

Voltage Sag Immunity Test (Semi F47)

Equipment under Test: TEX 120-112

EUT Serial No.: 3203301756

Customer Spec: 120WPP182

Date: 06/11/2020

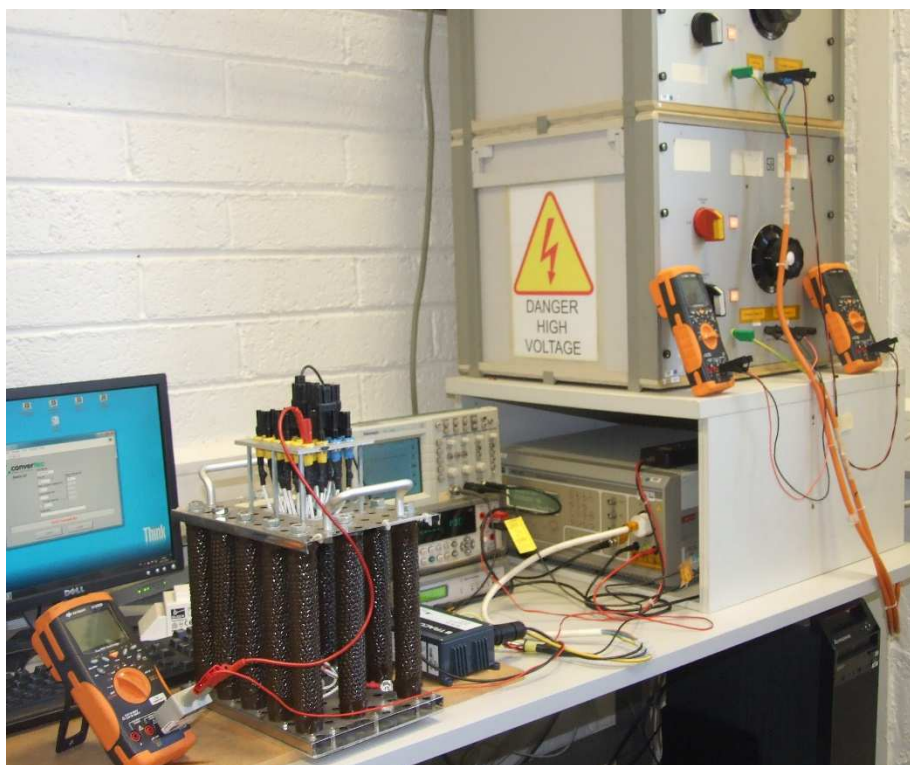
Standard: SEMI F47

Tester: Marie Doran, Traco Power Solutions Ltd

Notes:

- EUT tested under operating conditions of 230V and 115V 50Hz input at full nominal load (12V/8A Resistive).
- Test carried out using test generator using Voltage Sag Generator: Schaffner NSG1003: Dropout and Variation Simulator and Oscilloscope Tektronix: TDS2014C.
- Pass/Fail Criteria for Subsystems and Components-Voltage sag immunity testing of subsystems and components should meet the following as required by Semi-F47:
 - A. Performs at full rated operation.
 - B. May not perform at full rated operation but recovers operation without operator and/or host controller intervention. Must not send error signals to the equipment host controller indicating when full rated operation is not achieved.
 - C. May not perform at full rated operation but recovers operation without operator and/or host controller intervention. May send signals to the equipment host controller indicating when full rated operation is not achieved.
 - D. Does not perform at full rated operation and requires an operator and/or host controller intervention for recovering.

1. Test Setup



2. Voltage Sag Immunity test Results (Semi F47)

Input Voltage =115VAC, Output =12V, 8A

115VAC						
Voltage Sag	Duration	Duration	Output Voltage	% delta of nominal output voltage	Semi F47	Criteria
[V]	[s]	[cycles]	[V]	DUT 50Hz [%]	[%]	[Class]
103.5	20	1000	12.05	-0.4	90	A
103.5	10	500	12.05	-0.4	90	A
92	10	500	12.05	-0.4	80	A
92	1	50	12.05	-0.4	80	A
92	0.5	25	12.05	-0.4	80	A
80.5	0.5	25	12.05	-0.4	70	A
80.5	0.5	10	12.05	-0.4	70	A
57.5	0.2	10	12.05	-0.4	50	A
57.5	0.02	1	12.05	-0.4	50	A
0	0.02	1	12.05	-0.4	0	A

*Yellow indicates the required Voltage SAG Immunity Levels. Other levels are recommended.

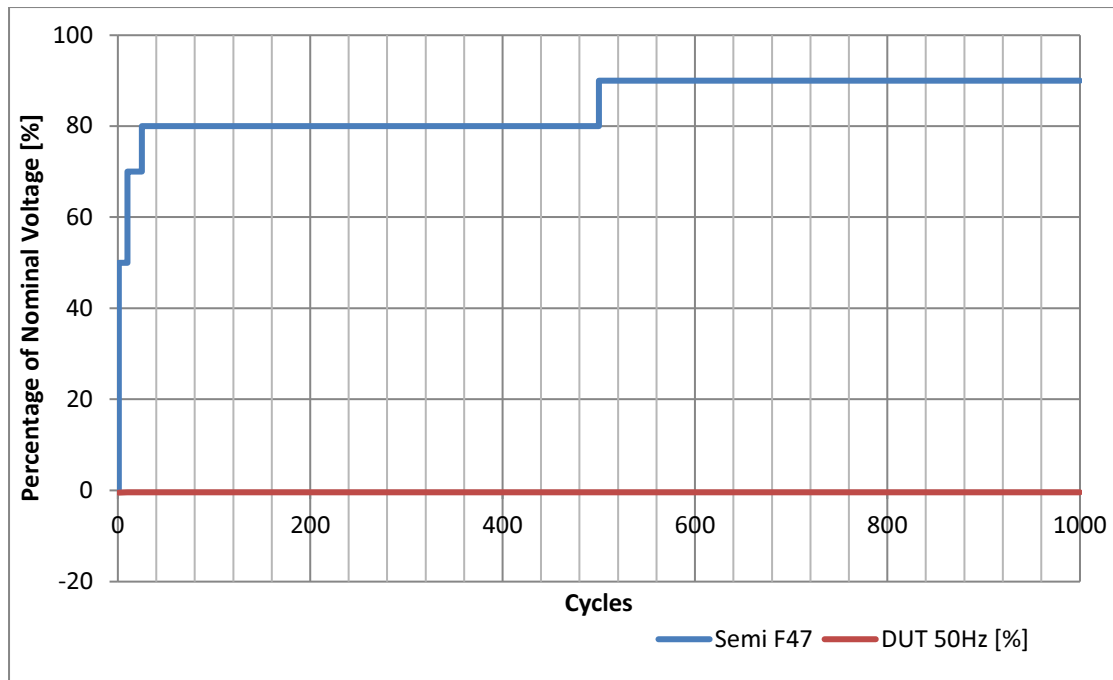


Figure 1: TEX 120-112/ 0-1000 cycles

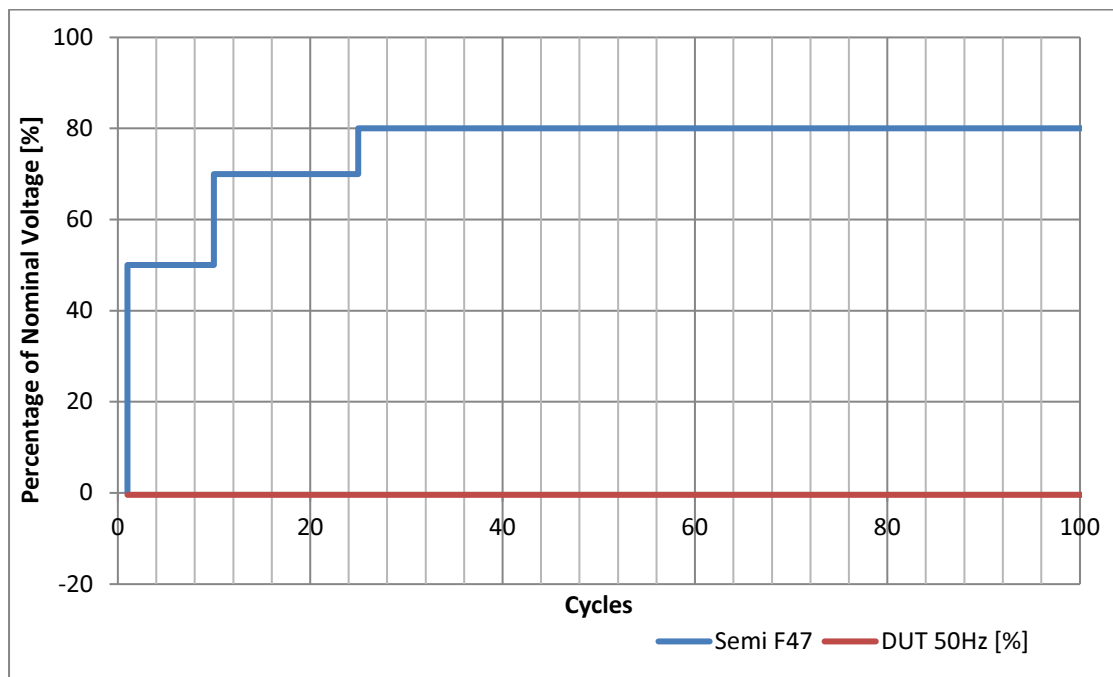


Figure 2: TEX 120-112/ 0-100 cycles

Input Voltage =230VAC, Output =12V, 8A

230VAC						
Voltage Sag	Duration	Duration	Output Voltage	% delta of nominal output voltage	Semi F47	Criteria
[V]	[s]	[cycles]	[V]	DUT 50Hz [%]	[%]	[Class]
103.5	20	1000	12.05	-0.4	90	A
103.5	10	500	12.05	-0.4	90	A
92	10	500	12.05	-0.4	80	A
92	1	50	12.05	-0.4	80	A
92	0.5	25	12.05	-0.4	80	A
80.5	0.5	25	12.05	-0.4	70	A
80.5	0.5	10	12.05	-0.4	70	A
57.5	0.2	10	12.05	-0.4	50	A
57.5	0.02	1	12.05	-0.4	50	A
0	0.02	1	12.05	-0.4	0	A

*Yellow indicates the required Voltage SAG Immunity Levels. Other levels are recommended.

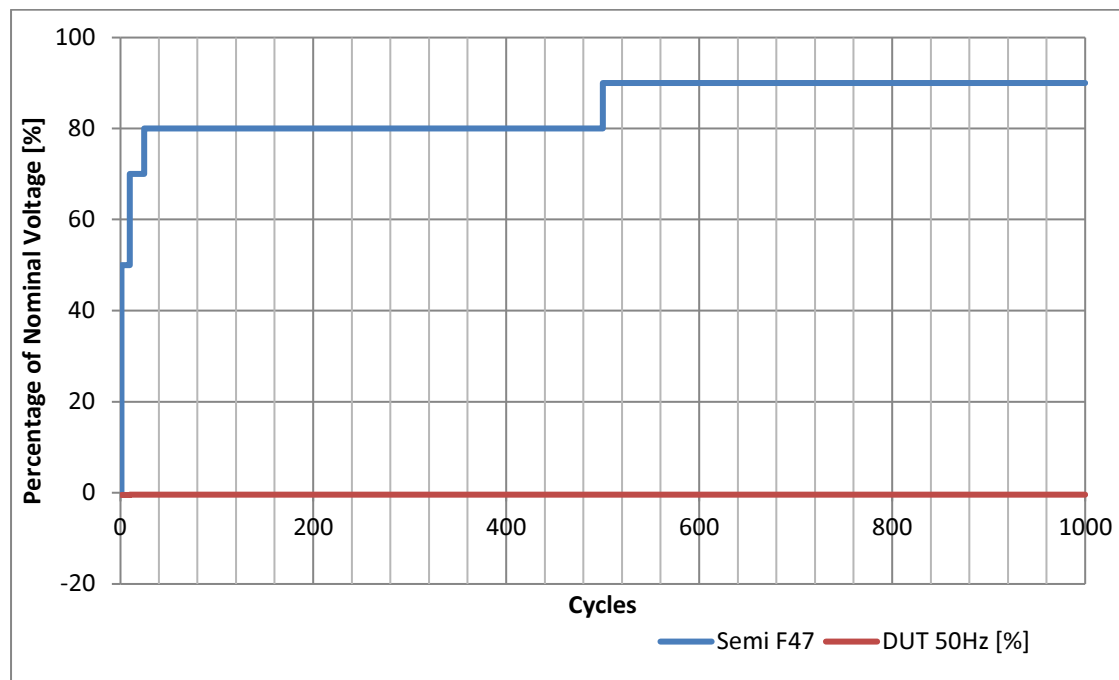


Figure 3: TEX 120-112/ 0-1000 cycles

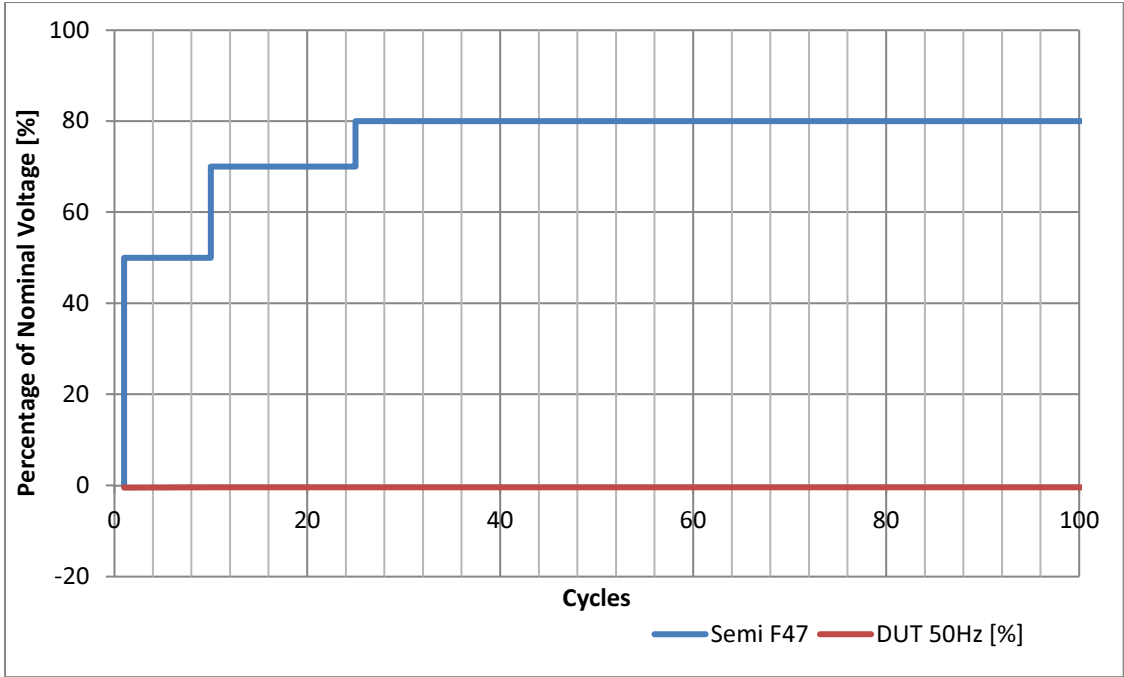


Figure 4: TEX 120-112/ 0-100 cycles

Conclusion:

The EUT meets classification A (Ref. SEMI F47). The test results were evaluated in relation to the Customer Specification 120WPP1XX and the EUT was considered to have PASSED the tests.

PASS

Summary

SEMI F47			
Semi F47 Voltage SAG Immunity			
-AC Supply (230VAC and 115VAC)	(Class A)	PASS	