

S-100 SCREENING PROCEDURE

All parts procured with S-100 Screening shall be 100% screened in accordance with one of the three following procedures, as applicable. All testing is performed at room temperature. For testing at high and low temperatures, Group A testing is required.

DISCRETE SEMICONDUCTORS

Reference: MIL-PRF-19500, JANTXV Level

TEST / PROCESS	MIL-STD-750 METHOD	CONDITIONS
1	Pre-cap Visual Inspection	2074 Diodes 2069 Power FETs 2072 Transistors
2	Temperature Cycling	1051
3	Thermal Impedance	3161 Power FETs 3103 IGBT 3131 Bipolar Transistor 3101 Diodes
4	Hermetic Seal Fine Leak (Not applicable to double plug diodes and non-cavity products)	1071
5	Hermetic Seal	1071
6	Interim Electrical Parameters (Not applicable to case mounted rectifiers).	-
7	High Temperature Reverse Bias (Not applicable to case mounted rectifiers).	1039 Transistors 1042 Power FETs 1038 Diodes and Rectifiers
8	Interim Electrical Parameters	-
9	Power Burn-in	1039 Bipolar Transistors 1042 Power FETs 1038 Diodes, Rectifiers and Zeners 1038 Case mount Rectifiers 1040 Thyristors
10	Final Electrical	-

Notes: 1) Sequence and testing varies per device.

2) For diode bridges pre-cap visual is performed at the bridge assembly level prior to potting.

HYBRIDS**Reference: MIL-PRF-38534, Class H**

SCREEN	MIL-STD-883 METHOD	CONDITIONS	
1	Internal Visual	2017	Condition B
2	Temperature Cycling	1010	Condition C
3	Constant Acceleration	2001	Condition A (min) Y1 orientation only.
4	Pre burn in Electrical Parameters	-	Per device detailed specification.
5	Burn-in	1015	160 hours at 125° C minimum.
6	Final Electrical Parameters	-	Per device detailed specification.
7	PDA Calculation	-	10%
8	Seal: a. Fine b. Gross	1014	-
9	External Visual, Mechanical	2009	-

MICROCIRCUITS**Reference: MIL-PRF-38535, Class B; and MIL-STD-883, Test Method 5004 Class B**

SCREEN	MIL-STD-883 METHOD	CONDITIONS	
1	Internal Visual	2010	Condition B
2	Temperature Cycling	1010	Condition C
3	Constant Acceleration	2001	Condition E (min) Y1 orientation only.
3.1	Visual Inspection		
4	Pre burn in Electrical Parameters	-	Per device detailed specification.
5	Burn-in	1015	96 hours at 125° C minimum.
	Post burn in electrical Parameters		Per device detailed specification
6	PDA Calculation		5% max
7	Final Electrical Parameters	-	Per device detailed specification.
8	Seal: a. Fine b. Gross	1014	-
9	External Visual, Mechanical	2009	-

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.