

**SS-100 SCREENING**  
**DISCRETE SEMICONDUCTORS**  
(Excluding Axial & MELF Diodes)

All parts procured with JAN-S Screening shall be 100% screened in accordance with the following procedure.

SCREEN NUMBER	TEST / PROCESS	MIL-STD-750 TEST METHOD	TEST CONDITIONS
1a *	Die Visual	2073	-
1b *	Internal Visual	2074 2069 Power FETs 2072 Transistors	-
2 *	Stabilization Bake	-	As Specified
3a*	Temperature Cycling (Thermal Shock)	1051	No dwell time is required at +25°C. Test condition C, or maximum storage temperature, whichever is less, 20 cycles. Condition A or B, as specified.
3b *	Surge Current	4066	As Specified
3c *	Thermal Impedance	3101 3103 3104 3131 3161	As specified.
4	Constant Acceleration	-	Y1 @ 20,000g or as specified
5	PIND	-	Test Condition A
6	Shock Test (Axial Lead Diodes Only)	FIST 2081 BIST 2082	-
7*	Hermetic Seal	1071	Fine Leak; Gross Leak
8	Serialization	-	-
9	Electrical Tests	-	As specified; Read And Record.
10 *	High Temperature Reverse Bias (HTRB)	1038A Diodes and Rectifiers 1039 Transistors 1042 Power FETs	Test Condition A T <sub>A</sub> = 125°C; t = 48 hrs; V <sub>R</sub> = V
11	Electrical Tests an Delta for PDA	-	As specified; Read And Record.
12 *	Burn-In	1038B Diodes and Zeners 1039 Transistors 1040 Thyristors 1042 Power FETs	Test Condition B Test Condition B  Test Condition A T <sub>A</sub> = 25°C; t = 240 hrs; V <sub>R</sub> = Rated Value; I <sub>b</sub> = Rated Value; f = 60 Hz
13	Electrical Tests	-	As specified; Read And Record.
14 *	Hermetic Seal	1071	Fine Leak Gross Leak
15	Radiography	2076	-
16 *	External Visual	2071	After complete marking, prior to lot acceptance.

**Notes:** For potted assemblies such as bridge rectifiers, screening is performed on discrete hermetic components prior to assembly and potting. Completed assemblies are subjected to temperature cycling followed by final electrical parameter verification.

- Marking QPL Parts will be the original TXV Part Number, no re-marking.
- Generic Group A, Group B and Group C data to a TXV Level is available (additional charge).
- Serial number tags may be left on or removed at Sensitron's discretion.
- Read and Record data is filed and sent only at the customer's request.
- Asterisk (\*) indicates that the test/process was already performed on a QPL part. Order as JANTXV/INXXXX/SS.

# **SENSITRON**

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## **SEMICONDUCTOR**

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### **SS-100 SCREENING**

#### **AXIAL & MELF DIODES**

All parts procured with JAN-S Screening shall be 100% screened in accordance with the following procedure.

<b>SCREEN NUMBER</b>	<b>TEST / PROCESS</b>	<b>MIL-STD-750 TEST METHOD</b>	<b>TEST CONDITIONS</b>
1a	Die Visual	2073	-
1b	Internal Visual	2074	-
3a	Temperature Cycling (Thermal Shock)	1051	No dwell time is required at +25°C. Test condition C, or maximum storage temperature, whichever is less, 20 cycles.
3b	Surge Current If specified on Slash Sheet	4066	Condition A or B as specified
3c	Thermal Impedance	3101	As specified on Slash Sheet
7	External Visual in lieu of Hermetic Seal	2068	-
8	Serialization	-	-
9	Electrical Tests	-	As specified ; Read And Record.
10	High Temperature Reverse Bias (HTRB)	1038A	Test Condition A $T_A = 150^\circ\text{C}$ ; $t = 48$ hrs ; $V = 80\%$ of $V_R$
11	Electrical Tests and delta parameters for PDA	-	As specified - Read And Record.
12	Burn-In	1038B	Test Condition B $T_A = 25^\circ\text{C}$ ; $t = 240$ hrs ; $V_R =$ Rated Value ; $I_O =$ Rated Value ; $f = 50-60$ Hz
13a	Electrical Tests and delta parameters for PDA	-	As specified ; Read And Record. Group A, subgroup 2
13b	Other Electrical	-	As specified ; Group A, subgroup 3
15	Radiography	2076	-
16	External Visual	2071	After complete marking, prior to lot acceptance.

**Notes:**

- For Surface Mount parts, screening is performed on discrete hermetic components prior to assembly. Completed assemblies are subjected to temperature cycling followed by final electrical parameter verification.
- Marking on diode will be the original TXV part number, no re-marking.
- Marking on the MELFs will be the original cathode band only, no remarking.
- Generic Group A, Group B and Group C data to a TXV level is available (additional charge).  
Group A, Group B and Group C to a Space level is per customer's request only (additional charge).
- Parts are packed in standard sleeves.
- Serial number tags may be left on or removed at Sensitron's option.
- Read and Record data is filed and sent only at the request of customer.

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**SEMICONDUCTOR**

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**SS-100 SCREENING**

**HYBRIDS**

Reference: MIL-PRF-38534, Class K

	<b>SCREEN</b>	<b>MIL-STD-883 METHOD</b>	<b>CONDITIONS</b>
1	Non-destructive Pull Test	2023	100%
2	Internal Visual	2017	Condition B
3	Temperature Cycling	1010	Condition C
4	Constant Acceleration	2001	Condition A (min) Y1 orientation only.
5	PIND	2020	Condition A or B
6	Serialization	-	-
7	Pre burn in Electrical Parameters	-	Per device detailed specification. Read and record.
8	Burn-in	1015	320 hours at 125° C minimum, divided equally into 2 successive burn-ins.
9	Final Electrical Parameters	-	Per device detailed specification. Subgroups 1, 2, 3 minimum Read and record
10	PDA Calculation	-	2% or 1 device, calculated on failures from second burn-in only.
11	Seal: a. Fine b. Gross	1014	-
12	Radiography	2012	-
13	External Visual, Mechanical	2009	-

**SS-100 SCREENING**

**MICROCIRCUITS**

Reference: MIL-PRF-38535, Class S and MIL-STD-883, Test Method 5004 Class S

SCREEN	MIL-STD-883 METHOD	CONDITIONS	
1	Non-destructive bond pull	2023	100%
2	Internal Visual	2010	Condition A
3	Temperature Cycling	1010	Condition C
4	Constant Acceleration	2001	Condition E (min) Y1 orientation only.
4.1	Visual Inspection	-	-
5	PIND	2020	Condition A
6	Serialization	-	-
7	Pre burn in Electrical Parameters	-	Per device detailed specification. Read and record only when delta required.
8	Burn-in	1015	240 hours at 125° C minimum.
9	Interim (post burn in) Electrical Parameters	-	Per device detailed specification. Read and record.
10	PDA Calculation	-	5% or 1 device whichever is greater (Group A subgroup 1 + deltas) plus 3% or 1 device whichever is greater. (Functional parameters at 25°C)
11	Final Electrical Parameters	-	Per device detailed specification Read and record.
12	Seal: a. Fine b. Gross	1014	-
13	Radiographic	2012	Two views
14	External Visual, Mechanical	2009	-

**TECHNICAL DATA**

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