

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 (Glass) 2069 Power FETs 2072 Transistors, non-glass Diodes
3a	Temperature Cycling	1051
3b	Surge	4066
3c	Thermal Impedance	3161 Power FETs 3103 IGBT 3131 Bipolar Transistor 3101 Diodes
9	Interim Electrical Parameters	-
10	High Temperature Reverse Bias - HTRB (Not required for zeners and case mounted rectifiers)	1039 Transistors 1042 Power FETs 1038 Diodes and Rectifiers
11	Interim Electrical Parameters	-
12	Burn-in	1039 Bipolar Transistors 1042 Power FETs 1038 Diodes, Rectifiers and Zeners 1038 Case mount Rectifiers 1040 Thyristors
13	Final Electrical	-
14	Hermetic Seal a. Fine b. Gross	1071
17	Case Isolation	To be performed on case isolated packages.

- 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.
 - 3) Flow in accordance with slash sheet may be used if applicable.

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	-

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