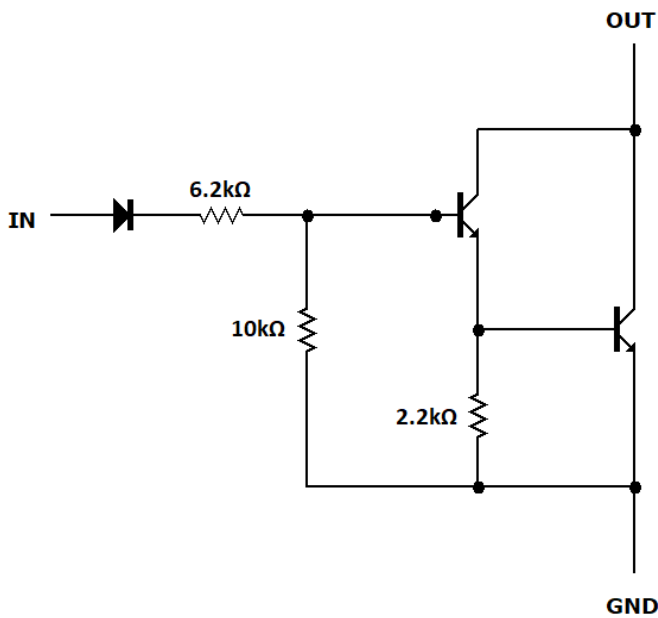


HIGH VOLTAGE MEDIUM CURRENT DRIVER ARRAY

- Six Darlington drivers that can interface directly to 5V logic
- Each channel can drive up to 800mA (see notes)
- Hermetic 22 pin DIP package
- Available screened to MIL-STD-883
 - Class level H – SBA691310S
 - Class level K – SBA691310SS

SCHEMATIC (one of six circuits)



PINOUTS

PIN	FUNCT.
1	IN1
2	IN2
3	IN3
4	IN4
5	IN5
6	IN6
7	GND
8	OUT6
9	NC
10	NC
11	NC
12	OUT5
13	NC
14	OUT4
15	NC
16	OUT3
17	NC
18	OUT2
19	NC
20	OUT1
21	NC
22	NC

TECHNICAL DATA
DATA SHEET 6056, Rev D

ABSOLUTE MAXIMUM RATINGS

RATING	MIN	MAX	UNITS
Output Voltage		120	V
Input Voltage		30	V
Continuous Collector Current ^{1,4}		800	mA
Continuous Collector Current ^{2,4}		750	mA
Continuous Collector Current ^{3,4}		450	mA
Operating Junction Temperature	-55	150	°C
Storage Temperature Range	-65	150	°C

TABLE 1. ELECTRICAL CHARACTERISTICS

T_A = 25°C UNLESS OTHERWISE SPECIFIED.

CHARACTERISTIC	MIN	MAX	UNITS
Collector-Base Breakdown Voltage (I _C = 100μA) ⁵	120		V
Collector-Emitter Breakdown Voltage (I _C = 1mA) ⁵	100		V
Emitter-Base Breakdown Voltage (I _E = 100μA) ⁵	7		V
Output Leakage Current (V _{CE} = 80V)		100	nA
Output Leakage Current (V _{CE} = 80V, T _A = -55°C)		100	nA
Output Leakage Current (V _{CE} = 80V, T _A = 125°C)		300	nA
V _{CE SAT.} VOLT. (I _C = 350mA, V _{IN} = 5V)		1.05	V
V _{CE SAT.} VOLT. (I _C = 350mA, V _{IN} = 5V, T _A = -55°C)		1.18	V
V _{CE SAT.} VOLT. (I _C = 350mA, V _{IN} = 5V, T _A = 125°C)		0.95	V
Input Current (ON) (V _{IN} = 5V)		700	μA
Input Current (ON) (V _{IN} = 5V, T _A = -55°C)		650	μA
Input Current (ON) (V _{IN} = 5V, T _A = 125°C)		750	μA
Input Voltage (OFF) (I _C < 50μA)	1.4		V
Input Voltage (OFF) (I _C < 50μA, T _A = -55°C)	1.9		V
Input Voltage (OFF) (I _C < 500μA, T _A = 125°C)	1.1		V
Turn-On Delay (T _{PLH} , 0.5 V _{IN} to 0.5 V _{OUT})		400	ns
Turn-Off Delay (T _{PHL} , 0.5 V _{IN} to 0.5 V _{OUT})		5800	ns
Thermal Resistance, junction-to-case, per channel ⁶		52	°C/W

¹Up to two channels on simultaneously.

²Up to three channels on simultaneously.

³Up to six channels on simultaneously.

⁴Soldered to a double-sided, 1oz. Cu, 6in² printed circuit board with natural convection, T_A ≤ 25°C.

⁵Internal transistor characteristic not subject to production screening.

⁶Not subject to 100% production screening.

TECHNICAL DATA
 DATA SHEET 6056, Rev D

SCREENING, CONFORMANCE INSPECTION, AND PERIODIC INSPECTION

1. Screening. Screening shall be in accordance with MIL-PRF-38534 (see Table 2) and shall be conducted on all devices prior to quality conformance inspection; class level H – **SBA691310S**, class level K – **SBA691310SS**.
2. Quality conformance inspection. Quality conformance inspection shall be in accordance with MIL-PRF-38534, Appendix C, group A (see Table 3); class level H – **SBA691310S**, class level K – **SBA691310SS**.
3. Quality periodic inspection. Quality periodic inspection shall be in accordance with MIL-PRF-38534, Appendix C, groups B, C, and D; class level H – **SBA691310S**, class level K – **SBA691310SS**.

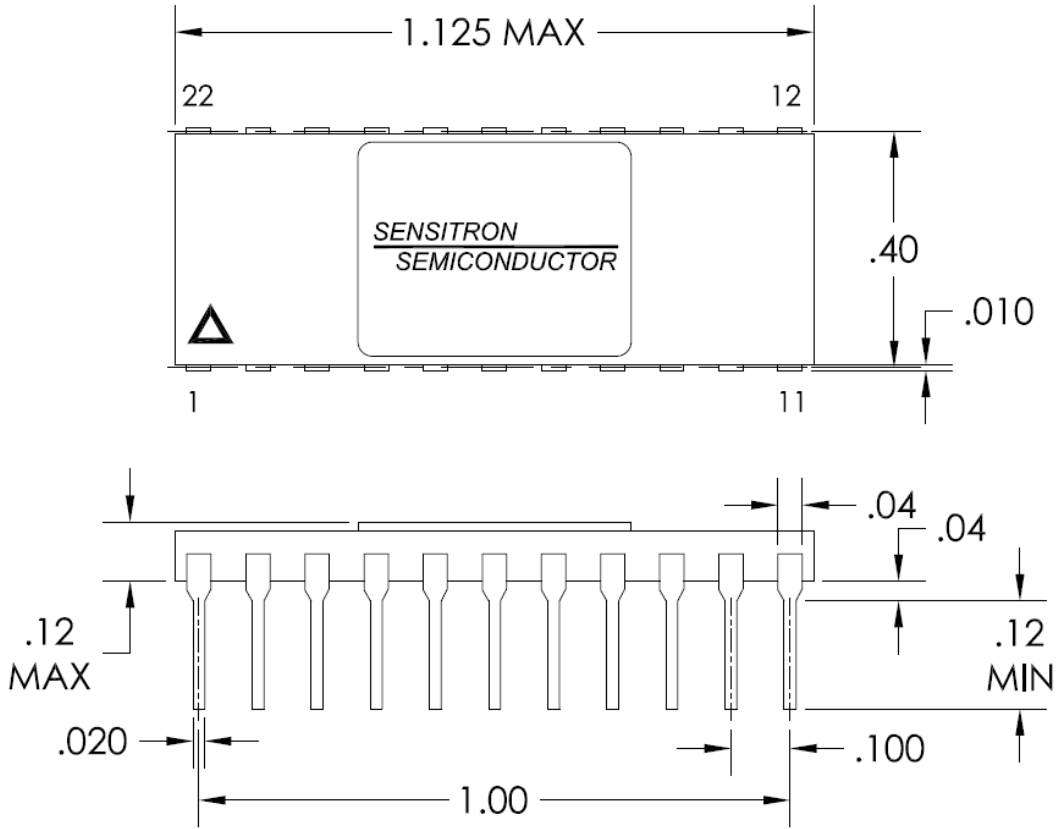
TABLE 2. SCREENING REQUIREMENTS

Screen	Class H	Class K
Non-destructive bond pull		X
Internal visual	X	X
Temperature cycling	X	X
Mechanical shock or constant acceleration	X	X
PIND		X
Pre-burn-in electrical test		X
Burn-in	X	X
Final electrical test	X	X
Seal (fine and gross)	X	X
Radiographic		X
External visual screen	X	X

TABLE 3. GROUP A TESTING REQUIREMENTS

Subgroup	Parameters	Quantity (accept #)
1	Static test at +25°C	116 (0)
2	Static tests at maximum rated operating temperature	76 (0)
3	Static tests at minimum rated operating temperature	45 (0)
4	Dynamic tests at +25°C	N/A
5	Dynamic tests at maximum rated operating temperature	N/A
6	Dynamic tests at minimum rated operating temperature	N/A
7	Functional tests at +25°C	N/A
8	Functional tests at maximum and minimum rated operating temperatures	N/A
9	Switching tests at +25°C	116 (0)
10	Switching tests at maximum rated operating temperature	N/A
11	Switching tests at minimum rated operating temperature	N/A

MECHANICAL OUTLINE



DIMENSIONS IN INCHES
TOLERANCE UNLESS OTHERWISE NOTED:
.XX = ± 0.01
.XXX = ± 0.005

PART ORDERING INFORMATION:

SBA691310XX



Screening Level

Screening Level:

Suffix	Part Number	Screening in accordance to MIL-PRF-38534
S	SBA691310S	Class H level
SS	SBA691310SS	Class K level

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.