Test Data

NSP2-250-D2S

(AC85～264V And DC24V Battery Input)

NON-STOP POWER SUPPLY

Approved by : Osaki Nakano

Prepared by : Naoki Yamamoto

INPUT	:	AC 85V ～ 264V		
		Battery 24V		
OUTPUT	:	V1: 5V	20A	(Peak 23A)
		V2: 3.3V	10A	
		V3: 12V	7A	(Peak 12A)
		V4: -5V	0.5A	
		V5: -12V	0.5A	
		V6: 5Vs	1A	

株式会社 ニプロン

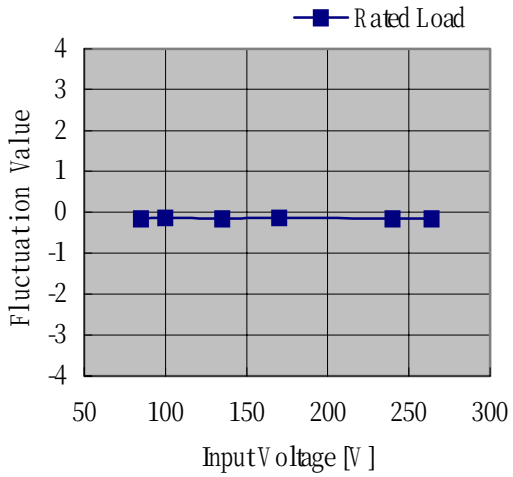
Nipron.Co.,Ltd.

CONTENTS

Model	NSP2-250-D2S
Item	Line Regulation

V1：5V 20A

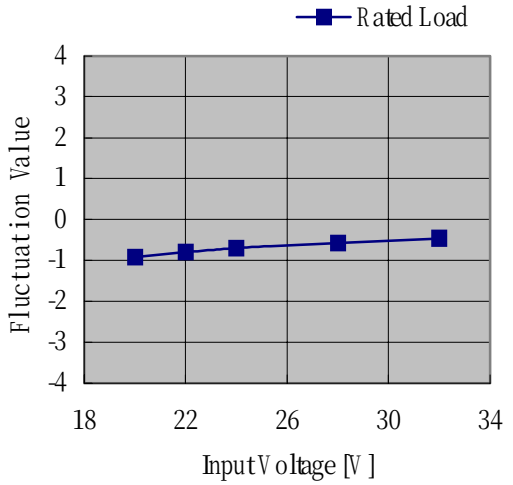
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	4.992	-0.16
100	4.993	-0.14
240	4.992	-0.16
264	4.992	-0.16

at Back up by Battery



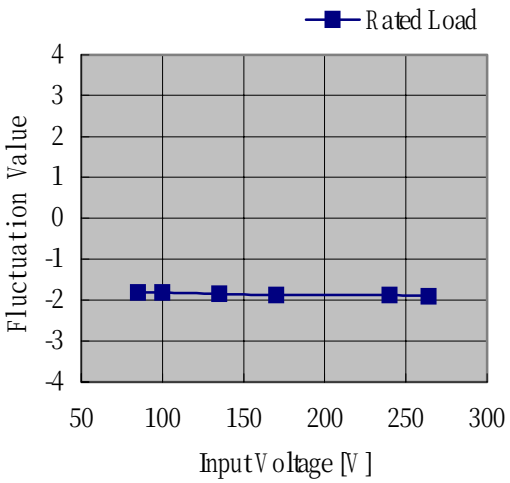
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	4.954	-0.92
24	4.965	-0.70
32	4.977	-0.46

Model	NSP2-250-D2S
Item	Line Regulation

V2：3.3V 10A

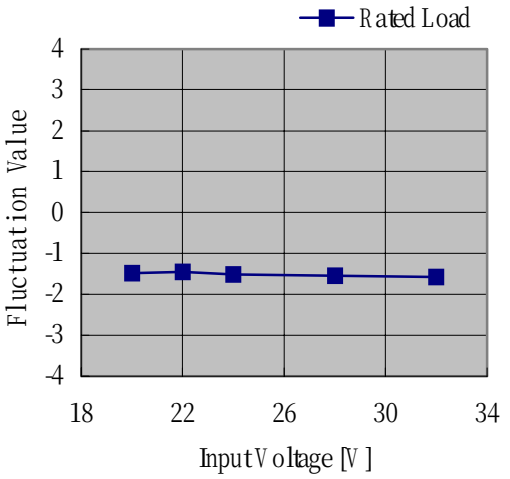
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	3.240	-1.82
100	3.240	-1.82
240	3.238	-1.88
264	3.237	-1.91

at Back up by Battery



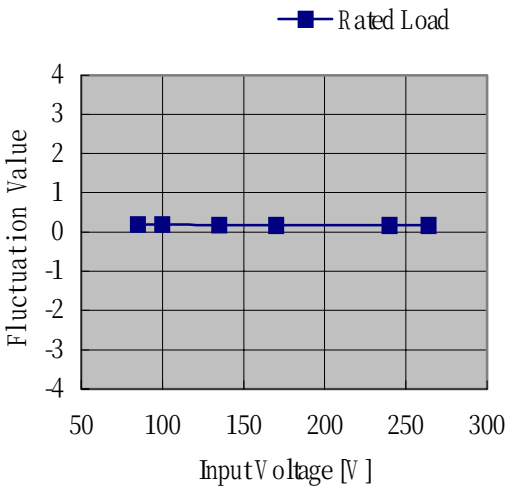
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	3.251	-1.48
24	3.250	-1.52
32	3.248	-1.58

Model	NSP2-250-D2S
Item	Line Regulation

V3：12V 7A

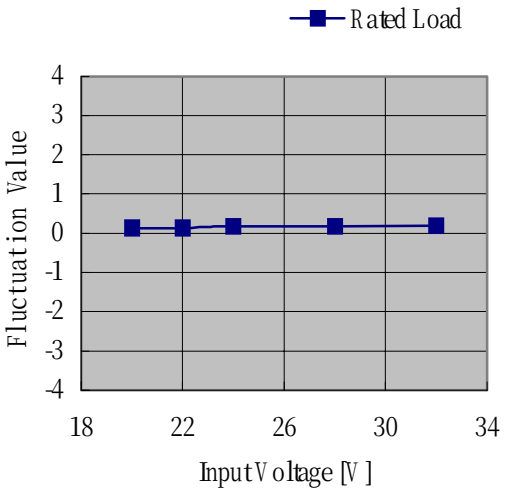
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	12.023	0.19
100	12.022	0.18
240	12.020	0.17
264	12.020	0.17

at Back up by Battery



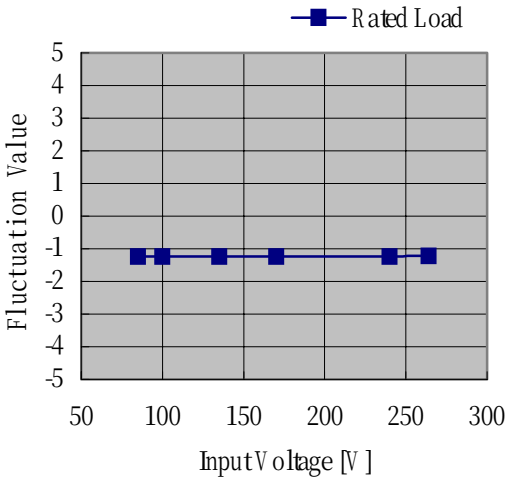
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	12.016	0.13
24	12.021	0.18
32	12.022	0.18

Model	NSP2-250-D2S
Item	Line Regulation

V4:-5V 0.5A

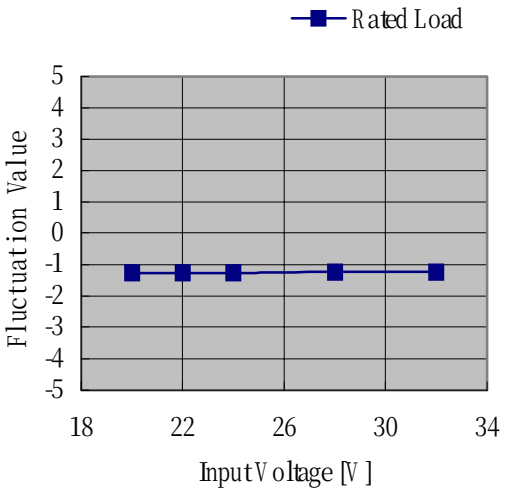
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	-4.983	-1.24
100	-4.983	-1.24
240	-4.983	-1.24
264	-4.989	-1.22

at Back up by Battery



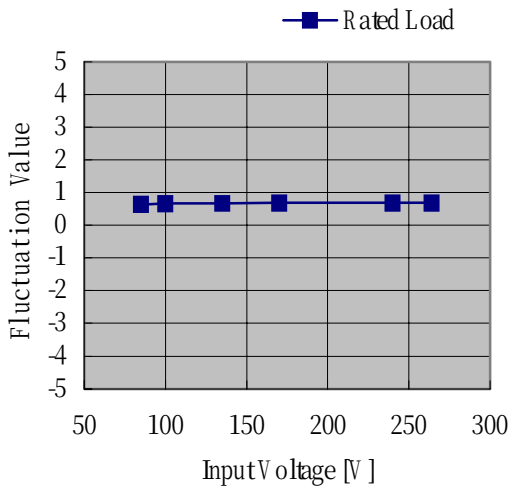
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-4.937	-1.26
24	-4.937	-1.26
32	-4.938	-1.24

Model	NSP2-250-D2S
Item	Line Regulation

V5：-12V 0.5A

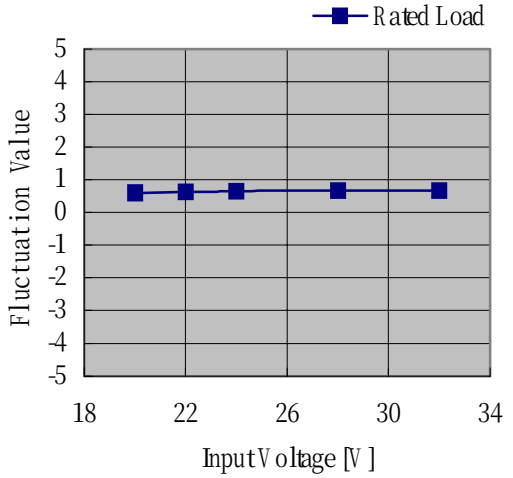
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	-12.077	0.64
100	-12.079	0.66
240	-12.081	0.67
264	-12.082	0.68

at Back up by Battery



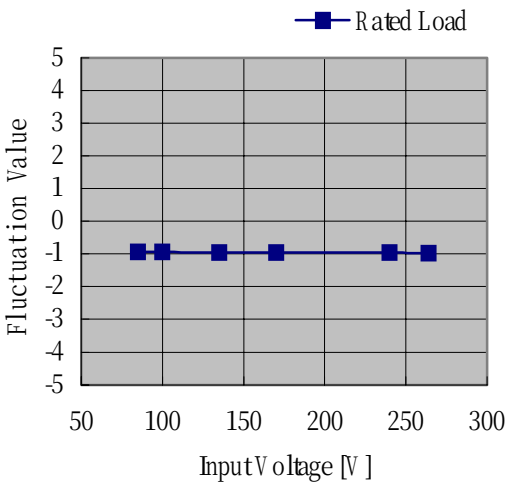
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-12.072	0.60
24	-12.078	0.65
32	-12.080	0.67

Model	NSP2-250-D2S
Item	Line Regulation

V6：5Vs 1A

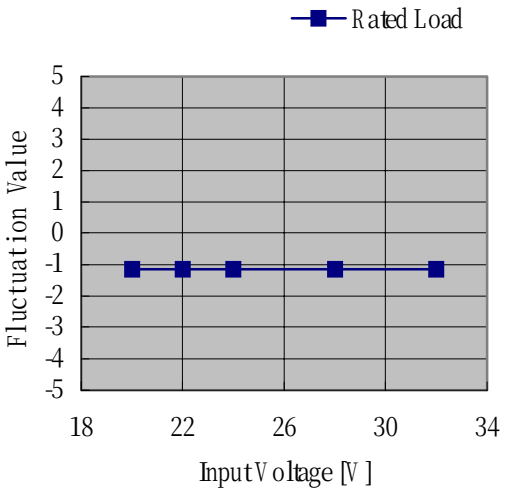
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	4.953	-0.94
100	4.953	-0.94
240	4.952	-0.96
264	4.951	-0.98

at Back up by Battery

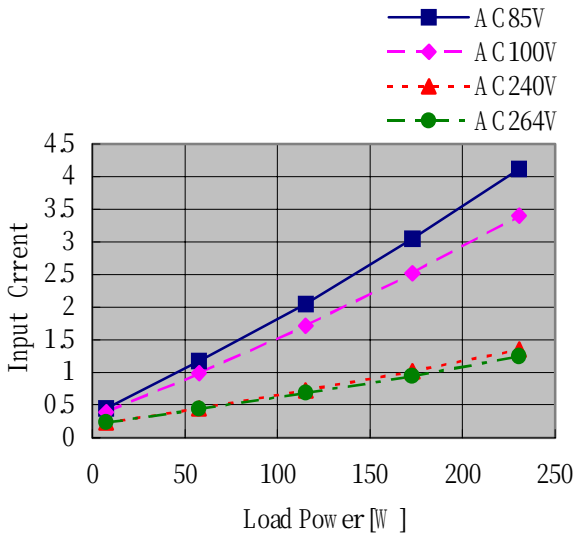


at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	4.943	-1.14
24	4.943	-1.14
32	4.943	-1.14

Model	NSP2-250-D2S
Item	Input Current (by Load Power)

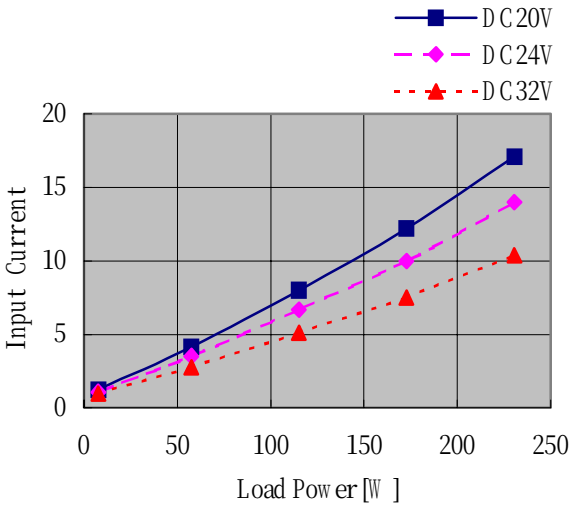
at AC Input



at AC Input

Load Power [W]	Input Current [A rms]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	0.45	0.39	0.23	0.23
57.6	1.17	0.98	0.44	0.43
115.3	2.05	1.72	0.72	0.68
172.9	3.04	2.52	1.01	0.94
230.5	4.12	3.40	1.35	1.25

at Back up by Battery

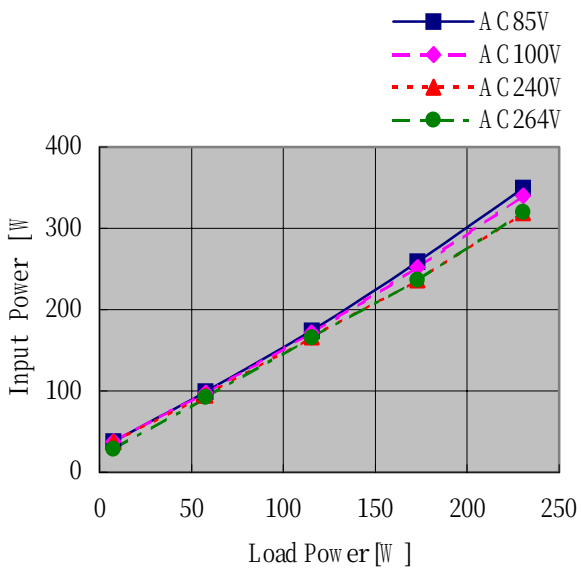


at Back up by Battery

Load Power [W]	Input Current [A]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	1.25	1.09	0.98
57.6	4.16	3.52	2.77
115.3	8.00	6.70	5.12
172.9	12.20	10.00	7.50
230.5	17.10	14.00	10.40

Model	NSP2-250-D2S
Item	Input Power (by Load Power)

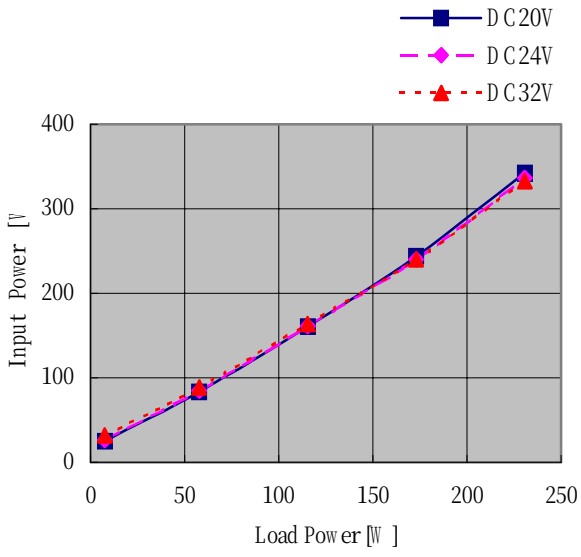
at AC Input



at AC Input

Load Power [W]	Input Power [W]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	37.51	37.99	37.32	28.23
57.6	99.05	97.63	94.27	92.12
115.3	174.37	171.26	165.97	165.47
172.9	258.75	252.24	236.04	235.82
230.5	349.62	340.07	318.85	320.05

at Back up by Battery

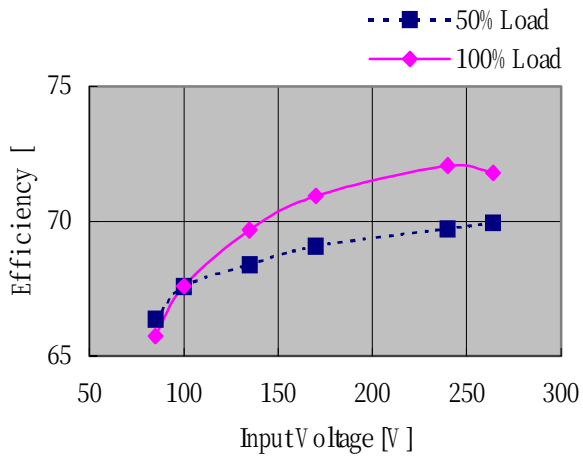


at Back up by Battery

Load Power [W]	Input Power [W]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	25.00	26.16	31.36
57.6	83.20	84.48	88.64
115.3	160.00	160.80	163.84
172.9	244.00	240.00	240.00
230.5	342.00	336.00	332.80

Model	NSP2-250-D2S
Item	Efficiency (by Input Voltage)

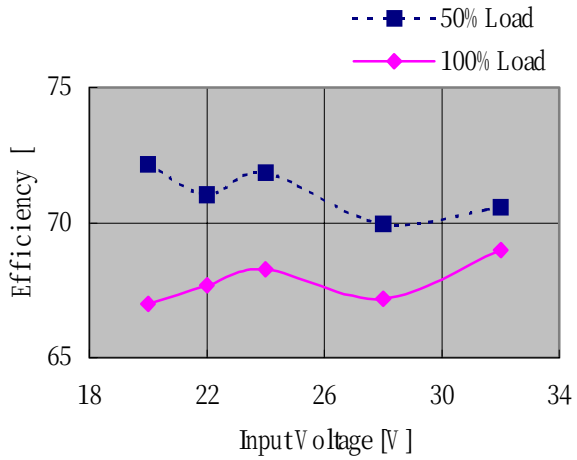
at AC Input



at AC Input

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
85	66.37	65.75
100	67.59	67.60
240	69.73	72.08
264	69.94	71.08

at Back up by Battery

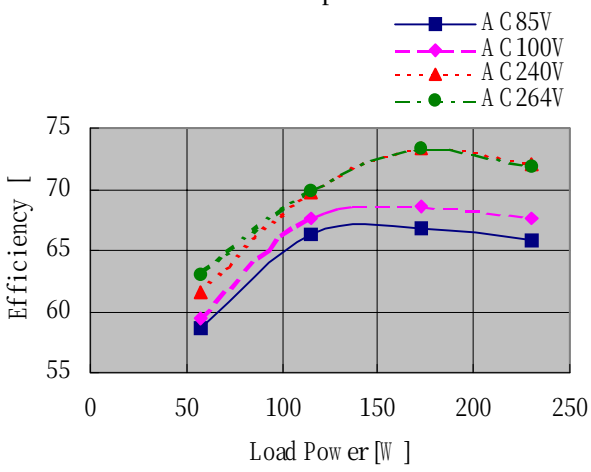


at Back up by Battery

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
20	72.17	67.00
24	71.85	68.27
32	70.57	69.00

Model	NSP2-250-D2S
Item	Efficiency (by Load Power)

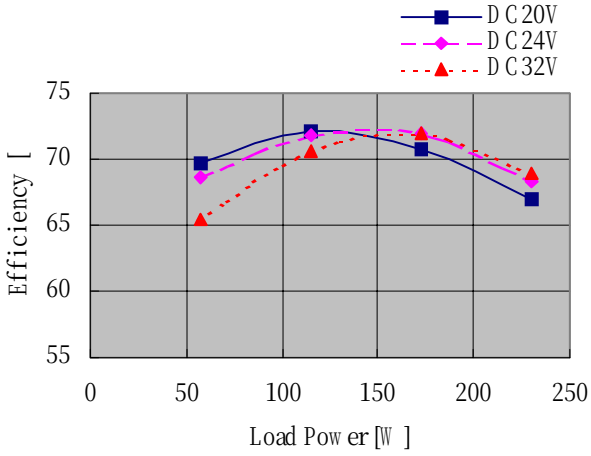
at AC Input



at AC Input

Load Power [W]	Efficiency [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
57.6	58.65	59.51	61.63	63.06
115.3	66.37	67.59	69.73	69.94
172.9	66.85	68.58	73.29	73.37
230.5	65.75	67.60	72.08	71.80

at Back up by Battery

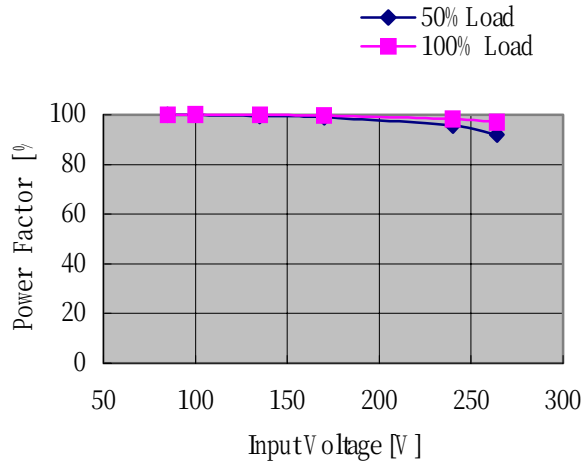


at Back up by Battery

Load Power [W]	Efficiency [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
57.6	69.67	68.64	65.48
115.3	72.17	71.85	70.57
172.9	70.74	71.97	72.01
230.5	67.00	68.27	69.00

Model	NSP2-250-D2S
Item	Power Factor

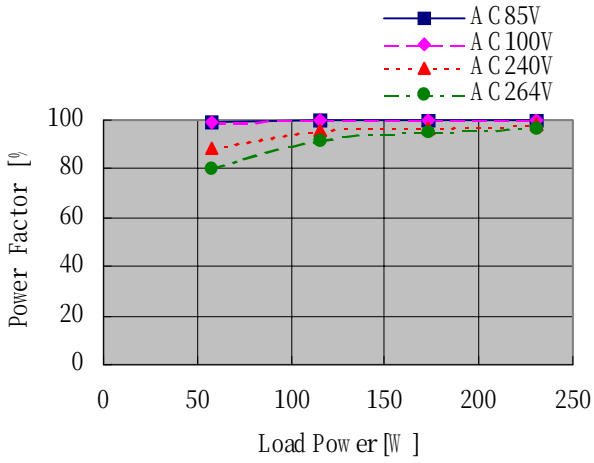
at AC Input



at AC Input

Input Voltage [V]	Power Factor [%]	
	50%Load	100% Load
85	99.93	99.91
100	99.85	99.99
240	95.61	98.23
264	91.85	96.98

at AC Input

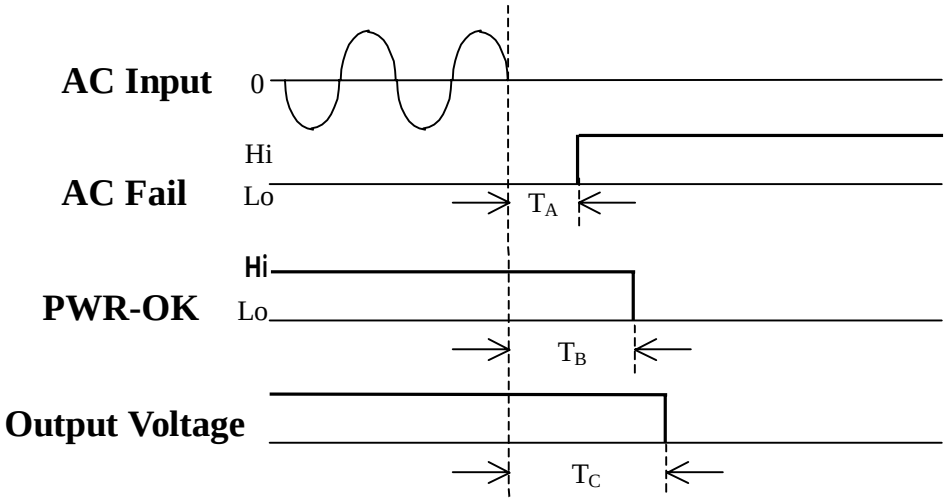


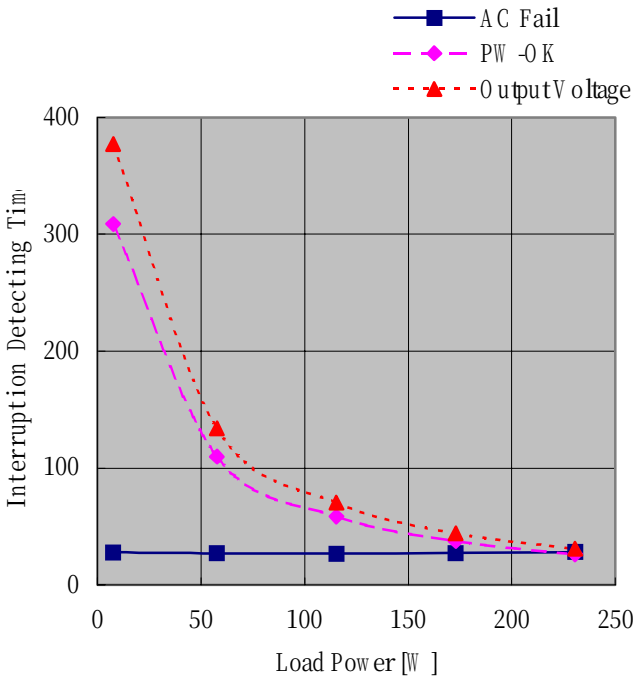
at AC Input

Load Power [W]	Power Factor [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
57.6	99.55	99.25	88.55	80.46
115.3	99.93	99.85	95.61	91.85
172.9	100.00	99.98	97.13	95.32
130.5	99.91	99.99	98.23	96.98

Model	NSP2-250-D2S	
Item	Instantaneous Interruption Compensation (by Load Power)	

at AC Input Only (85V / 100V / 240V / 264V)



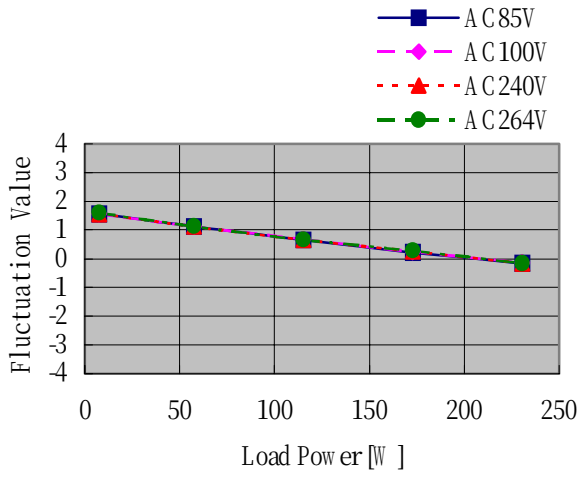


Load Power [W]	Interruption Detecting Time (ms)		
	AC Fail T_A	PWR-OK T_B	DC Output T_C
7.5	27.90	308.7	377.20
57.6	27.24	109.76	133.82
115.3	26.92	58.58	70.40
172.9	27.46	37.42	44.20
230.5	28.26	26.26	31.04

Model	NSP2-250-D2S
Item	Load Regulation

V1：5V 20A

at AC Input



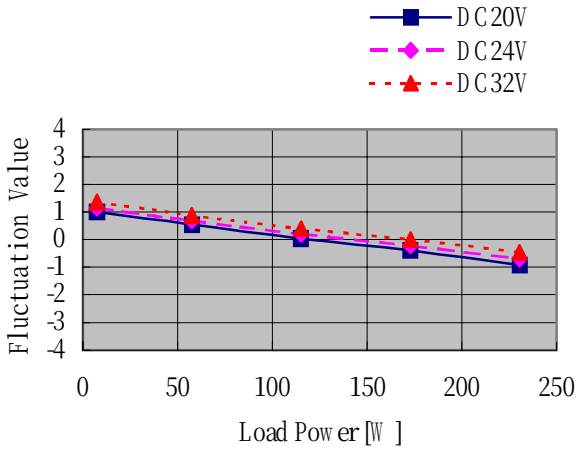
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	1.56	1.56	1.56	1.60
57.6	1.12	1.12	1.12	1.12
115.3	0.66	0.68	0.66	0.66
172.9	0.22	0.24	0.26	0.28
230.5	-0.16	-0.14	-0.16	-0.16

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	1.00	1.14	1.36
57.6	0.54	0.68	0.88
115.3	0.04	0.20	0.40
172.9	-0.40	-0.22	0.00
230.5	-0.92	-0.70	-0.46

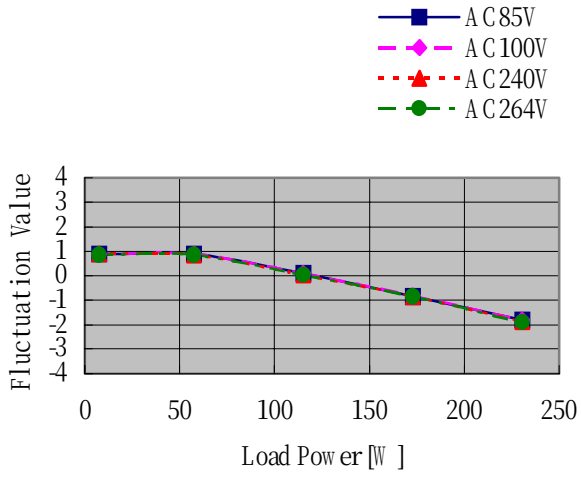
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Load Regulation

V2：3.3V 10A

at AC Input



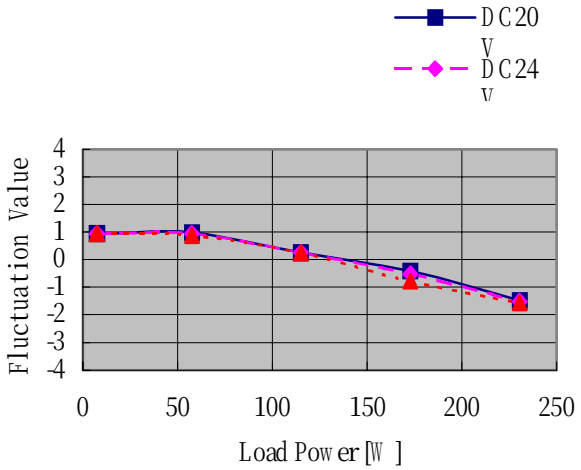
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	0.88	0.88	0.88	0.85
57.6	0.88	0.88	0.85	0.85
115.3	0.09	0.09	0.03	0.03
172.9	-0.85	-0.82	-0.85	-0.85
230.5	-1.82	-1.82	-1.88	-1.91

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	0.94	0.94	0.94
57.6	0.97	0.94	0.88
115.3	0.24	0.24	0.24
172.9	-0.42	-0.52	-0.79
230.5	-1.48	-1.52	-1.58

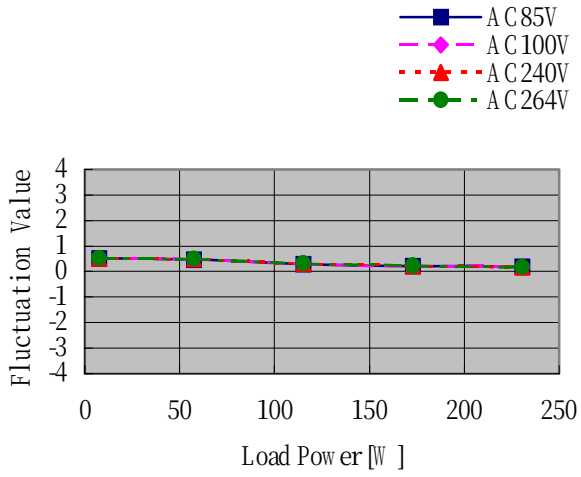
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Load Regulation

V3：12V 7A

at AC Input



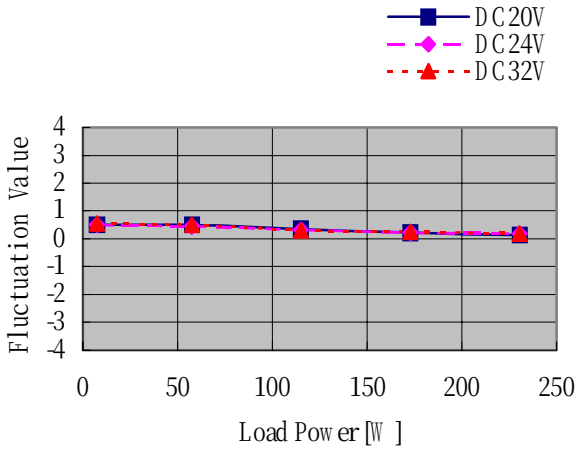
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	0.52	0.52	0.52	0.52
57.6	0.47	0.48	0.48	0.48
115.3	0.29	0.30	0.31	0.31
172.9	0.22	0.22	0.22	0.22
230.5	0.19	0.18	0.17	0.17

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	0.50	0.49	0.54
57.6	0.50	0.45	0.51
115.3	0.35	0.32	0.30
172.9	0.22	0.22	0.25
230.5	0.13	0.18	0.18

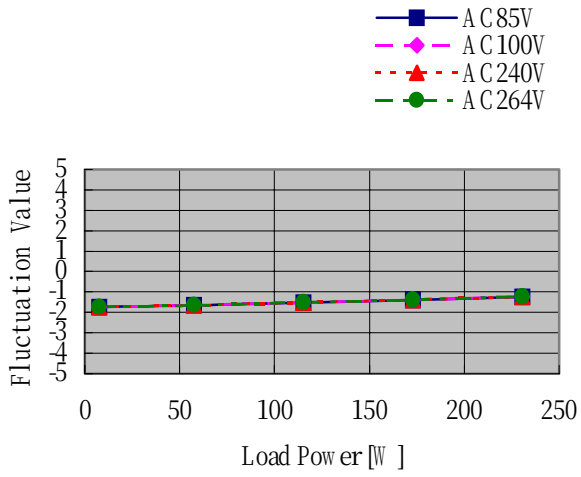
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Load Regulation

V4:-5V 0.5A

at AC Input



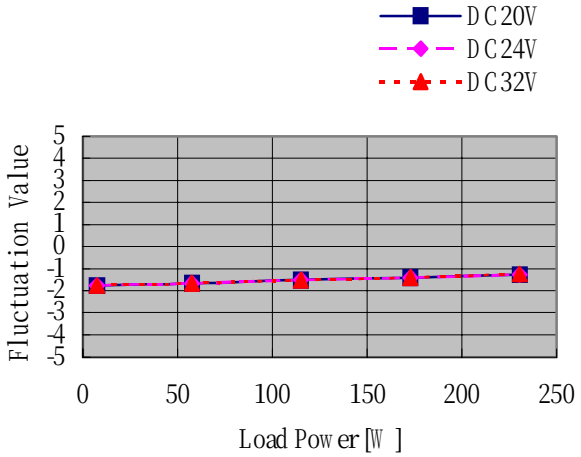
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	-1.74	-1.74	-1.74	-1.74
57.6	-1.66	-1.66	-1.66	-1.66
115.3	-1.52	-1.52	-1.52	-1.50
172.9	-1.38	-1.38	-1.38	-1.38
230.5	-1.24	-1.24	-1.24	-1.22

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	-1.76	-1.76	-1.76
57.6	-1.66	-1.66	-1.66
115.3	-1.52	-1.52	-1.52
172.9	-1.40	-1.40	-1.40
230.5	-1.26	-1.26	-1.24

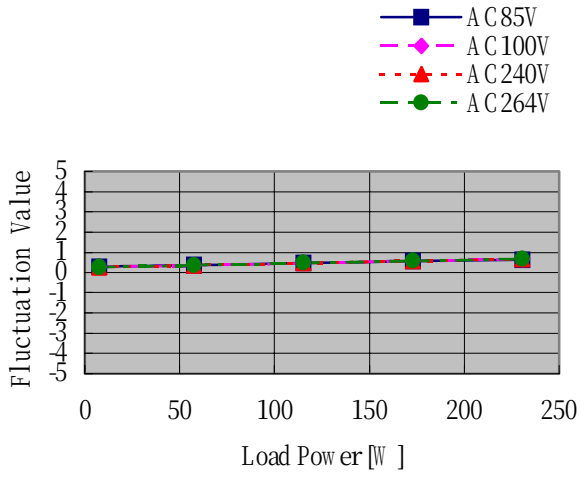
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Load Regulation

V5:-12V 0.5A

at AC Input



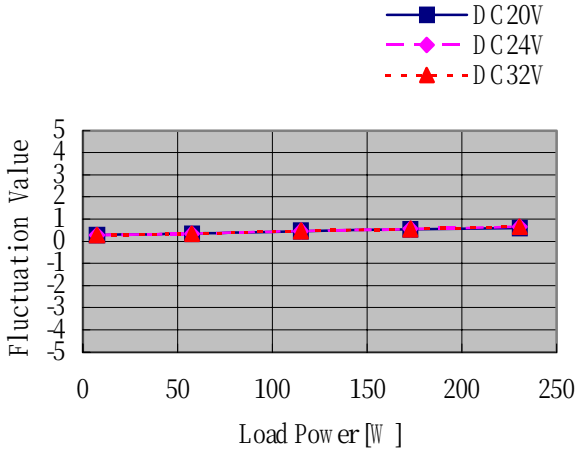
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	0.29	0.28	0.28	0.28
57.6	0.37	0.36	0.36	0.36
115.3	0.47	0.47	0.47	0.47
172.9	0.58	0.58	0.57	0.57
230.5	0.64	0.66	0.67	0.68

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
7.5	0.28	0.28	0.28
57.6	0.34	0.34	0.34
115.3	0.46	0.46	0.46
172.9	0.54	0.55	0.56
230.5	0.60	0.65	0.67

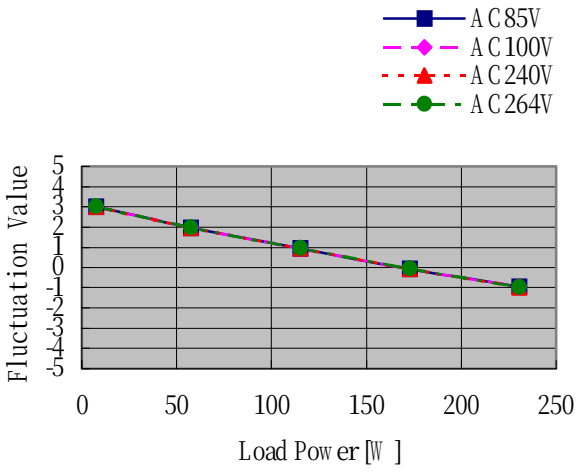
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
7.5	1.5	0	0	0	0	0
57.6	5	2.5	1.75	0.125	0.125	0.25
115.3	10	5	3.5	0.25	0.25	0.5
172.9	15	7.5	5.25	0.375	0.375	0.75
230.5	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Load Regulation

V6:5Vs 1A

at AC Input



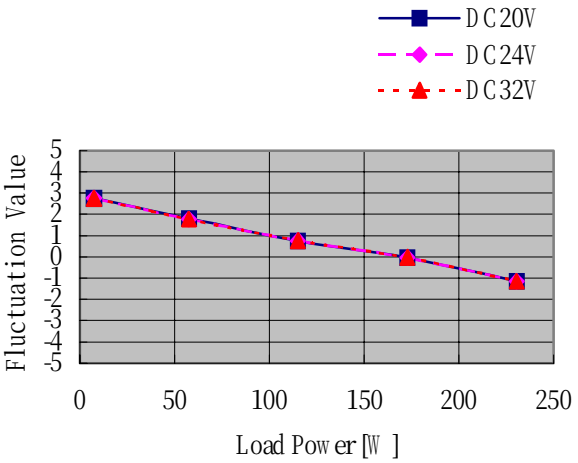
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
7.5	3.00	3.00	3.00	3.00
57.6	1.98	1.98	1.98	1.98
115.3	0.94	0.94	0.94	0.94
172.9	-0.06	-0.06	-0.06	-0.06
230.5	-0.94	-0.94	-0.96	-0.98

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.5	0	0	0	0	0
50	5	2.5	1.75	0.125	0.125	0.25
100	10	5	3.5	0.25	0.25	0.5
150	15	7.5	5.25	0.375	0.375	0.75
200	20	10	7	0.5	0.5	1

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC32V
5	2.76	2.76	2.76
50	1.80	1.78	1.78
100	0.74	0.76	0.76
150	-0.04	-0.04	-0.02
200	-1.14	-1.14	-1.14

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.5	0	0	0	0	0
50	5	2.5	1.75	0.125	0.125	0.25
100	10	5	3.5	0.25	0.25	0.5
150	15	7.5	5.25	0.375	0.375	0.75
200	20	10	7	0.5	0.5	1

Model	NSP2-250-D2S
Item	Ripple / Noise Voltage Test

Temperature	Input Voltage	V1 5V Ripple (mV) / Noise (mV)	V2 3.3V Ripple (mV) / Noise (mV)	V3 12V Ripple (mV) / Noise (mV)
-5℃	AC 85 V	15 / 35	25 / 45	20 / 55
	100 V	15 / 40	25 / 45	15 / 45
	240 V	15 / 30	25 / 35	15 / 30
	264 V	15 / 30	25 / 35	15 / 35
	DC 20 V	20 / 30	25 / 30	20 / 30
	24 V	15 / 30	25 / 30	15 / 25
	32 V	15 / 25	25 / 30	10 / 35
25℃	AC 85 V	10 / 50	20 / 40	20 / 45
	100 V	10 / 40	15 / 40	20 / 45
	240 V	10 / 25	20 / 35	15 / 40
	264 V	10 / 20	15 / 30	10 / 45
	DC 20 V	15 / 25	15 / 25	10 / 25
	24 V	10 / 20	15 / 25	15 / 30
	32 V	10 / 20	15 / 30	15 / 45
50℃	AC 85 V	10 / 45	15 / 50	15 / 50
	100 V	10 / 35	10 / 35	10 / 55
	240 V	10 / 35	10 / 30	10 / 55
	264 V	10 / 30	10 / 30	10 / 60
	DC 20 V	10 / 20	10 / 20	10 / 25
	24 V	10 / 20	10 / 20	10 / 25
	32 V	10 / 25	10 / 25	10 / 55
Specification		50 / 100	50 / 100	100 / 200
Judgement		Good	Good	Good

Temperature	Input Voltage	V4 -5V Ripple (mV) / Noise (mV)	V5 -12V Ripple (mV) / Noise (mV)	V6 5Vs Ripple (mV) / Noise (mV)
-5℃	AC 85 V	5 / 40	5 / 40	20 / 80
	100 V	5 / 25	5 / 30	20 / 65
	240 V	5 / 25	5 / 25	20 / 45
	264 V	5 / 25	5 / 25	20 / 35
	DC 20 V	10 / 25	10 / 20	20 / 35
	24 V	5 / 20	5 / 15	20 / 30
	32 V	5 / 20	5 / 20	15 / 25
25℃	AC 85 V	10 / 40	10 / 40	20 / 70
	100 V	10 / 40	5 / 35	20 / 70
	240 V	10 / 20	5 / 20	15 / 45
	264 V	10 / 25	10 / 25	20 / 40
	DC 20 V	10 / 25	5 / 20	20 / 30
	24 V	5 / 20	5 / 20	15 / 30
	32 V	5 / 20	5 / 20	10 / 20
50℃	AC 85 V	5 / 40	5 / 40	15 / 70
	100 V	10 / 35	10 / 35	15 / 65
	240 V	5 / 35	5 / 40	15 / 60
	264 V	5 / 30	5 / 35	15 / 55
	DC 20 V	5 / 25	5 / 25	15 / 25
	24 V	10 / 25	5 / 20	10 / 25
	32 V	5 / 25	5 / 25	15 / 50
Specification		50 / 100	100 / 200	50 / 100
Judgement		Good	Good	Good

Model	NSP2-250-D2S	
Item	Over-Current Protection	

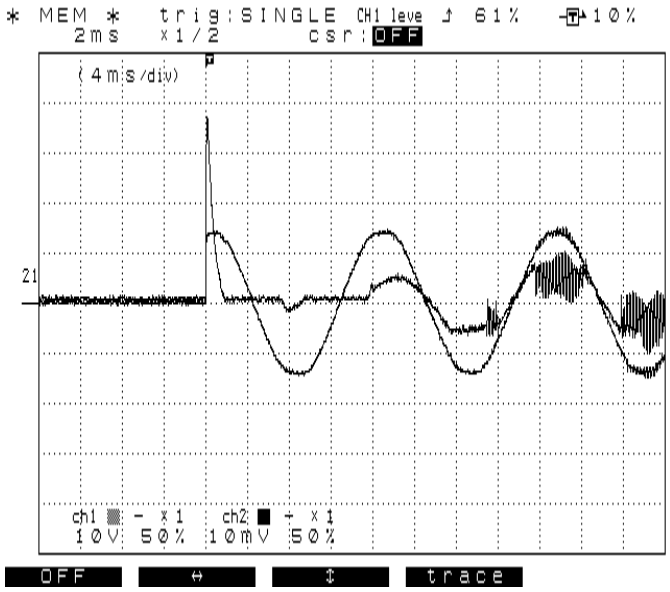
	Input Voltage			V1 5V		V2 3.3V		V3 12V	
0℃	AC	85	V	27.0	A	17.2	A	14.8	A
		100	V	27.0	A	17.2	A	14.8	A
		240	V	27.0	A	17.2	A	14.8	A
		264	V	27.0	A	17.2	A	14.8	A
	DC	20	V	27.0	A	17.6	A	14.8	A
		24	V	27.0	A	17.2	A	14.8	A
		32	V	27.2	A	17.2	A	14.8	A
25℃	AC	85	V	26.4	A	16.2	A	15.0	A
		100	V	26.6	A	16.2	A	15.0	A
		240	V	26.6	A	16.0	A	14.8	A
		264	V	26.6	A	16.2	A	14.8	A
	DC	20	V	26.2	A	16.0	A	15.0	A
		24	V	26.2	A	16.0	A	15.0	A
		32	V	26.2	A	16.0	A	15.0	A
50℃	AC	85	V	25.0	A	16.5	A	14.8	A
		100	V	25.2	A	16.0	A	14.8	A
		240	V	25.0	A	16.5	A	14.8	A
		264	V	25.0	A	16.5	A	14.8	A
	DC	20	V	25.0	A	15.0	A	14.8	A
		24	V	25.0	A	14.5	A	14.8	A
		32	V	24.8	A	14.5	A	14.8	A
Specification				23A or More		13A or More		13A or More	
Judgement				Good		Good		Good	

Model	NSP2-250-D2S	
Item	Over-Voltage Protection	

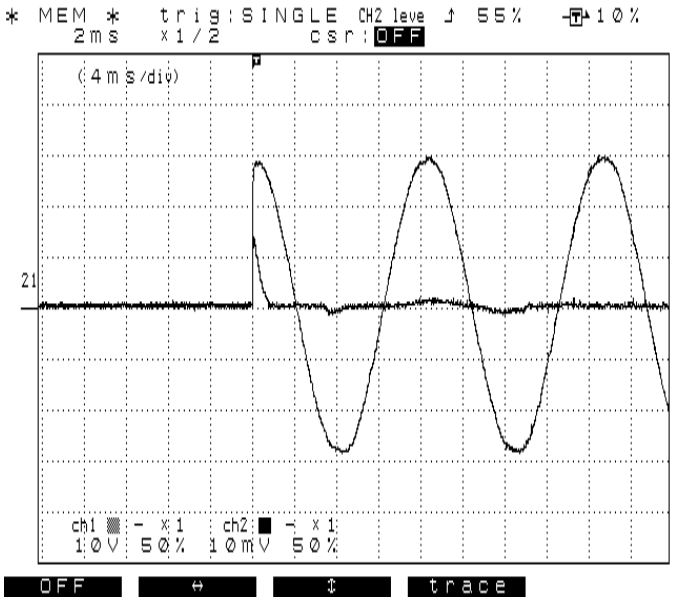
Temperature	Input Voltage		V1：5V	V2：3.3V	V3：12V
0℃	AC	100V	6.7V	4.2V	14.9V
	DC	24V	6.7V	4.2V	14.9V
25℃	AC	100V	6.6V	4.1V	14.8V
	DC	24V	6.6V	4.1V	14.8V
50℃	AC	100V	6.5V	4.0V	14.8V
	DC	24V	6.5V	4.0V	14.8V
Specification			6.0～7.0V	3.8～4.3V	14.0～15.6V
Judgement			Good	Good	Good

Model	NSP2-250-D2S	
Item	Inrush Current	

Inrush Current Wave



Wave No.1	
CH1	Measuring Point: Input Voltage
	Range 100V/DIV
CH2	Measuring Point: Input Current
	Range 10A/DIV
Time Line	4ms / DIV
Conditions	Input: AC100V 60Hz Load: Rated Load Temperature: 25℃
Note: Inrush Current Value: 34.8A	



Wave No.2	
CH1	Measuring Point: Input Voltage
	Range 100V/DIV
CH2	Measuring Point: Input Current
	Range 50A/DIV
Time Line	4ms / DIV
Conditions	Input: AC200V 60Hz Load: Rated Load Temperature: 25℃
Note: Inrush Current Value: 70.0A	

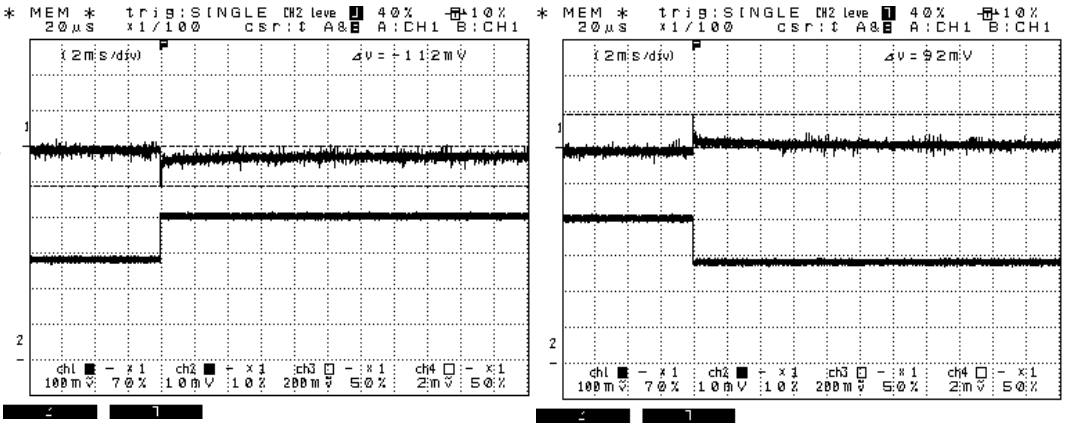
Model	NSP2-250-D2S	
Item	Dynamic Load Response	

V1：+5V 20A

70% Load⇔ 100% Load

Output Voltage

Load Current



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
70%Load→100% Load	- mV -112mV	±250mV	Good
100% Load→70% Load	92mV - mV		Good

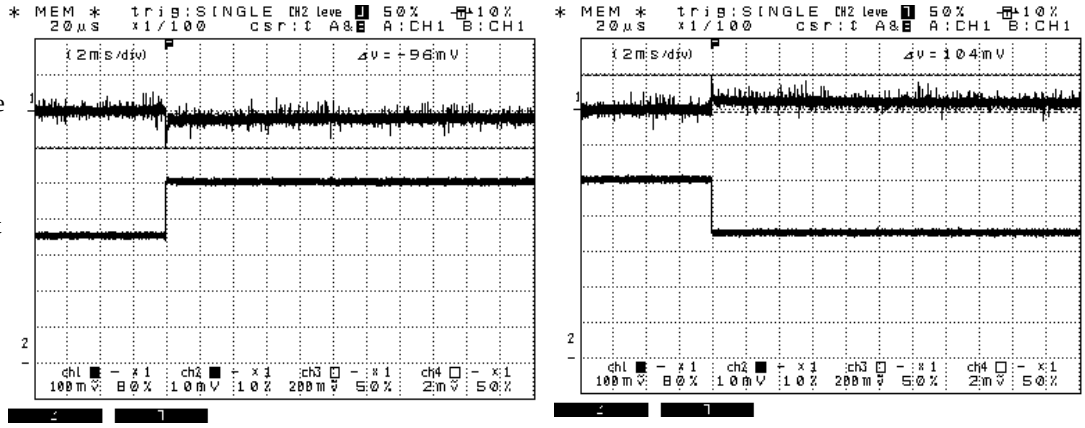
Model	NSP2-250-D2S	
Item	Dynamic Load Response	

V2：+3.3V 10A

70% Load⇔ **100%** Load

Output Voltage

Load Current



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
70%Load→100% Load	- mV -96mV	±165mV	Good
100% Load→70% Load	104mV - mV		Good

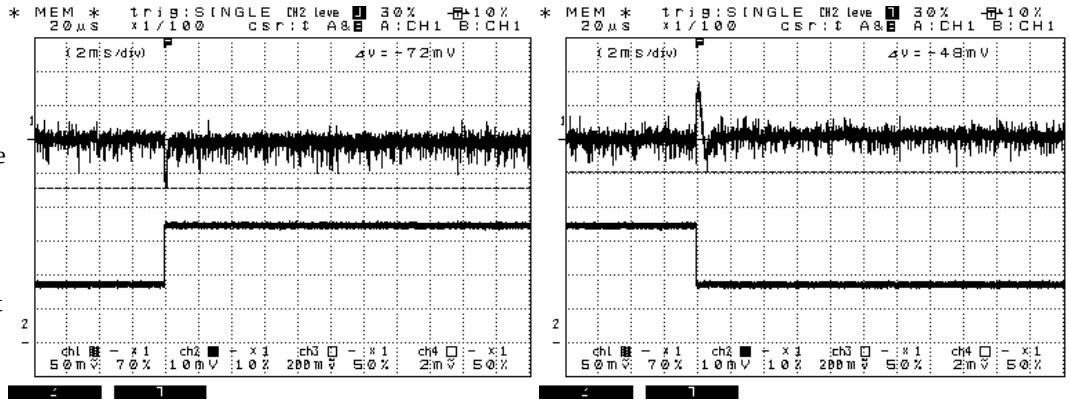
Model	NSP2-250-D2S	
Item	Dynamic Load Response	

V3：+12V 7A

50% Load ⇔ 100% Load

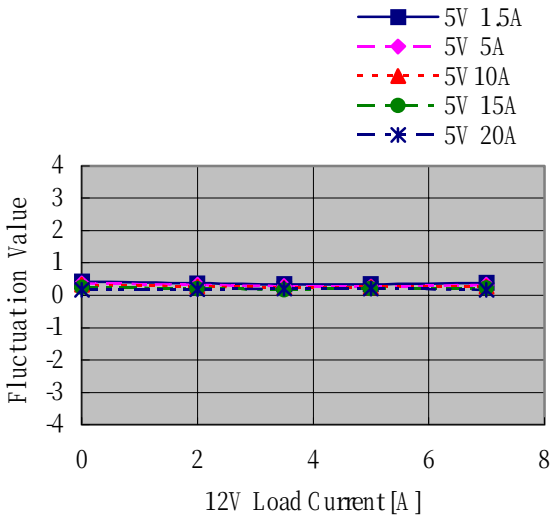
Output Voltage

Load Current



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
50%Load→100% Load	- mV -72mV	±600mV	Good
100% Load→50% Load	84mV -48mV		Good

Model	NSP2-250-D2S
Item	12V Cross Regulation

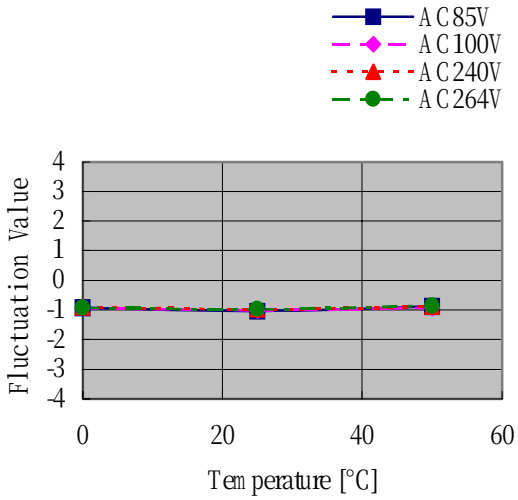


12V Load Current	12V Voltage Value [V]				
	5V 1.5A	5V 5A	5V 10A	5V 15A	5V 20A
0A	12.051	12.044	12.038	12.029	12.021
2A	12.045	12.038	12.033	12.026	12.022
3.5A	12.041	12.034	12.028	12.021	12.024
5A	12.041	12.033	12.030	12.025	12.026
7A	12.046	12.038	12.033	12.027	12.020

12V Load Current	Fluctuation Value [%]				
	5V 1.5A	5V 5A	5V 10A	5V 15A	5V 20A
0A	0.43	0.37	0.32	0.24	0.18
2A	0.37	0.32	0.28	0.22	0.18
3.5A	0.34	0.28	0.23	0.18	0.20
5A	0.34	0.28	0.25	0.21	0.22
7A	0.38	0.32	0.28	0.22	0.17

Model	NSP2-250-D2S
Item	Ambient Temperature Drift

V1：5V 20A

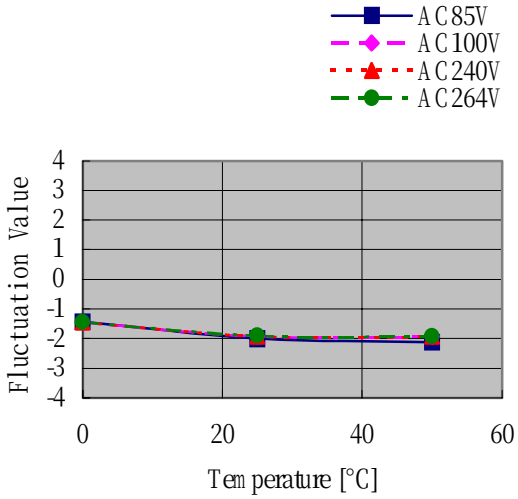


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	4.954	4.953	4.955	4.954
25	4.953	4.949	4.951	4.951
50	4.949	4.954	4.956	4.956

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-0.92	-0.94	-0.90	-0.92
25	-1.04	-1.02	-0.98	-0.98
50	-0.88	-0.92	-0.88	-0.86

V2：3.3V 10A



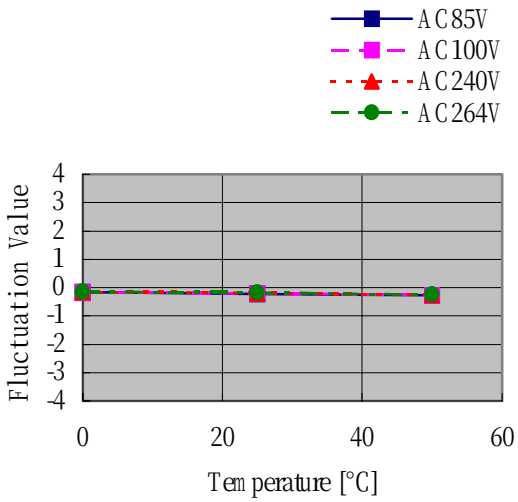
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	3.253	3.252	3.252	3.252
25	3.234	3.236	3.236	3.237
50	3.230	3.236	3.236	3.236

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-1.42	-1.45	-1.45	-1.45
25	-2.00	-1.94	-1.94	-1.91
50	-2.12	-1.94	-1.94	-1.94

Model	NSP2-250-D2S
Item	Ambient Temperature Drift

V3：12V 7A

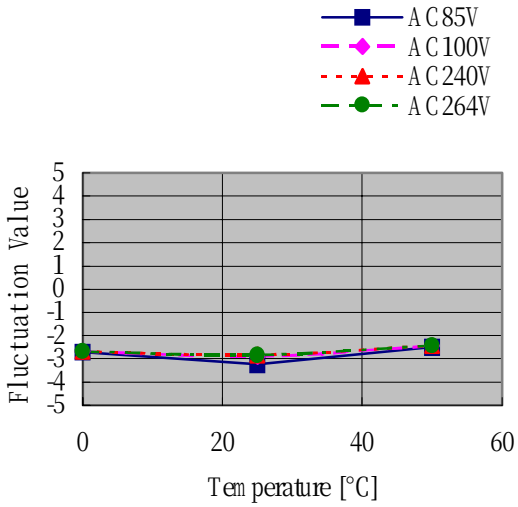


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	11.980	11.980	11.981	11.982
25	11.974	11.976	11.977	11.978
50	11.969	11.969	11.970	11.970

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-0.17	-0.17	-0.16	-0.15
25	-0.22	-0.20	-0.19	-0.18
50	-0.26	-0.26	-0.25	-0.25

V4：-5V 0.5A



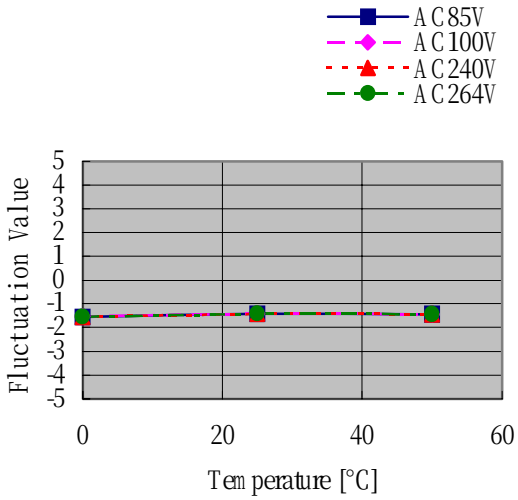
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-4.865	-4.866	-4.866	-4.866
25	-4.838	-4.855	-4.858	-4.858
50	-4.875	-4.878	-4.879	-4.879

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-2.70	-2.68	-2.68	-2.68
25	-3.24	-2.90	-2.84	-2.84
50	-2.50	-2.44	-2.42	-2.42

Model	NSP2-250-D2S
Item	Ambient Temperature Drift

V5：-12V 0.5A

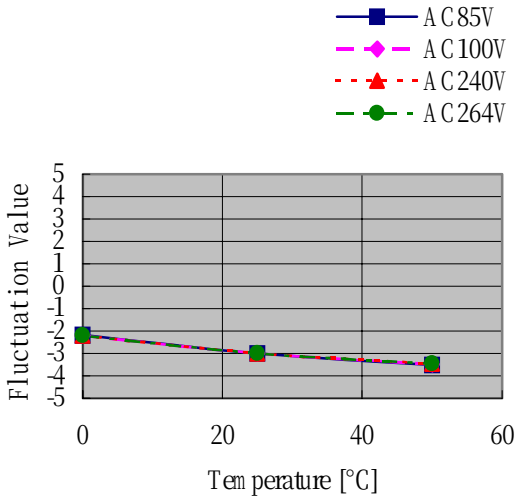


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-11.814	-11.815	-11.814	-11.814
25	-11.829	-11.829	-11.829	-11.829
50	-11.827	-11.827	-11.827	-11.827

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-1.55	-1.54	-1.55	-1.55
25	-1.43	-1.43	-1.43	-1.43
50	-1.44	-1.44	-1.44	-1.44

V6：5Vs 1A



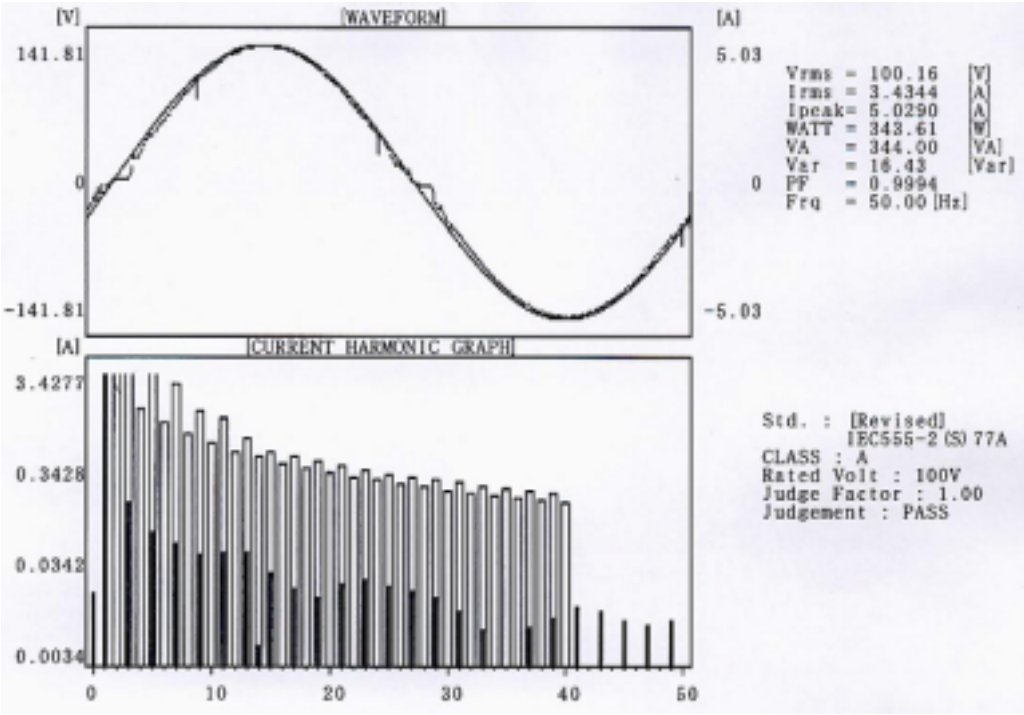
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	4.891	4.890	4.890	4.890
25	4.850	4.850	4.850	4.850
50	4.824	4.826	4.827	4.827

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
0	-2.18	-2.20	-2.20	-2.20
25	-3.00	-3.00	-3.00	-3.00
50	-3.52	-3.48	-3.46	-3.46

Model	NSP2-250-D2S	
Item	Harmonic Current	

Measuring Instrument ： MP701(Keisoku Giken)

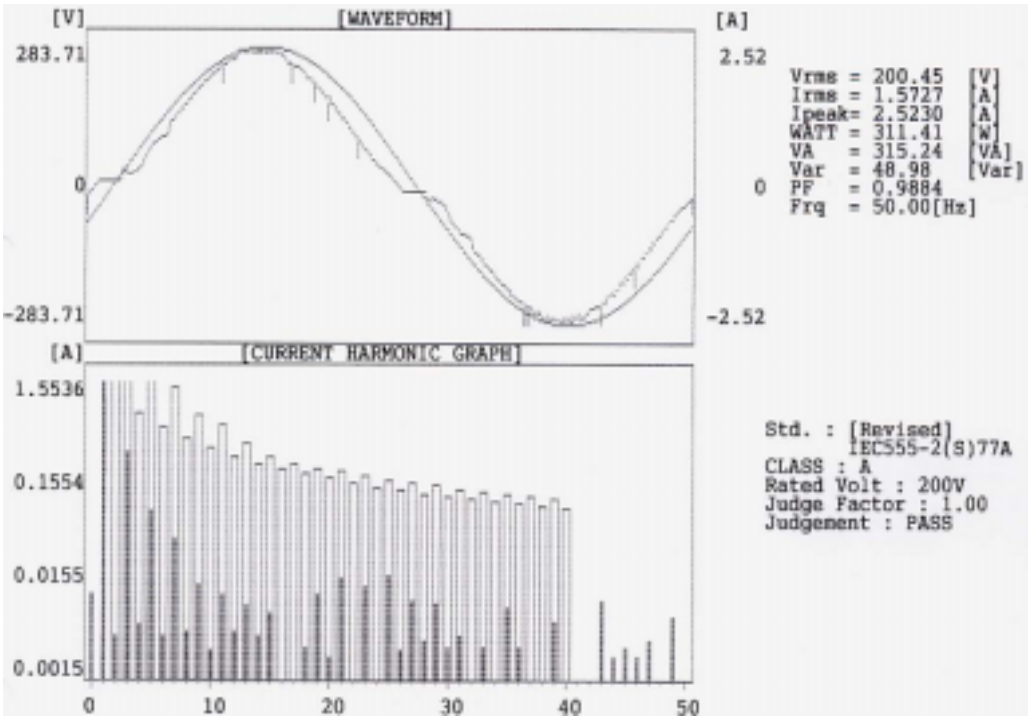


[CURRENT HARMONIC DATA]

No	(A)	No	(A)	No	(A)	No	(A)
00	0.0128	13	0.0343	26	0.0031	39	0.0070
01	3.4277	14	0.0038	27	0.0139	40	0.0021
02	0.0031	15	0.0209	28	0.0028	41	0.0091
03	0.1134	16	0.0022	29	0.0115	42	0.0022
04	0.0031	17	0.0144	30	0.0028	43	0.0082
05	0.0550	18	0.0015	31	0.0084	44	0.0007
06	0.0031	19	0.0115	32	0.0015	45	0.0068
07	0.0412	20	0.0025	33	0.0054	46	0.0000
08	0.0031	21	0.0157	34	0.0022	47	0.0061
09	0.0315	22	0.0021	35	0.0031	48	0.0007
10	0.0028	23	0.0174	36	0.0000	49	0.0068
11	0.0332	24	0.0018	37	0.0057		
12	0.0031	25	0.0155	38	0.0000		

Model	NSP2-250-D2S	
Item	Harmonic Current	

Measuring Instrument ： MP701(Keisoku Giken)



[CURRENT HARMONIC DATA]

No	(A)	No	(A)	No	(A)	No	(A)
00	0.0075	13	0.0059	26	0.0021	39	0.0039
01	1.5536	14	0.0028	27	0.0064	40	0.0007
02	0.0028	15	0.0050	28	0.0025	41	0.0015
03	0.2086	16	0.0015	29	0.0061	42	0.0007
04	0.0038	17	0.0007	30	0.0022	43	0.0063
05	0.0543	18	0.0022	31	0.0028	44	0.0018
06	0.0028	19	0.0074	32	0.0007	45	0.0022
07	0.0283	20	0.0018	33	0.0022	46	0.0018
08	0.0031	21	0.0112	34	0.0007	47	0.0025
09	0.0095	22	0.0007	35	0.0055	48	0.0000
10	0.0021	23	0.0089	36	0.0022	49	0.0044
11	0.0076	24	0.0007	37	0.0007		
12	0.0031	25	0.0119	38	0.0000		

Model	NSP2-250-D2S	
Item	Leakage Current Test	

Temperature Room Temperature
Input AC100V、240V
Load Rated Load, Minimum Load, at 'H' Remote on/off Signal

Input Voltage (V)	at Rated Load (mA)	at Minimum Load (mA)	at 'H' Remote Signal (mA)
100V	0.31	0.27	0.27
240V	0.71	0.71	0.71

Measuring Instrument：YEW.TYPE3226 Applicable Products（ Range：1KΩ

Model	NSP2-250-D2S	
Item	Line Noise Tolerance	

Temperature	Room Temperature
Input	AC100V,60Hz
Load	Rated Load
Noise Impressed Voltage	±2000V
Repeat Cycle	10～35ms
Pulse Width	50,800ns

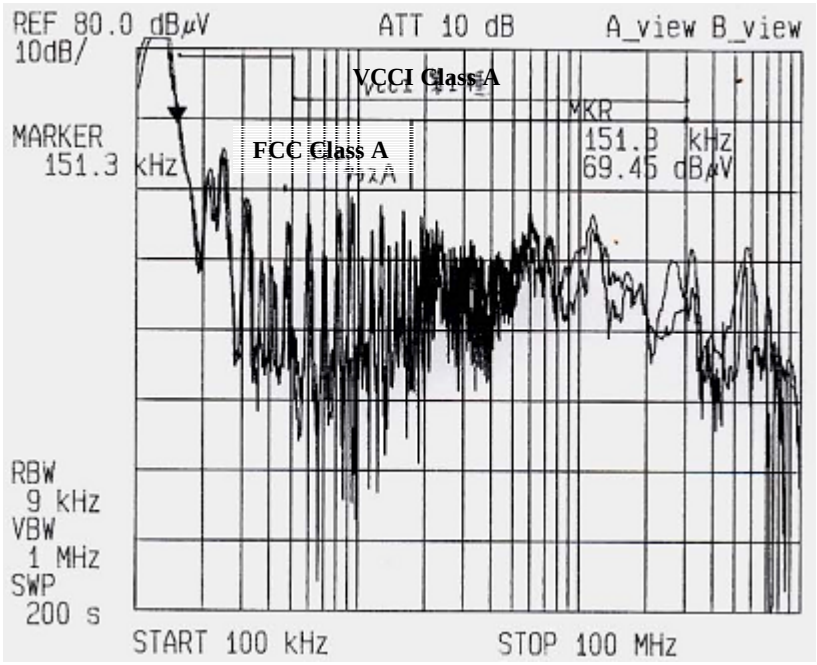
	Pulse Impressed Mode			
Normal	50ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common R Phase	Pulse Impressed Mode			
	50ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common S Phase	Pulse Impressed Mode			
	50ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○

○→No Trouble
△→Faulty Operation of Over-Voltage and so on
×→Power Supply Breakdown

Measuring Instrument ： INS420 (Noise Laboratory Co.,Ltd.)

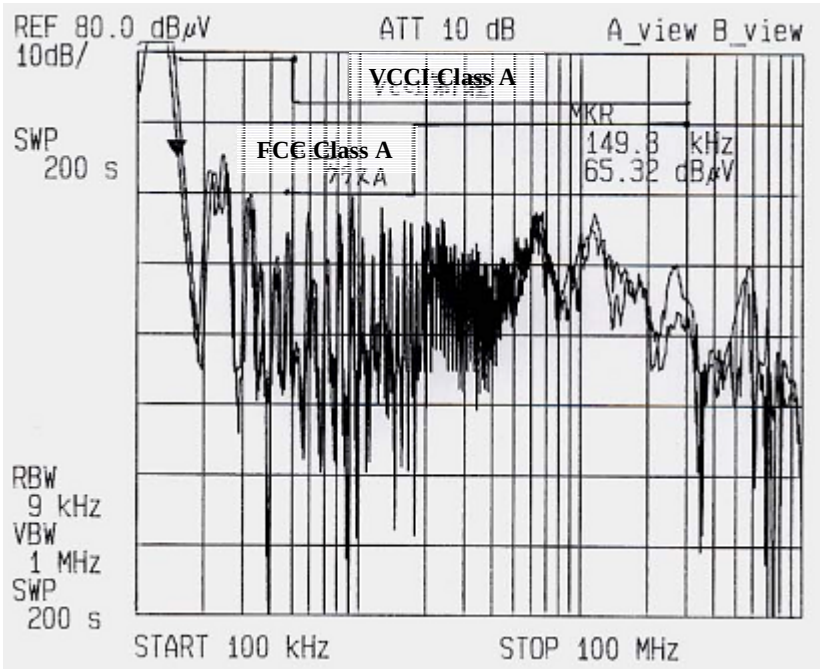
Model	NSP2-250-D2S	
Item	Conduction Emission	

Temperature Room Temperature
Input AC100V
Load Rated Load
Mesearing Point L-FG
Measuring Instrument R3261A (Advantest)



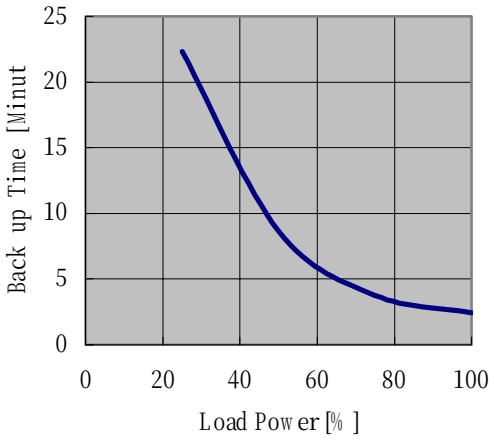
Model	NSP2-250-D2S	
Item	Conduction Emission	

Temperature Room Temperaure
Input AC240V
Load Rated Load
Measuring Point N-FG
Measuring Instrument R3261A (Advantest)



Model	NSP2-250-D2S	
Item	Battery Discharge	

Back up Time

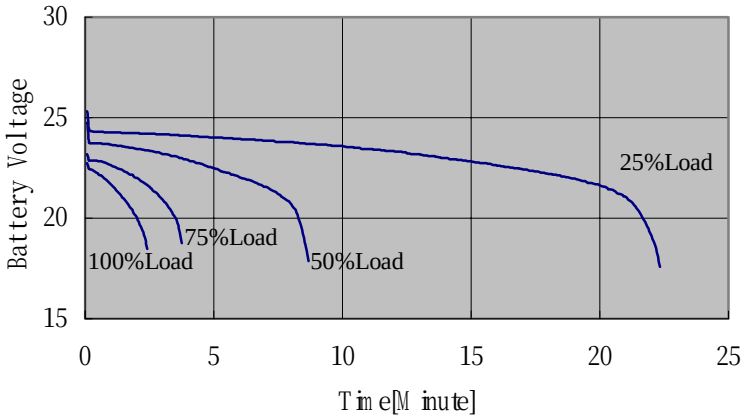


At Room Temperature (25℃)

Load Power [%]	Back up Time [Minute]
25	22.32
50	8.64
75	3.76
100	2.43

※100%Load = 230.5W

Battery Voltage



Battery：PS2538L(Lead-Acid Battery)