

HIGH VOLTAGE BRIDGE STACK

DESCRIPTION: 15,000 VOLT, 1 AMP, 60 NANOSECOND HIGH VOLTAGE MULTIPLIER.

FEATURES:

- Low thermal resistance
- Add suffix "HV" for screening per Sensitron HV Stack Screening Flow, HV-200 (SHVB0115THV)
- Compact low stress package

MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

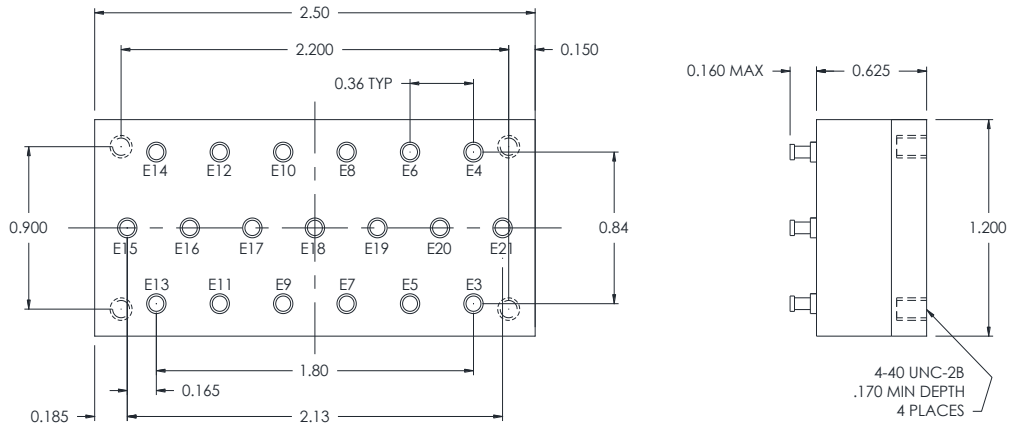
RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE (module)	PIV	15	kV
PEAK REPETITIVE REVERSE VOLTAGE (each bridge)	V_R	3300	V
AVERAGE RECTIFIED FORWARD CURRENT	I_o	1	Amps
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT ($t = 8.3$ msec, pulse) $T_c = 25^\circ\text{C}$ (Note 1)	I_{FSM}	25	Amps
MAXIMUM OPERATING TEMPERATURE RANGE	T_{op} & T_{stg}	-65 to +150	$^\circ\text{C}$
MAXIMUM THERMAL RESISTANCE, Junction to Case	$R_{\theta JC}$	2.5	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

CHARACTERISTIC, Each Bridge Leg	Min	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP ($I_f = 1.0$ A per leg) V_f $T_J = 25^\circ\text{C}$	--	7.5	Volts
MAXIMUM REVERSE CURRENT (2,500V PIV per leg) I_{r1} $T_J = 25^\circ\text{C}$ I_{r2} $T_J = 100^\circ\text{C}$	--	1.0 50	μA
INSULATION RESISTANCE (All Terminals to Base @ 15kV)	10		G Ω
REVERSE RECOVERY TIME t_{RR} $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$	--	60	nsec

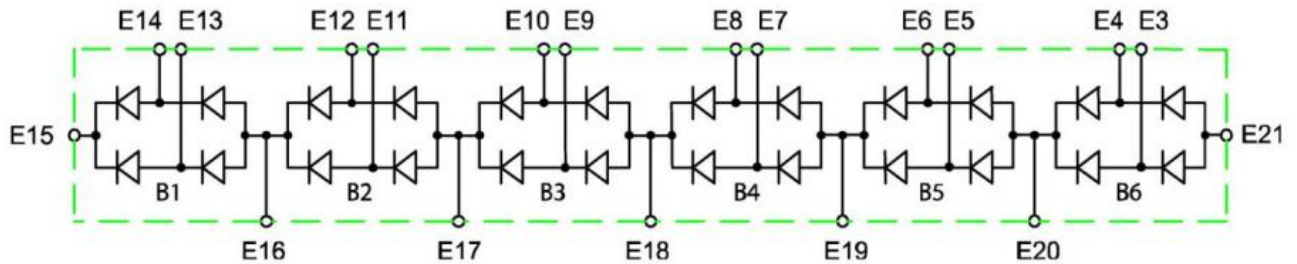
Note 1: Surge current is tested at individual diode level.

MECHANICAL DRAWING:



TOLERANCE
(UNLESS SPECIFIED)
.XX= +/- .03
.XXX= +/- .010

SCHEMATIC:



DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.