

SIFOs 802.3at Conformance Report, v 5.4.09, DN-95317: 10” Switch

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

November 11 2024 5:11 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		Min	Max	Average	Low Limit	P/F	High Limit	P/F
TestLoop: 1	1-1	UNITS							
Test: det_v									
Open_Circuit_Det_Voc=	20.3	V	20.3	20.3	20.3	2.8	Pass	30	Pass
Peak_Det_Vvalid=	7.05	V	7.05	7.05	7.1	3.8	Pass	10	Pass
Min_Det_Vvalid=	4.55	V	4.55	4.55	4.6	2.8	Pass	9	Pass
Det_Volt_Step_dVtest=	2.48	V	2.48	2.48	2.5	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=	0.5	V	0.5	0.5	0.5	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=	0.18	mA	0.18	0.18	0.18	0	Pass	5	Pass
Det_Current_Isc=	0.2	mA	0.2	0.2	0.2	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=	86	msec	86	86	86	-1	Pass	1500	Pass
Eff_Backoff_Tdbo_eff=	86	msec	86	86	86	-1	Pass	1500	Pass
Backoff_Type=	0	****	0	0	0	0	Pass	0	Pass
Detection_Time_Tdet=	332	msec	332	332	332	5	Pass	500	Pass
Total_Det_Time=	336	msec	336	336	336	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=	19.2	V	19.2	19.2	19.2	15.5	Pass	20.5	Pass
Vclass_Min=	18.9	V	18.9	18.9	18.9	15.5	Pass	20.5	Pass
Mark_Voltage_Vmark=	8.6	V	8.6	8.6	8.6	7	Pass	10	Pass
Mark_Voltage_Min=	8.5	V	8.5	8.5	8.5	7	Pass	10	Pass
Test: class_time									
Class_0_Count=	1	****	1	1	1	1	Pass	2	Pass
Class_Time_Tpdc=	11	msec	11	11	11	6	Pass	75	Pass
Class_4_Count=	2	****	2	2	2	2	Pass	2	Pass
Event1_Tcle1=	11.5	msec	11.5	11.5	11.5	6	Pass	30	Pass
Event2_Tcle2=	11.1	msec	11.1	11.1	11.1	6	Pass	30	Pass
Mark_Tme1=	7.6	msec	7.6	7.6	7.6	6	Pass	12	Pass
Mark_Tme_Last=	8.6	msec	8.6	8.6	8.6	6	Pass	376	Pass

Enhanced Test Condition

Mark_Tme1_LowI=	6.4	msec	6.4	6.4	6.4	6	Pass	12	Pass
Test: class_err									
Class_lim=	79	mA	79	79	79	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=	96	msec	96	96	96	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=	42	usec	42	42	42	15	Pass	50000	Pass
Power-On_Tpon_c4=	37.1	msec	37.1	37.1	37.1	0	Pass	400	Pass
Test: pwrup_inrush									
Init_Iinrush=	419.75	mA	419.75	419.75	419.8	400	Pass	450	Pass
Max_Iinrush_c0=	418.75	mA	418.75	418.75	418.8	400	Pass	450	Pass
Max_Iinrush_c4=	420	mA	420	420	420	400	Pass	450	Pass
Min_Iinrush=	418.25	mA	418.25	418.25	418.3	400	Pass	450	Pass
Tinrush=	60	msec	60	60	60	50	Pass	75	Pass
Inrush_45m=	53	V	53	53	53	50	Pass	57	Pass
Inrush_Voltage=	30.7	V	30.7	30.7	30.7	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=	248.3	mA	248.3	248.3	248	60	Pass	450	Pass
Test: pwron_v									
Vport_min=	52.2	V	52.2	52.2	52.2	50	Pass	57	Pass
Vport_max=	53.2	V	53.2	53.2	53.2	50	Pass	57	Pass
Vport_ripple=	24	mVpp	24	24	24	0	Pass	500	Pass
Vport_noise=	85	mVpp	85	85	85	0	Pass	200	Pass
Vtrans_min=	52	V	52	52	52	50	Pass	57	Pass
Vtrans_max=	53.3	V	53.3	53.3	53.3	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=	133.8	%	133.8	133.8	133.8	100	Pass	9999	Pass
Pcon_c1=	18.5	W	18.5	18.5	18.5	3.9	Pass	22.7	Pass
Icon_%_c1=	472.7	%	472.7	472.7	472.7	100	Pass	9999	Pass
Pcon_c2=	18.5	W	18.5	18.5	18.5	6.8	Pass	22.7	Pass
Icon_%_c2=	276	%	276	276	276	100	Pass	9999	Pass
Pcon_c3=	18.5	W	18.5	18.5	18.5	14.2	Pass	22.7	Pass
Icon_%_c3=	133.8	%	133.8	133.8	133.8	100	Pass	9999	Pass
Pcon_c4=	32.6	W	32.6	32.6	32.6	28.7	Pass	38.9	Pass
Icon_%_c4=	110.5	%	110.5	110.5	110.5	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=	401.1	mA	401.1	401.1	401.1	400	Pass	1750	Pass
Tlim_1=	61.3	msec	61.3	61.3	61.3	10	Pass	9999	Pass
Vlim_1=	52.4	V	52.4	52.4	52.4	50	Pass	57	Pass
Ilim_Max_1=	100	mA	100	100	100	0	Pass	1750	Pass
Ktran_lo_1=	104.6	%	104.6	104.6	104.6	92.4	Pass	115	Pass
Ilim_Peak_2=	98.5	mA	98.5	98.5	98.5	0	Pass	1750	Pass

Enhanced Test Condition

Ilim_Min_2=	684.6	mA	684.6	684.6	684.6	683	Pass	1750	Pass
Tlim_2=	61.3	msec	61.3	61.3	61.3	10	Pass	75	Pass
Vlim_2=	51.9	V	51.9	51.9	51.9	50	Pass	57	Pass
Ilim_Max_2=	948.3	mA	948.3	948.3	948.3	683	Pass	1750	Pass
Ktran_lo_2=	103.5	%	103.5	103.5	103.5	92.4	Pass	115	Pass
Test: pwrn_overld									
%Ipeak_1=	125	%	125	125	125	100	Pass	125	Pass
Vport_Ipeak_1=	52.6	V	52.6	52.6	52.6	50	Pass	57	Pass
Vport_5%DC_1=	52.6	V	52.6	52.6	52.6	50	Pass	57	Pass
%Ipeak_2=	125	%	125	125	125	100	Pass	125	Pass
Vport_Ipeak_2=	52	V	52	52	52	50	Pass	57	Pass
Vport_5%DC_2=	52	V	52	52	52	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=	360	msec	360	360	360	300	Pass	400	Pass
Test: pwrn_overld									
Icut_1=	377.8	mA	377.8	377.8	377.8	-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=	63.6	msec	63.6	63.6	63.6	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=	20.8	msec	20.8	20.8	20.8	0	Pass	500	Pass
Output_Cap_Cout=	0.078	uF	0.078	0.078	0.08	-1	Pass	0.52	Pass
Output_Load_Rp=	132.8	Kohm	132.8	132.8	133	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=	1414.1	msec	1414.1	1414.1	1414	750	Pass	10000	Pass
Peak_Error_Delay_Ved=	0.9	V	0.9	0.9	0.9	0	Pass	20.5	Pass