Optimized for Use with Lithium Ion Batteries**
- **Radiation Tolerant Design**
- **High Charge/Discharge Current**
- **Low Forward Discharge Voltage (V_{FD})**
- **Compact and Rugged Construction Offering Weight and Space Savings**
- **Very Low Mechanical Stress and Thermal Resistance**
- **Hermetic Sealed Discrete Elements**
- **TX, TXV, and S-Level Screening Available Upon Request**
- **Available with Male or Female and Inch or Metric Terminals**

ASPM **SPBM505-4.2x1**



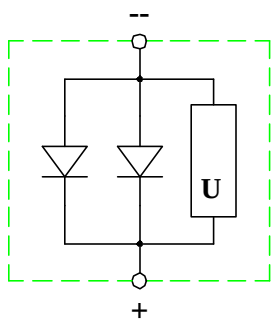
SPBM505-4.2x4

MAXIMUM RATINGS

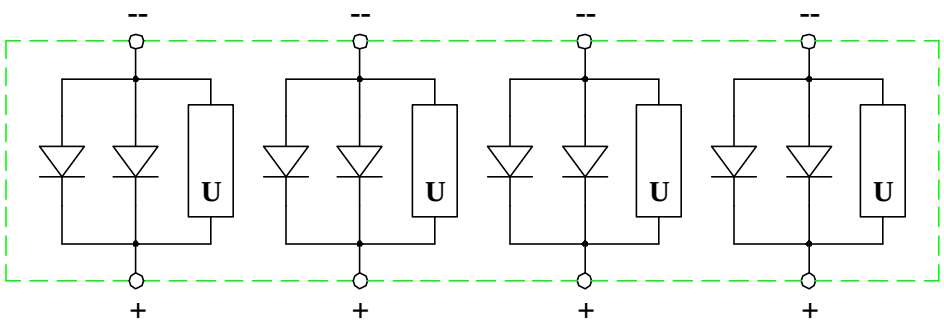
CHARACTERISTIC		SYMBOL	VALUE	UNIT
Discharge Current		**I_D**	300	Amps
Charge Current		**I_C**	20	Amps
Surge Current (Non-repetitive, t = 8.3 ms Pulse)	Discharging Leg Charging Leg	**I_{FSM}**	1000 40	Amps
Operating Temperature Range **Storage Temperature Range**		**T_{OP}** **T_{STG}**	-40 TO +125 -55 TO +175	°C
Thermal Resistance, Junction to Base	Discharging Leg Charging Leg	**1_{JBd}** **1_{JBc}**	0.40 0.80	°C/W

ELECTRICAL SCHEMATIC

SPBM505-4.2x1



SPBM505-4.2x4



NOTE:
U - Charge Circuit

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

DATA SHEET #: PM0013A

SPBM505-4.2x1
SPBM505-4.2x4

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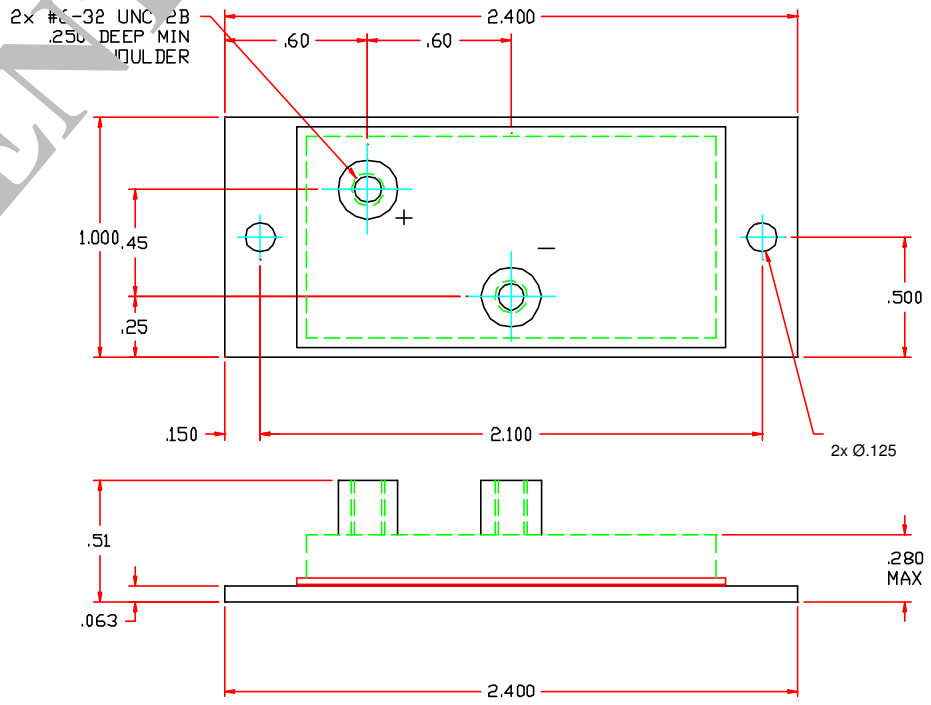
ELECTRICAL CHARACTERISTICS (per Section)

RATING		SYMBOL	MIN	MAX	UNIT
Discharge Voltage (T_A = 25°C)	I_F = 100A	V_{FD1}	--	.52	Volts
	I_F = 200A	V_{FD2}	--	.55	
	I_F = 300A	V_{FD3}	--	.67	
Discharge Voltage (I_F = 300A)	T_A = -40°C	V_{FD4}	--	.70	Volts
	T_A = +100°C	V_{FD5}	--	.62	
Charge Voltage (T_A = 25°C)	I_F = 15mA	V_{FC1}	4.20	--	Volts
	I_F = 20A	V_{FC2}	4.25	4.75	
Charge Voltage	I_F = 15mA, T_A = -40°C	V_{FC3}	4.20	--	Volts
	I_F = 20A, T_A = -40°C	V_{FC4}	4.25	4.75	
	I_F = 20A, T_A = +100°C	V_{FC5}	4.25	4.75	
Charge Leakage Current (V_R = 4.0V)	T_A = 25°C	I_{RC1}	--	10	mA
	T_A = -40°C	I_{RC2}	--	10	
	T_A = +100°C	I_{RC3}	--	10	
Insulation Resistance (All terminals to Base @200V)		R_{INS}	1.0	--	GS

PACKAGE OUTLINE: SPBM505-4.2x1

NOTES:
(Unless otherwise specified)
All dimensions are in inches
For -x4 Package Outline Contact Factory.

Tolerances
(Unless specified):
.XX " .03
.XXX " .010



AVAILABLE TERMINAL CONFIGURATIONS

PART No.	THREAD TYPE	THREAD SIZE	PART No.	THREAD TYPE	THREAD SIZE
SPBM505-4.2x1	INCH FEMALE	6-32 UNC-2B	SPBM505-4.2x4	INCH FEMALE	6-32 UNC-2B
SPBM505-4.2x1A	INCH MALE	6-32 UNC-2A	SPBM505-4.2x4A	INCH MALE	6-32 UNC-2A
SPBM505-4.2x1M	METRIC FEMALE	M4 x 0.7	SPBM505-4.2x4M	METRIC FEMALE	M4 x 0.7
SPBM505-4.2x1MA	METRIC MALE	M4 x 0.7	SPBM505-4.2x4MA	METRIC MALE	M4 x 0.7