

SIFOs 802.3at Conformance Report, v 5.4.09, DN-95117

1 Sifos Technologies

Sifos Technologies provides a one-box solution to facilitate complete testing and analysis of Power Sourcing Equipment (PSE) behaviors and overall compliance to the IEEE 802.3at specification. The PSE Conformance Test Suite serves as a virtual industry standard for PSE specification compliance. SIFOS test coverage exceeds 95% of 802.3at PSE PICS

2 Enhanced Test Conditions

In addition to just running the basic conformance testing on an individual port and to better recreate the system-level environment, ASSMANN individually tests all ports of its PSE controller devices while having the background ports running at various PoE-application conditions. ASSMANN further, repeats testing conditions over extended periods of time to ensure performance is consistent after multiple hours, days and/or continued operation.

PSE Conformance Test Suite

December 24 2024 4:26 PM

Port Count..... 1

Loop Count..... 1

PSE Tested: **Results Type-2 30W**



802.3at Conformance Report

version 5.4.09

Test Mode: **30 Watt PHY**

report ver. 5.4.03

Sifos Interop Index*: **100%**

S/N: 34020093A

Error
Log: None

Chassis ID: 192.168.221.105

PSA-3402 Ports

TestLoop: 1

1-1

UNITS

Min

Max

Average

Low
Limit

P/F

High
Limit

P/F

Test: det_v

Open_Circuit_Det_Voc=

19.7

V

19.7

19.7

19.7

2.8

Pass

30

Pass

Peak_Det_Vvalid=

7.09

V

7.09

7.09

7.1

3.8

Pass

10

Pass

Min_Det_Vvalid=

4.54

V

4.54

4.54

4.5

2.8

Pass

9

Pass

Det_Volt_Step_dVtest=

2.55

V

2.55

2.55

2.6

1

Pass

7.2

Pass

Detection_Slew=

0

V/usec

0

0

0

0

Pass

0.1

Pass

Good_Sig_Det_Pulse=

3

edges

3

3

3

1

Pass

9

Pass

Backoff_Voltage=

0.3

V

0.3

0.3

0.3

0

Pass

2.8

Pass

Non_802_Discr_?=

0

0

0

0

0

Pass

0

Pass

Detect_Strategy=

0

0

0

0

0

Pass

2

Pass

Test: det_i

Init_Current_Isc=

0.19

mA

0.19

0.19

0.19

0

Pass

5

Pass

Det_Current_Isc=

0.21

mA

0.21

0.21

0.21

0

Pass

5

Pass

Test: det_range

Rgood_Max=

28

Kohm

28

28

28

26

Pass

32

Pass

Rgood_Min=

17

Kohm

17

17

17

16

Pass

19

Pass

Rmid_det=

28

Kohm

28

28

28

26

Pass

33

Pass

Cgood_Max=

0.1

uF

0.1

0.1

0.1

0

Pass

10

Pass

Rbad_Cbad_Stat=

0

0

0

0

0

Pass

0

Pass

4Pair_Pwr_?=

0

0

0

0

0

Pass

0

Pass

Test: det_time

Backoff_Time_Tdbo=

94

msec

94

94

94

-1

Pass

1500

Pass

Eff_Backoff_Tdbo_eff=

94

msec

94

94

94

-1

Pass

1500

Pass

Backoff_Type=

0

0

0

0

0

Pass

0

Pass

Detection_Time_Tdet=

379

msec

379

379

379

5

Pass

500

Pass

Total_Det_Time=

383

msec

383

383

383

5

Pass

1000

Pass

Test: det_rsource

PSE_Detect_Source=

1

1

1

1

0

Pass

1

Pass

Output_Impedance_Zout=

450

Kohm

450

450

450

45

Pass

2000

Pass

Test: class_v

Vclass_Max=

18.8

V

18.8

18.8

18.8

15.5

Pass

20.5

Pass

Vclass_Min=

18.5

V

18.5

18.5

18.5

15.5

Pass

20.5

Pass

Mark_Voltage_Vmark=

8.3

V

8.3

8.3

8.3

7

Pass

10

Pass

Mark_Voltage_Min=

8.2

V

8.2

8.2

8.2

7

Pass

Enhanced Test Condition

Mark_Tme1_LowI=	6.8	msec	6.8	6.8	6.8	6	Pass	12	Pass
Test: class_err									
Class_lim=	76	mA	76	76	76	51	Pass	100	Pass
Pwr_Cl_lim=	0	****	0	0	0	0	Pass	0	Pass
Pwr_Cl_55=	0	****	0	0	0	0	Pass	0	Pass
Mark_lim=	6	mA	6	6	6	5	Pass	100	Pass
Pwr_Cl_Uneven=	0	****	0	0	0	0	Pass	0	Pass
Treset=	117	msec	117	117	117	15	Pass	10000	Pass
Test: pwrup_time									
Power-On_Trise_c0=	40	usec	40	40	40	15	Pass	50000	Pass
Power-On_Tpon_c0=	11.7	msec	11.7	11.7	11.7	0	Pass	400	Pass
Power-On_Trise_c4=	43	usec	43	43	43	15	Pass	50000	Pass
Power-On_Tpon_c4=	39.1	msec	39.1	39.1	39.1	0	Pass	400	Pass
Test: pwrup_inrush									
Init_Iinrush=	418.5	mA	418.5	418.5	418.5	400	Pass	450	Pass
Max_Iinrush_c0=	417.5	mA	417.5	417.5	417.5	400	Pass	450	Pass
Max_Iinrush_c4=	417.25	mA	417.25	417.25	417.3	400	Pass	450	Pass
Min_Iinrush=	416.75	mA	416.75	416.75	416.8	400	Pass	450	Pass
Tinrush=	60	msec	60	60	60	50	Pass	75	Pass
Inrush_45m=	52.6	V	52.6	52.6	52.6	50	Pass	57	Pass
Inrush_Voltage=	30.6	V	30.6	30.6	30.6	30	Pass	57	Pass
Inrush_Strategy_c0=	0	****	0	0	0	0	Pass	1	Pass
Inrush_Strategy_c4=	0	****	0	0	0	0	Pass	1	Pass
LowV_Inrush=	245.5	mA	245.5	245.5	246	60	Pass	450	Pass
Test: pwron_v									
Vport_min=	51.9	V	51.9	51.9	51.9	50	Pass	57	Pass
Vport_max=	52.8	V	52.8	52.8	52.8	50	Pass	57	Pass
Vport_ripple=	30	mVpp	30	30	30	0	Pass	500	Pass
Vport_noise=	96	mVpp	96	96	96	0	Pass	200	Pass
Vtrans_min=	51.8	V	51.8	51.8	51.8	50	Pass	57	Pass
Vtrans_max=	52.8	V	52.8	52.8	52.8	50	Pass	57	Pass
Test: pwron_pwrcap									
Pcon_c0=	18.5	W	18.5	18.5	18.5	14.2	Pass	22.7	Pass
Icon_%_c0=	134	%	134	134	134	100	Pass	9999	Pass
Pcon_c1=	18.5	W	18.5	18.5	18.5	3.9	Pass	22.7	Pass
Icon_%_c1=	473.9	%	473.9	473.9	473.9	100	Pass	9999	Pass
Pcon_c2=	18.5	W	18.5	18.5	18.5	6.8	Pass	22.7	Pass
Icon_%_c2=	276.8	%	276.8	276.8	276.8	100	Pass	9999	Pass
Pcon_c3=	18.5	W	18.5	18.5	18.5	14.2	Pass	22.7	Pass
Icon_%_c3=	134	%	134	134	134	100	Pass	9999	Pass
Pcon_c4=	31.7	W	31.7	31.7	31.7	28.7	Pass	38.9	Pass
Icon_%_c4=	107.3	%	107.3	107.3	107.3	100	Pass	9999	Pass
Type-2_Enable=	1	****	1	1	1	1	Pass	1	Pass
Test: pwron_maxi									
Ilim_Peak_1=	97.5	mA	97.5	97.5	97.5	0	Pass	1750	Pass
Ilim_Min_1=	403.3	mA	403.3	403.3	403.3	400	Pass	1750	Pass
Tlim_1=	61.7	msec	61.7	61.7	61.7	10	Pass	9999	Pass
Vlim_1=	52.1	V	52.1	52.1	52.1	50	Pass	57	Pass
Ilim_Max_1=	98	mA	98	98	98	0	Pass	1750	Pass
Ktran_lo_1=	104.2	%	104.2	104.2	104.2	92.4	Pass	115	Pass
Ilim_Peak_2=	98	mA	98	98	98	0	Pass	1750	Pass

Enhanced Test Condition

Ilim_Min_2=	687.5	mA	687.5	687.5	687.5	683	Pass	1750	Pass
Tlim_2=	61.3	msec	61.3	61.3	61.3	10	Pass	75	Pass
Vlim_2=	51.7	V	51.7	51.7	51.7	50	Pass	57	Pass
Ilim_Max_2=	951.5	mA	951.5	951.5	951.5	683	Pass	1750	Pass
Ktran_lo_2=	103.2	%	103.2	103.2	103.2	92.4	Pass	115	Pass
Test: pwrn_overld									
%Ipeak_1=	125	%	125	125	125	100	Pass	125	Pass
Vport_Ipeak_1=	52.3	V	52.3	52.3	52.3	50	Pass	57	Pass
Vport_5%DC_1=	52.3	V	52.3	52.3	52.3	50	Pass	57	Pass
%Ipeak_2=	125	%	125	125	125	100	Pass	125	Pass
Vport_Ipeak_2=	51.7	V	51.7	51.7	51.7	50	Pass	57	Pass
Vport_5%DC_2=	51.7	V	51.7	51.7	51.7	50	Pass	57	Pass
Test: mps_dc_valid									
Min_Valid_Time_Tmps=	50	msec	50	50	50	1	Pass	60	Pass
Duty_Cycle_tol=	1	****	1	1	1	1	Pass	1	Pass
Test: mps_dc_pwrn									
Min_Valid_I_hold=	8	mA	8	8	8	5	Pass	10	Pass
Time-to-Shutdown_Tmpdo=	362	msec	362	362	362	300	Pass	400	Pass
Test: pwrn_overld									
Icut_1=	369	mA	369	369	369	-1	Pass	1750	Pass
Tcut_1=	62.6	msec	62.6	62.6	62.6	50	Pass	9999	Pass
Isoft_1=	-1	mA	-1	-1	-1	-1	Pass	683	Pass
Tsoft_1=	-1	msec	-1	-1	-1	-1	Pass	2000	Pass
Icut_2=	637	mA	637	637	637	-1	Pass	1750	Pass
Tcut_2=	62.4	msec	62.4	62.4	62.4	10	Pass	9999	Pass
Isoft_2=	-1	mA	-1	-1	-1	-1	Pass	683	Pass
Tsoft_2=	-1	msec	-1	-1	-1	-1	Pass	2000	Pass
Test: pwrn_time									
Turn-Off_Time_Toff=	22.8	msec	22.8	22.8	22.8	0	Pass	500	Pass
Output_Cap_Cout=	0.0826	uF	0.0826	0.0826	0.08	-1	Pass	0.52	Pass
Output_Load_Rp=	139.8	Kohm	139.8	139.8	140	45	Pass	50000	Pass
Test: pwrn_v									
Avg_Idle_Voff=	0.1	V	0.1	0.1	0.1	0	Pass	2.8	Pass
Error_Delay_Ted=	1359.4	msec	1359.4	1359.4	1359	750	Pass	10000	Pass
Peak_Error_Delay_Ved=	0.3	V	0.3	0.3	0.3	0	Pass	20.5	Pass