

## 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**

<b>SCREEN</b>	<b>MIL-STD-883 METHOD</b>	<b>CONDITIONS</b>	
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**

<b>SCREEN</b>	<b>MIL-STD-883 METHOD</b>	<b>CONDITIONS</b>	
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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