Test Data

aNSP3-250P-S20

(AC90～132V, 180～264V And DC24V Battery Input)

NON-STOP POWER SUPPLY

Approved by : K. Omori

Prepared by : K. Yamada

INPUT	:	AC 90V ～ 132V		
		AC 180V ～ 264V		
		Battery 24V		
OUTPUT	:	V1: 5V	14A	(Peak 25A)
		V2: 3.3V	9.1A	(Peak 20A)
		V3: 12V	7A	(Peak 13A)
		V4: -5V	0.3A	
		V5: -12V	0.8A	
		V6: 5Vs	1.5A	

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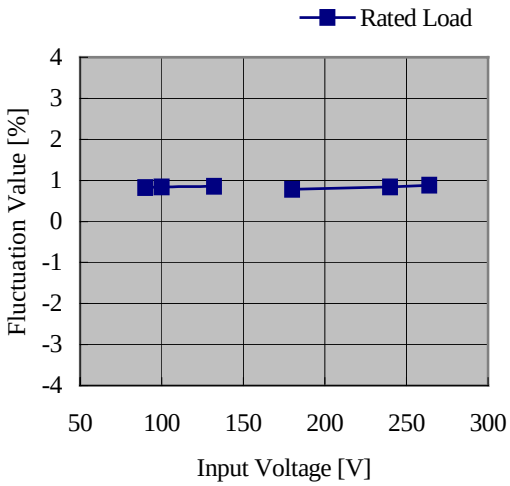
CONTENTS

Model	aNSP3-250P-S20
Item	Line Regulation

V1：5V 14A

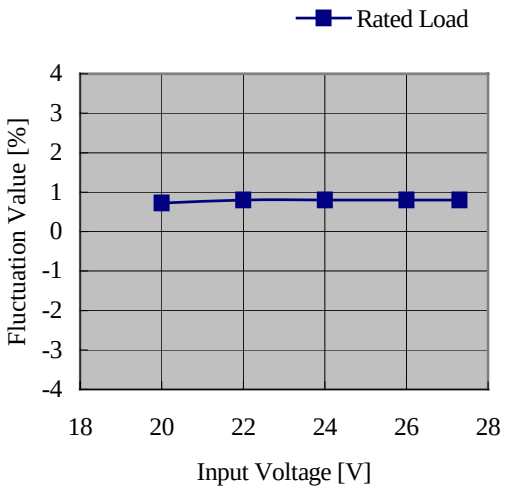
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	5.041	0.82
100	5.042	0.84
132	5.043	0.86
180	5.039	0.78
240	5.042	0.84
264	5.044	0.88

at Back up by Battery



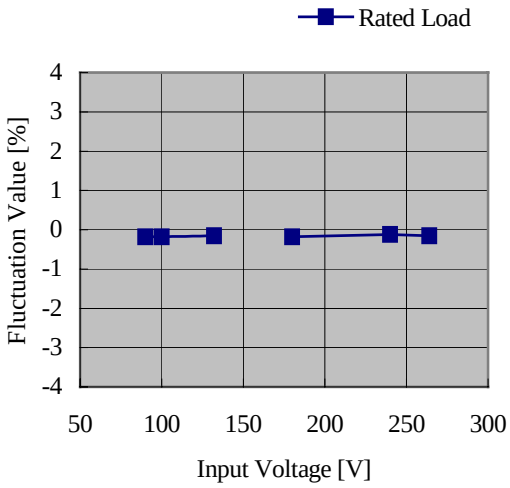
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	5.036	0.72
24	5.040	0.80
27.3	5.040	0.80

Model	aNSP3-250P-S20
Item	Line Regulation

V2：3.3V 9.4A

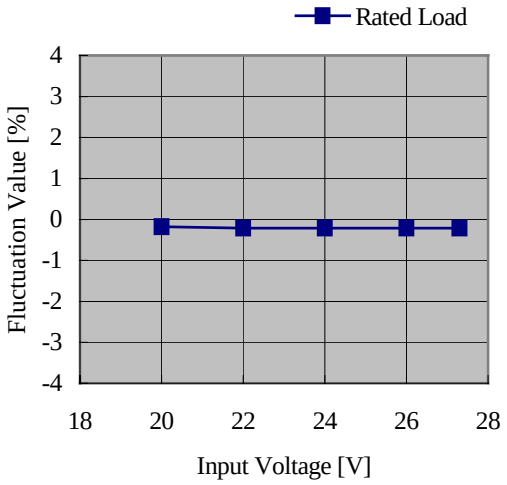
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	3.294	-0.18
100	3.294	-0.18
132	3.295	-0.15
180	3.294	-0.18
240	3.296	-0.12
264	3.295	-0.15

at Back up by Battery



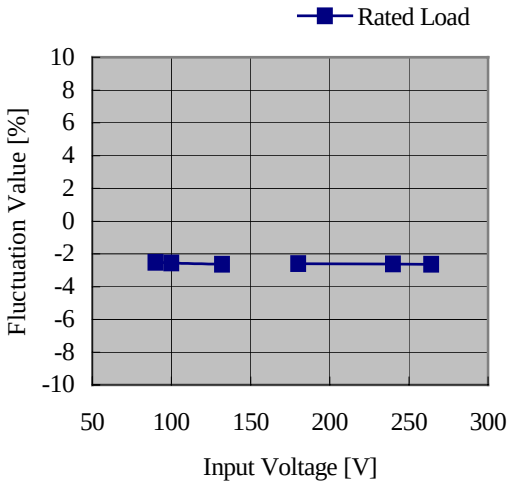
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	3.294	-0.18
24	3.293	-0.21
27.3	3.293	-0.21

Model	aNSP3-250P-S20
Item	Line Regulation

V3：12V 7A

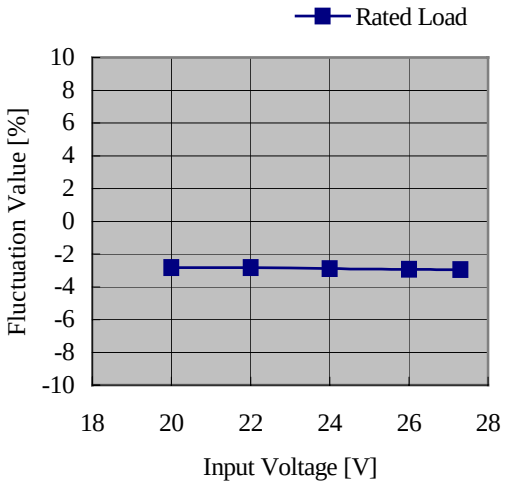
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	11.698	-2.52
100	11.694	-2.55
132	11.684	-2.63
180	11.687	-2.61
240	11.685	-2.63
264	11.683	-2.64

at Back up by Battery



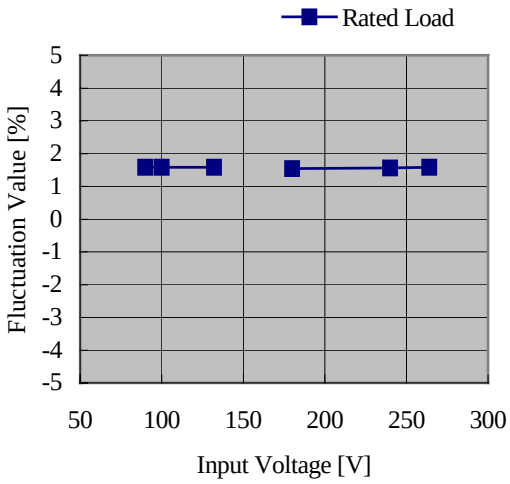
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	11.661	-2.83
24	11.653	-2.89
27.3	11.645	-2.96

Model	aNSP3-250P-S20
Item	Line Regulation

V4:-5V 0.3A

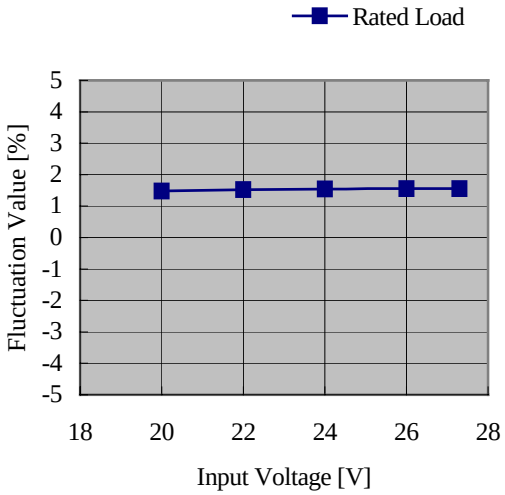
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	-5.079	1.58
100	-5.079	1.58
132	-5.079	1.58
180	-5.077	1.54
240	-5.078	1.56
264	-5.079	1.58

at Back up by Battery



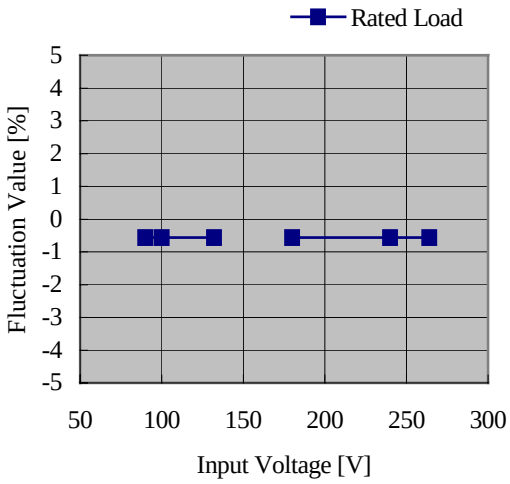
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-5.074	1.48
24	-5.077	1.54
27.3	-5.078	1.56

Model	aNSP3-250P-S20
Item	Line Regulation

V5:-12V 0.8A

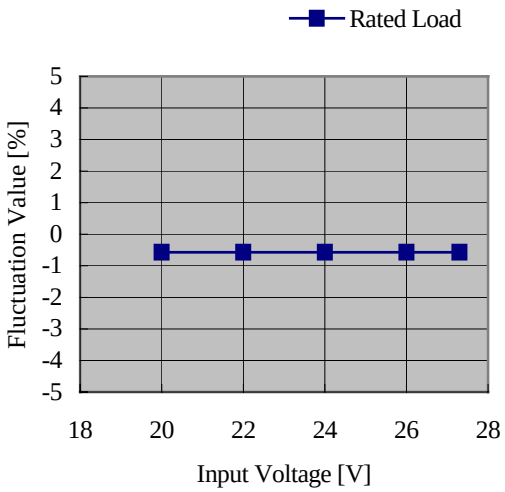
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	-11.932	-0.57
100	-11.932	-0.57
132	-11.932	-0.57
180	-11.932	-0.57
240	-11.932	-0.57
264	-11.932	-0.57

at Back up by Battery



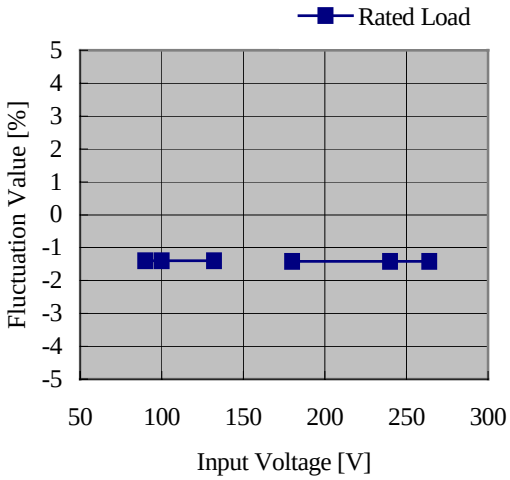
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-11.931	-0.58
24	-11.932	-0.57
27.3	-11.932	-0.57

Model	aNSP3-250P-S20
Item	Line Regulation

V6：5Vs 1.5A

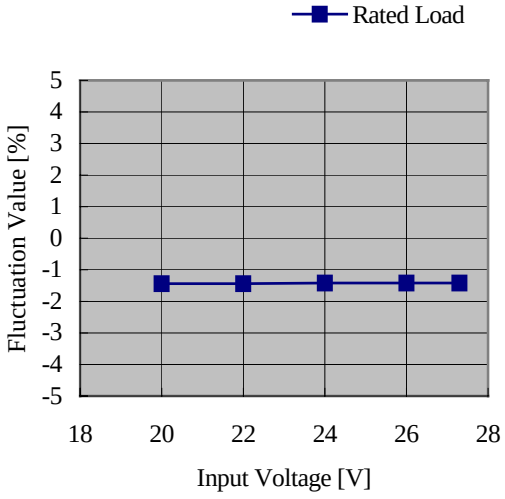
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 90	4.930	-1.40
100	4.930	-1.40
132	4.930	-1.40
180	4.929	-1.42
240	4.929	-1.42
264	4.929	-1.42

at Back up by Battery

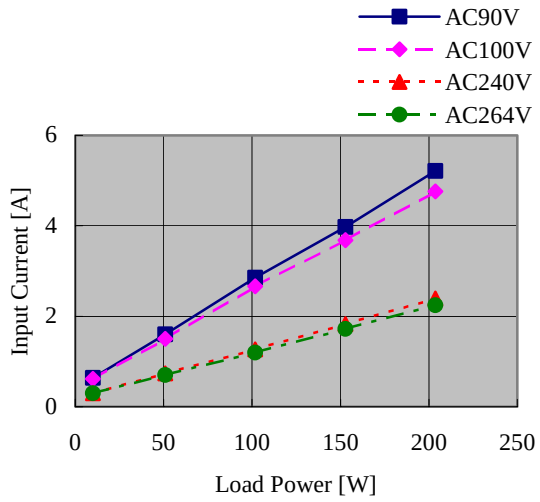


at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	4.928	-1.44
24	4.929	-1.42
27.3	4.929	-1.42

Model	aNSP3-250P-S20
Item	Input Current (by Load Power)

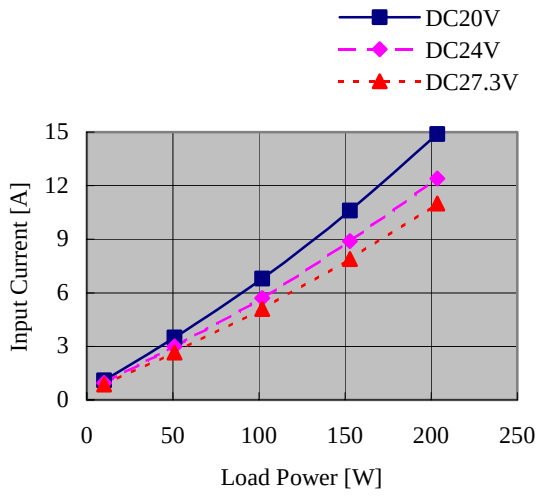
at AC Input



at AC Input

Load Power [W]	Input Current [A rms]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	0.64	0.62	0.30	0.30
50.96	1.60	1.51	0.73	0.70
101.81	2.86	2.67	1.27	1.20
152.77	3.97	3.68	1.83	1.72
203.62	5.22	4.76	2.39	2.24

at Back up by Battery

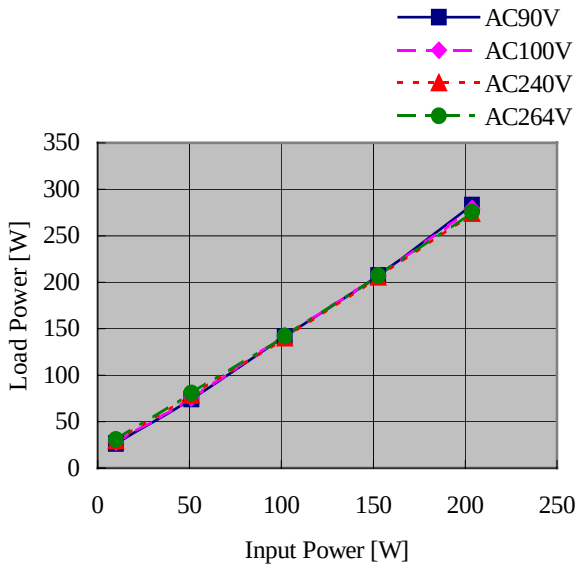


at Back up by Battery

Load Power [W]	Input Current [A]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	1.10	0.95	0.86
50.96	3.50	3.00	2.65
101.81	6.80	5.70	5.10
152.77	10.60	8.90	7.90
203.62	14.90	12.40	11.00

Model	aNSP3-250P-S20
Item	Input Power (by Load Power)

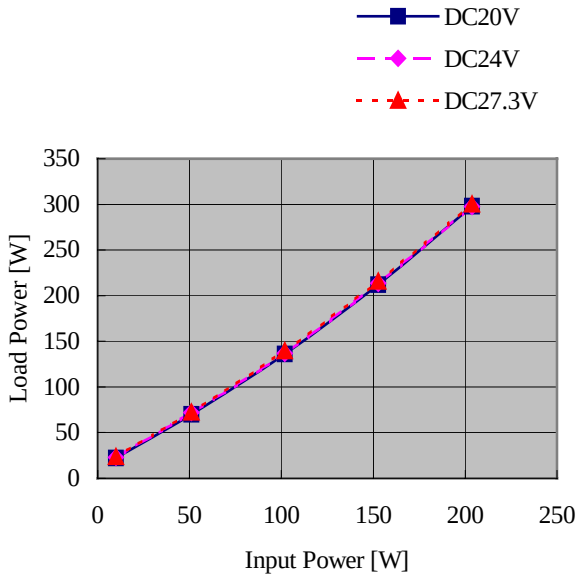
at AC Input



at AC Input

Load Power [W]	Input Power [W]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	26.60	27.79	29.32	30.82
50.96	74.13	75.45	78.44	80.72
101.81	141.64	142.33	139.96	142.09
152.77	207.21	206.75	205.49	207.20
203.62	282.92	279.42	273.98	275.27

at Back up by Battery

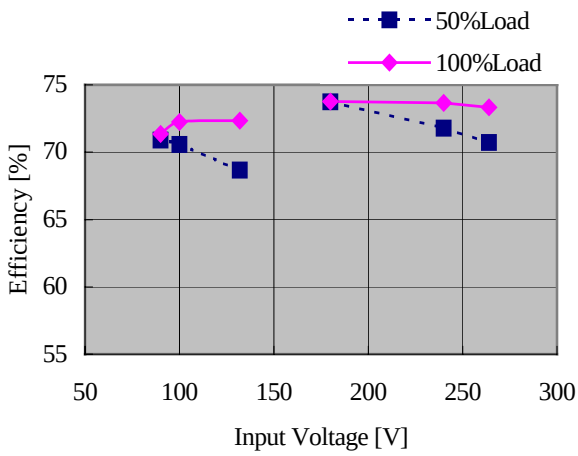


at Back up by Battery

Load Power [W]	Input Power [W]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	22.00	22.80	23.48
50.96	70.00	72.00	72.35
101.81	136.00	136.80	139.23
152.77	212.00	213.60	215.67
203.62	298.00	297.60	300.30

Model	aNSP3-250P-S20
Item	Efficiency (by Input Voltage)

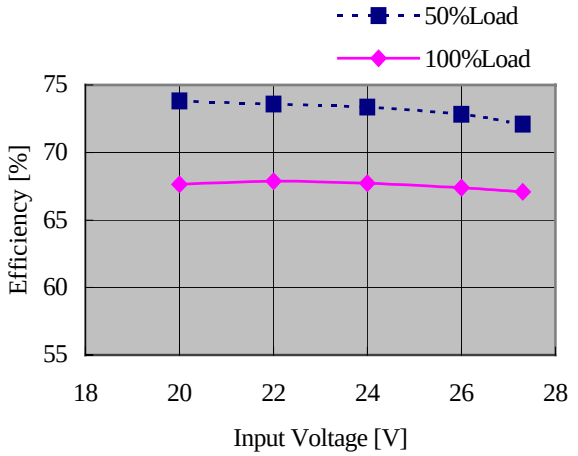
at AC Input



at AC Input

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
90	70.91	71.36
100	70.58	72.25
240	71.78	73.67
264	70.71	73.32

at Back up by Battery

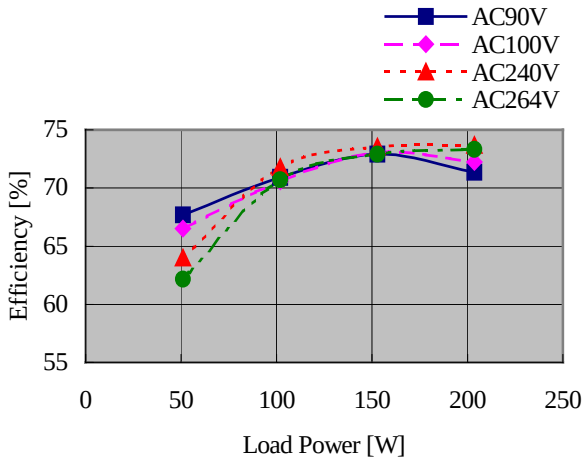


at Back up by Battery

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
20	73.80	67.64
24	73.37	67.72
27.3	72.09	67.10

Model	aNSP3-250P-S20
Item	Efficiency (by Load Power)

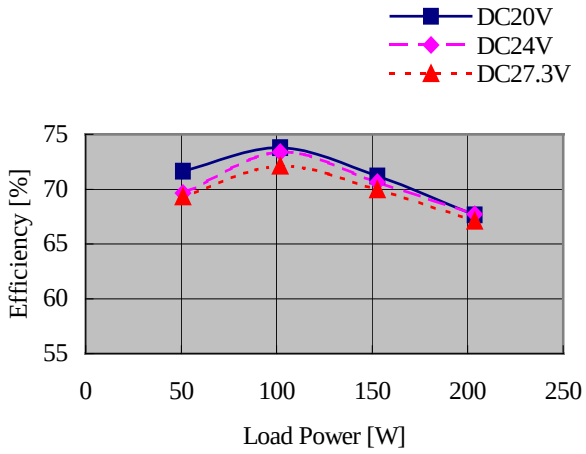
at AC Input



at AC Input

Load Power [W]	Efficiency [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
50.96	67.68	66.50	63.97	62.17
101.81	70.91	70.58	71.78	70.71
152.77	72.90	73.08	73.53	72.93
203.62	71.36	72.25	73.67	73.32

at Back up by Battery

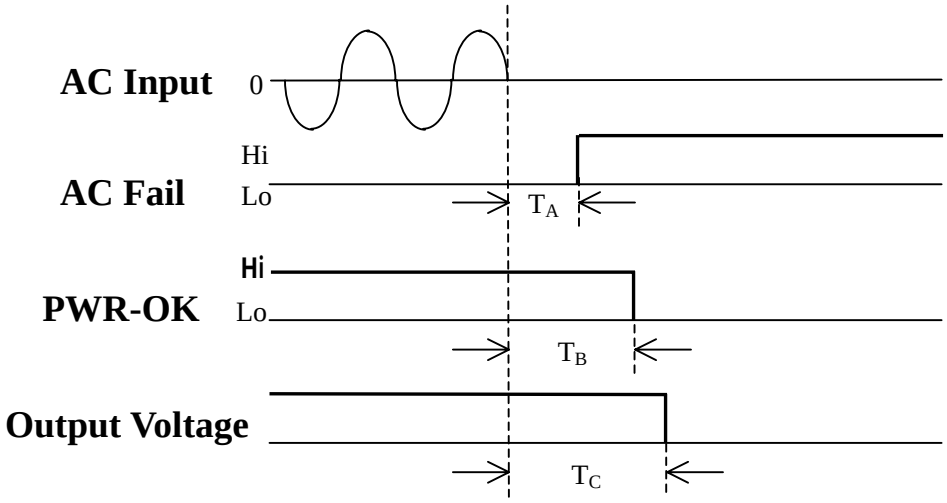


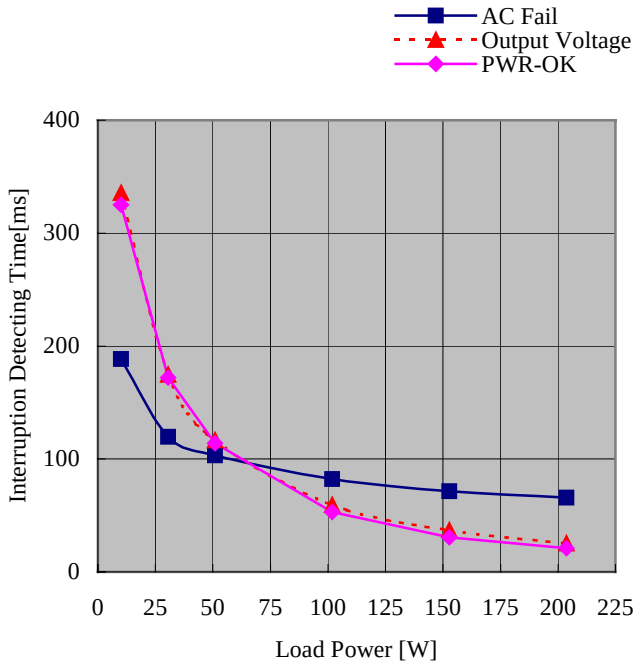
at Back up by Battery

Load Power [W]	Efficiency [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
50.96	71.63	69.64	69.31
101.81	73.80	73.37	72.09
152.77	71.20	70.64	69.97
203.62	67.64	67.72	67.10

Model	aNSP3-250P-S20	
Item	Instantaneous Interruption Compensation (by Load Power)	

at AC Input Only (90V / 100V / 240V / 264V)



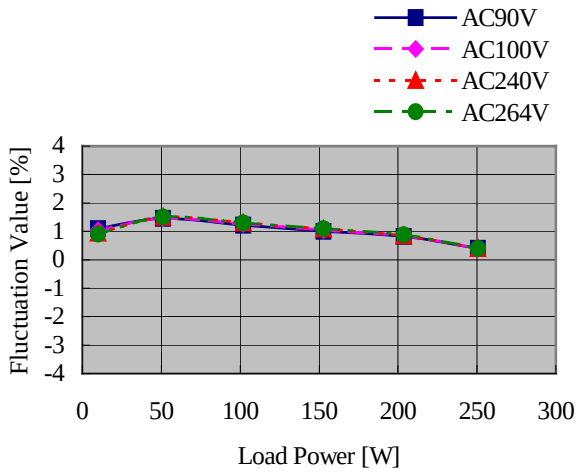


Load Power [W]	Interruption Detecting Time (ms)		
	AC Fail T_A	PWR-OK T_B	DC Output T_C
10	188.40	325.30	335.60
30.59	119.60	171.94	174.55
50.96	103.20	114.09	116.63
101.81	82.20	53.01	59.31
152.77	71.40	30.52	36.83
203.62	65.80	20.96	25.26

Model	aNSP3-250P-S20
Item	Load Regulation

V1：5V 14A

at AC Input



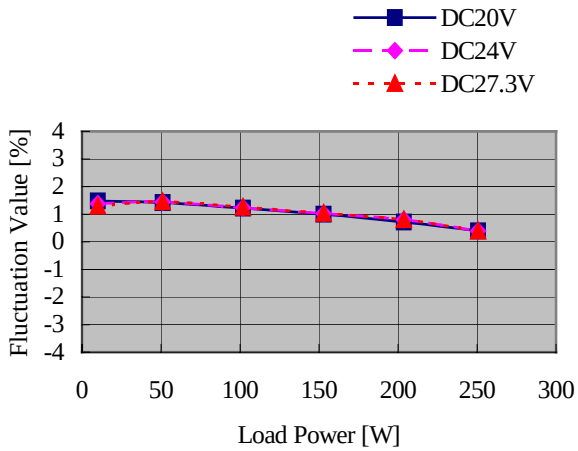
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	1.10	1.04	0.94	0.90
50.96	1.46	1.46	1.50	1.50
101.81	1.22	1.26	1.30	1.30
152.77	1.00	1.04	1.08	1.10
203.62	0.82	0.84	0.84	0.88
250.53	0.40	0.40	0.40	0.40

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.53	25	9.1	6.2	0.3	0.8	2

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	1.48	1.38	1.30
50.96	1.42	1.44	1.46
101.81	1.22	1.24	1.26
152.77	1.00	1.02	1.04
203.62	0.72	0.80	0.80
250.53	0.40	0.40	0.40

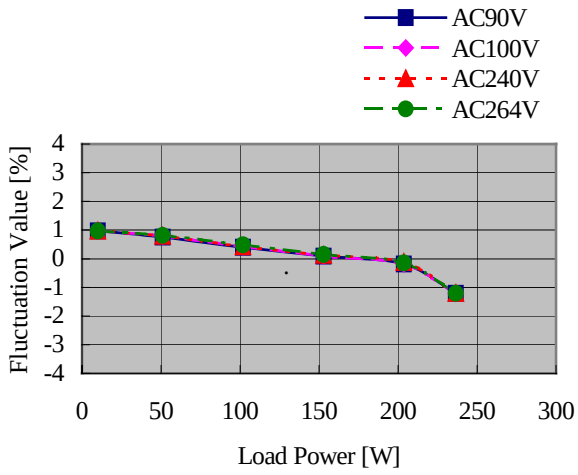
Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.53	25	9.1	6.2	0.3	0.8	2

Model	aNSP3-250P-S20
Item	Load Regulation

V2：3.3V 9.4A

at AC Input



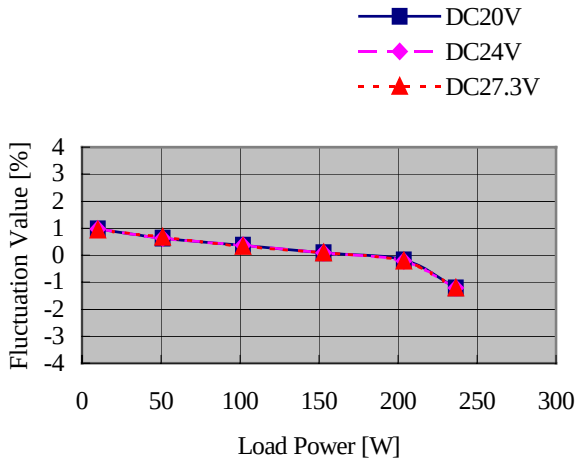
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	0.97	0.97	0.97	0.97
50.96	0.76	0.79	0.79	0.79
101.81	0.39	0.42	0.42	0.48
152.77	0.09	0.09	0.12	0.15
203.62	-0.18	-0.18	-0.12	-0.15
236.5	-1.21	-1.21	-1.21	-1.21

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
236.5	15	20	6.2	0.3	0.8	2

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	0.97	0.97	0.94
50.96	0.64	0.64	0.67
101.81	0.36	0.36	0.33
152.77	0.09	0.09	0.09
203.62	-0.18	-0.21	-0.21
236.5	-1.21	-1.21	-1.21

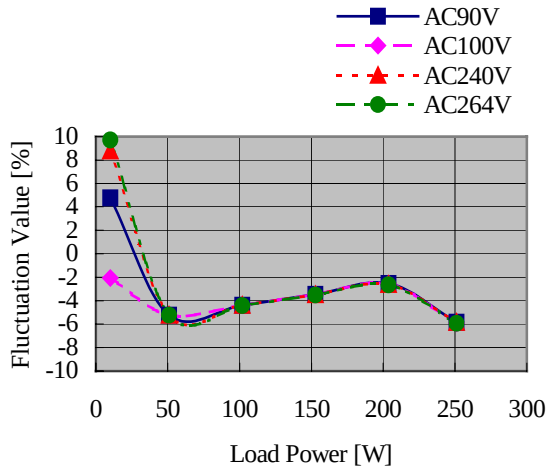
Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
236.5	15	20	6.2	0.3	0.8	2

Model	aNSP3-250P-S20
Item	Load Regulation

V3：12V 7A

at AC Input



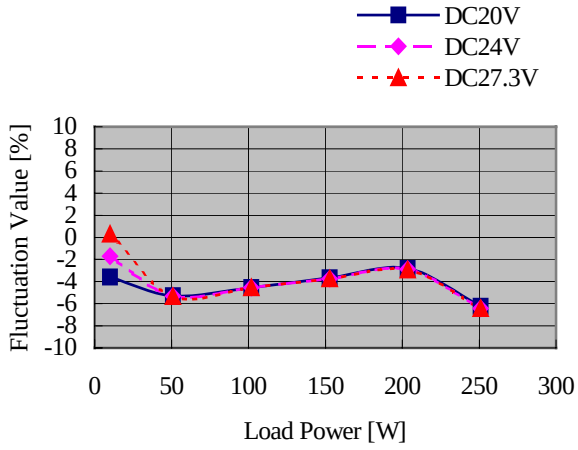
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	4.76	-2.08	8.78	9.72
50.96	-5.24	-5.23	-5.23	-5.23
101.81	-4.40	-4.40	-4.40	-4.41
152.77	-3.47	-3.47	-3.49	-3.51
203.62	-2.52	-2.55	-2.63	-2.64
250.97	-5.83	-5.92	-5.83	-5.92

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.97	8.9	8.9	13	0.3	0.8	2

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	-3.59	-1.73	0.29
50.96	-5.30	-5.32	-5.33
101.81	-4.53	-4.55	-4.53
152.77	-3.67	-3.75	-3.76
203.62	-2.83	-2.89	-2.96
250.97	-6.25	-6.42	-.642

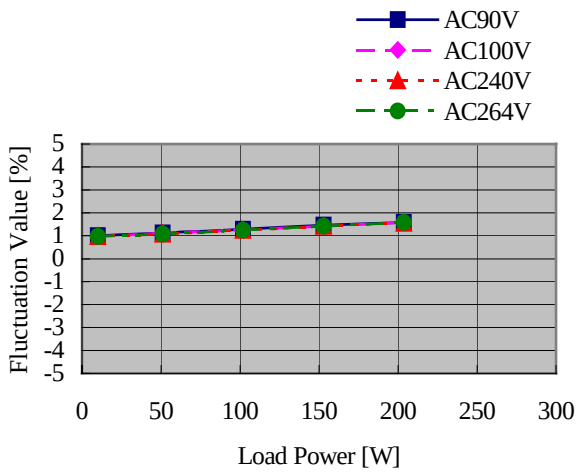
Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.97	8.9	8.9	13	0.3	0.8	2

Model	aNSP3-250P-S20
Item	Load Regulation

V4:-5V 0.3A

at AC Input



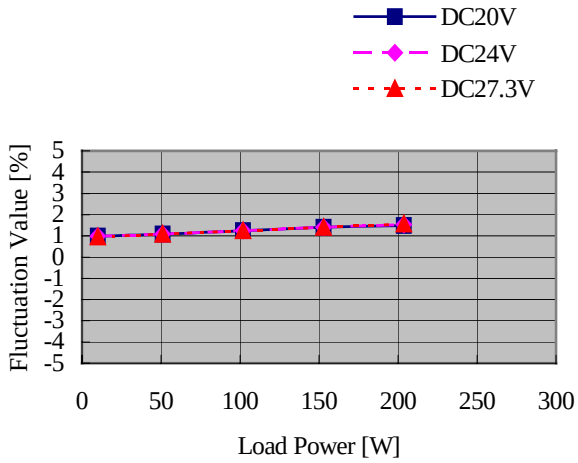
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	1.00	0.98	0.98	0.98
50.96	1.12	1.10	1.08	1.08
101.81	1.28	1.26	1.24	1.24
152.77	1.46	1.42	1.42	1.42
203.62	1.58	1.58	1.56	1.58

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	0.98	0.98	0.98
50.96	1.08	1.08	1.08
101.81	1.24	1.24	1.24
152.77	1.40	1.40	1.40
203.62	1.48	1.54	1.56

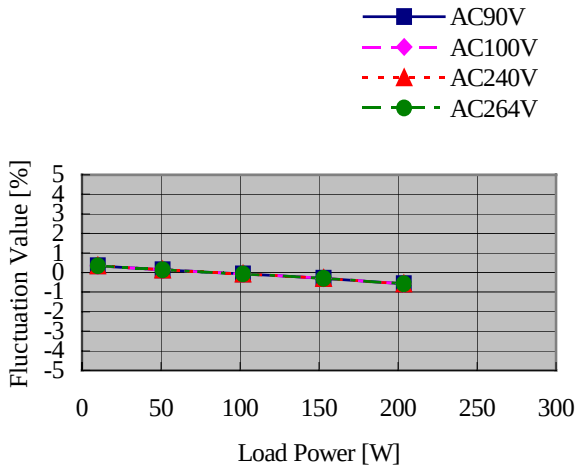
Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5

Model	aNSP3-250P-S20
Item	Load Regulation

V5：-12V 0.8A

at AC Input



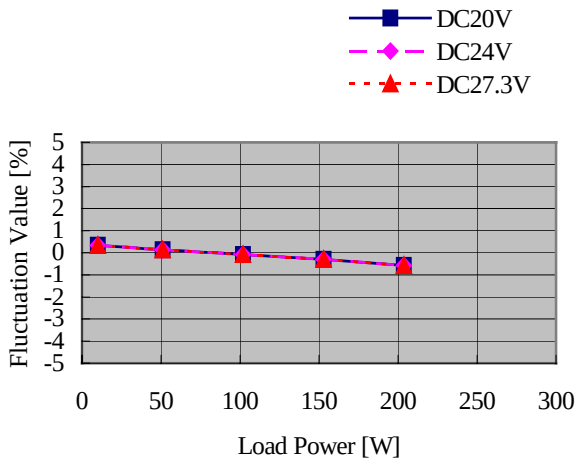
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	0.34	0.34	0.34	0.34
50.96	0.13	0.13	0.13	0.13
101.81	-0.07	-0.07	-0.07	-0.07
152.77	-0.29	-0.30	-0.30	-0.30
203.62	-0.57	-0.57	-0.57	-0.57

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	0.34	0.34	0.34
50.96	0.13	0.13	0.13
101.81	-0.08	-0.08	-0.08
152.77	-0.30	-0.30	-0.30
203.62	-0.58	-0.57	-0.57

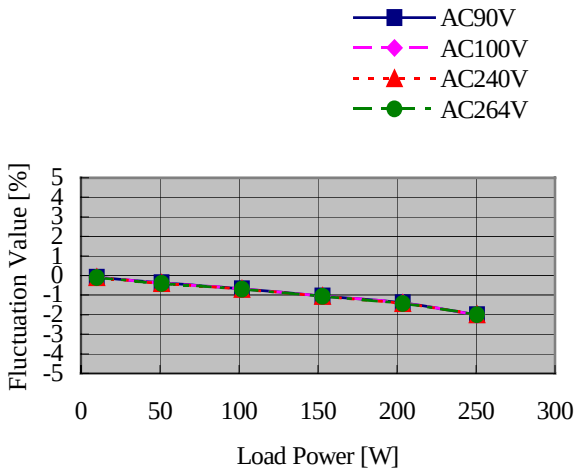
Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5

Model	aNSP3-250P-S20
Item	Load Regulation

V6¦5Vs 1.5A

at AC Input



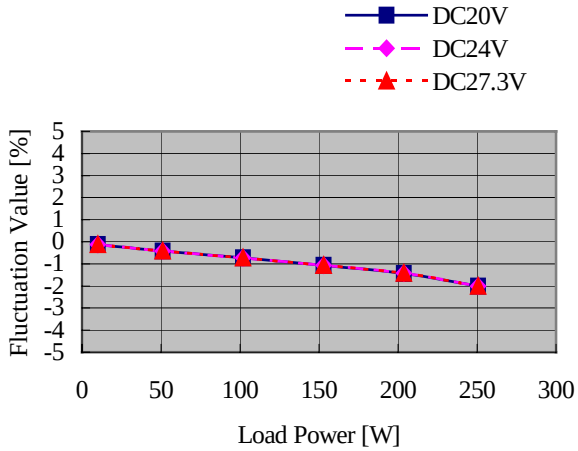
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
10	-0.08	-0.08	-0.10	-0.10
50.96	-0.36	-0.38	-0.40	-0.40
101.81	-0.68	-0.68	-0.70	-0.70
152.77	-1.04	-1.04	-1.06	-1.06
203.62	-1.40	-1.40	-1.42	-1.42
250.53	-2.00	-2.00	-2.00	-2.00

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.53	25	9.1	6.2	0.3	0.8	2

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27.3V
10	-0.12	-0.12	-0.12
50.96	-0.42	-0.42	-0.42
101.81	-0.72	-0.72	-0.72
152.77	-1.06	-1.06	-1.06
203.62	-1.44	-1.42	-1.42
250.53	-2.00	-2.00	-2.00

Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
10	2	0	0	0	0	0
50.96	3.5	2.35	1.75	0.08	0.2	0.38
101.81	7	4.7	3.5	0.15	0.4	0.75
152.77	10.5	7.05	5.25	0.23	0.6	1.13
203.62	14	9.4	7	0.3	0.8	1.5
250.53	25	9.1	6.2	0.3	0.8	2

Model	aNSP3-250P-S20	
Item	Ripple / Noise Voltage Test	

		V1	5V	V2	3.3V	V3	12V
Temperature	Input Voltage	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)
-5℃	AC 90 V	34	56	10	40	100	120
	100 V	32	54	10	40	100	110
	132 V	32	54	12	48	90	100
	180 V	34	58	10	43	106	114
	240 V	30	50	12	50	96	105
	264 V	32	54	12	50	90	105
25℃	AC 90 V	30	48	7	30	100	115
	100 V	28	42	8	28	90	100
	132 V	28	48	10	40	80	100
	180 V	30	48	8	30	100	110
	240 V	28	48	10	44	90	95
	264 V	30	48	10	40	90	100
55℃	AC 90 V	28	60	8	46	90	100
	100 V	26	52	8	40	90	100
	132 V	24	52	10	48	85	100
	180 V	24	46	8	38	100	100
	240 V	24	46	8	44	85	115
	264 V	24	46	10	44	90	108
Specification		50	100	50	100	150	200
Judgment		Good		Good		Good	

		V4	-5V	V5	-12V	V6	5VS
Temperature	Input Voltage	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)
-5℃	AC 90 V	7	38	7	40	14	44
	100 V	7	38	7	40	14	40
	132 V	7	42	7	48	14	50
	180 V	6	36	7	38	12	46
	240 V	6	44	7	44	12	50
	264 V	6	46	7	44	12	50
25℃	AC 90 V	5	28	5	32	8	30
	100 V	5	30	7	34	8	34
	132 V	7	38	7	38	10	40
	180 V	5	28	7	30	8	36
	240 V	7	42	7	44	8	50
	264 V	7	42	7	40	8	50
55℃	AC 90 V	7	34	7	38	12	45
	100 V	7	34	7	38	7	38
	132 V	7	40	7	44	7	44
	180 V	7	34	8	38	12	38
	240 V	7	38	8	42	7	42
	264 V	7	42	8	44	7	40
Specification		50	100	100	200	50	100
Judgment		Good		Good		Good	

Model	aNSP3-250P-S20	
Item	Ripple / Noise Voltage Test	

		V1	5V	V2	3.3V	V3	12V
Temperature	Input Voltage	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)
-5℃	DC 20 V	14	44	7	40	45	50
	24 V	14	44	7	40	45	50
	27.3 V	16	44	7	40	45	50
25℃	DC 20 V	10	50	7	60	42	35
	24 V	10	50	7	60	42	35
	27.3 V	12	50	7	60	42	35
55℃	DC 20 V	8	30	7	40	40	30
	24 V	10	30	7	40	40	30
	27.3 V	10	30	7	40	40	30
Specification		50	100	50	100	150	200
Judgment		Good		Good		Good	

		V4	-5V	V5	-12V	V6	5VS
Temperature	Input Voltage	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)	Ripple (mV)	Noise (mV)
-5℃	DC 20 V	7	45	6	45	15	50
	24 V	7	45	6	45	15	50
	27.3 V	7	45	6	45	13	50
25℃	DC 20 V	7	35	10	40	10	35
	24 V	8	35	10	40	10	35
	27.3 V	8	35	10	40	10	35
55℃	DC 20 V	7	25	7	30	14	30
	24 V	7	25	8	30	14	30
	27.3 V	8	25	8	30	12	30
Specification		50	100	100	200	50	100
Judgment		Good		Good		Good	

Model	aNSP3-250P-S20	
Item	Over-Current Protection	

Load：Rated Load

Temperature	Input Voltage	V1 5V	V2 3.3V	V3 12V
-5℃	AC 90 V	29.3 A	23.5 A	15.0 A
	100 V	30.0 A	25.0 A	15.4 A
	132 V	35.5 A	31.5 A	18.5 A
	180 V	30.0 A	24.0 A	15.3 A
	240 V	34.5 A	29.0 A	18.0 A
	264 V	37.0 A	33.0 A	19.3 A
	DC 20 V	36.0 A	32.5 A	21.0 A
	24 V	47.0 A	34.0 A	22.0 A
	27.3 V	49.0 A	35.0 A	22.8 A
25℃	AC 90 V	28.6 A	22.7 A	14.5 A
	100 V	29.4 A	24.0 A	15.3 A
	132 V	36.5 A	27.2 A	18.8 A
	180 V	29.0 A	23.5 A	15.0 A
	240 V	34.5 A	28.8 A	18.0 A
	264 V	38.0 A	29.0 A	19.9 A
	DC 20 V	35.0 A	28.6 A	21.0 A
	24 V	43.0 A	28.9 A	22.3 A
	27.3 V	46.0 A	29.6 A	22.3 A
55℃	AC 90 V	27.4 A	21.5 A	14.5 A
	100 V	28.1 A	22.5 A	14.7 A
	132 V	35.0 A	29.5 A	19.0 A
	180 V	28.0 A	22.3 A	14.5 A
	240 V	34.5 A	26.5 A	18.5 A
	264 V	38.5 A	28.0 A	20.6 A
	DC 20 V	35.0 A	23.5 A	19.0 A
	24 V	42.0 A	26.0 A	21.0 A
	27.3 V	47.0 A	27.0 A	22.0 A
Specification		26A or More	21A or More	14A or More
Judgment		Good	Good	Good

Model	aNSP3-250P-S20	
Item	Over-Current Protection	

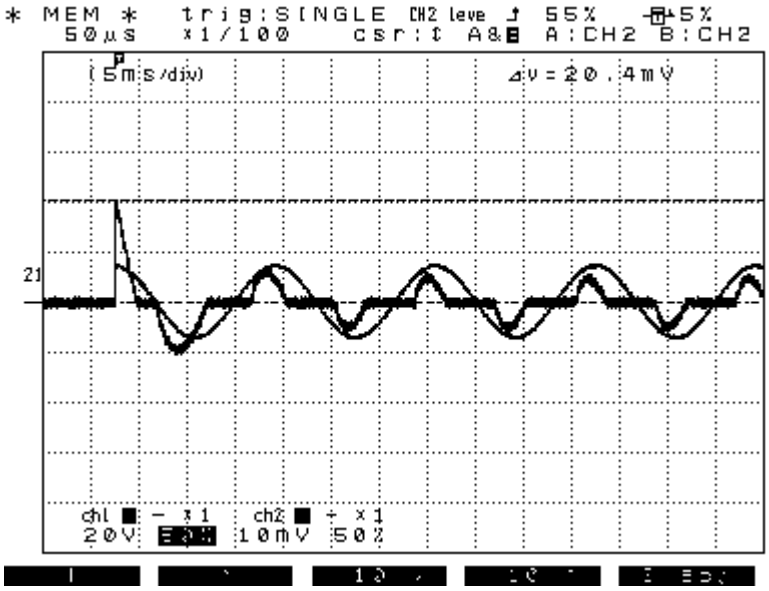
Temperature	Input Voltage	V4 -5V	V5 -12V	V6 5VS
-5℃	AC 90 V	0.63 A	1.30 A	3.00 A
	100 V	0.70 A	1.30 A	3.00 A
	132 V	0.75 A	1.45 A	3.00 A
	180 V	0.75 A	1.30 A	3.10 A
	240 V	0.77 A	1.35 A	3.10 A
	264 V	0.80 A	1.45 A	3.10 A
	DC 20 V	0.80 A	1.10 A	3.10 A
	24 V	0.82 A	1.10 A	3.10 A
	27.3 V	0.82 A	1.10 A	3.10 A
25℃	AC 90 V	0.60 A	1.30 A	2.40 A
	100 V	0.60 A	1.30 A	2.40 A
	132 V	0.60 A	1.40 A	2.40 A
	180 V	0.65 A	1.40 A	2.70 A
	240 V	0.66 A	1.42 A	2.70 A
	264 V	0.65 A	1.45 A	2.70 A
	DC 20 V	0.70 A	1.05 A	2.60 A
	24 V	0.70 A	1.10 A	2.60 A
	27.3 V	0.70 A	1.10 A	2.60 A
55℃	AC 90 V	0.57 A	1.25 A	2.40 A
	100 V	0.57 A	1.30 A	2.40 A
	132 V	0.57 A	1.42 A	2.50 A
	180 V	0.60 A	1.25 A	2.40 A
	240 V	0.60 A	1.20 A	2.40 A
	264 V	0.60 A	1.35 A	2.40 A
	DC 20 V	0.60 A	1.00 A	2.40 A
	24 V	0.60 A	1.10 A	2.40 A
	27.3 V	0.60 A	1.10 A	2.40 A
Specification		0.33A or More	0.84A or More	2.1A or More
Judgment		Good	Good	Good

Model	aNSP3-250P-S20	
Item	Over-Voltage Protection	

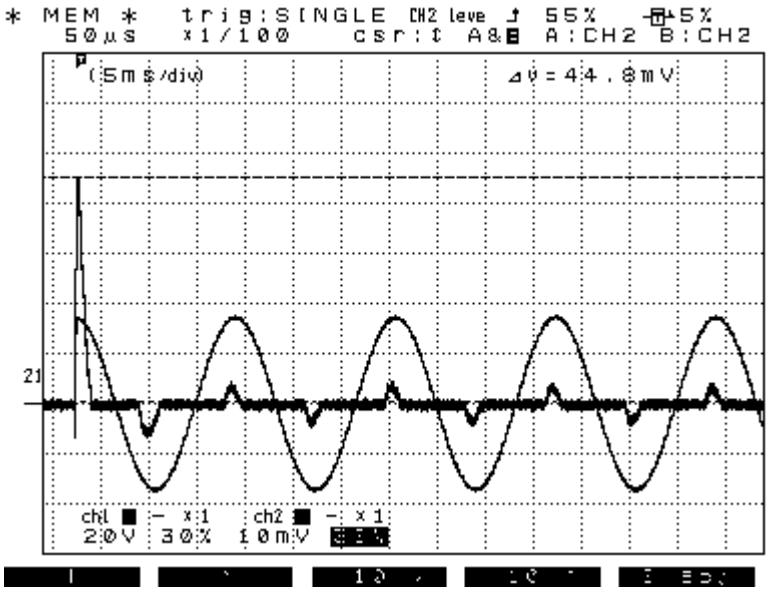
Temperature	Input Voltage	V1：5V	V2：3.3V	V3：12V
-5℃	AC100V	6.75V	4.50V	15.00V
	AC240V	6.60V	4.45V	15.00V
	DC24V	6.70V	4.47V	15.00V
25℃	AC100V	6.50V	4.15V	15.05V
	AC240V	6.50V	4.18V	15.06V
	DC24V	6.50V	4.18V	15.05V
55℃	AC100V	6.40V	4.00V	15.10V
	AC240V	6.40V	4.02V	15.07V
	DC24V	6.35V	4.00V	15.10V
Specification		5.6～7.0V	3.8～4.8V	13.4～15.6V
Judgment		Good	Good	Good

Model	aNSP3-250P-S20	
Item	Inrush Current	

Inrush Current Wave



Wave No.1	
CH1	Measuring Point：Input Voltage
	Range 200V/DIV
CH2	Measuring Point：Input Current
	Range 20A/DIV
Time Line	5ms/DIV
Conditions	Input：AC100V 60Hz Load：Rated Load Temperature：25℃
Note： Inrush Current Value：40.8A	

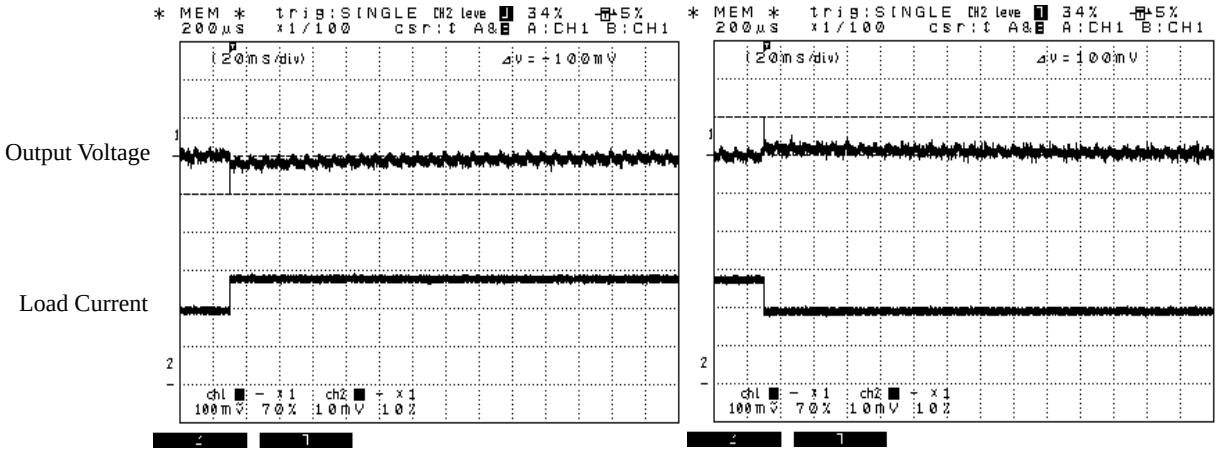


Wave No.2	
CH1	Measuring Point：Input Voltage
	Range 200V/DIV
CH2	Measuring Point：Input Current
	Range 20A/DIV
Time Line	5ms/DIV
Conditions	Input：AC240V 60Hz Load：Rated Load Temperature：25℃
Note： Inrush Current Value：89.6A	

Model	aNSP3-250P-S20	
Item	Dynamic Load Response	

V1：+5V 15A

70% Load⇔ 100% Load

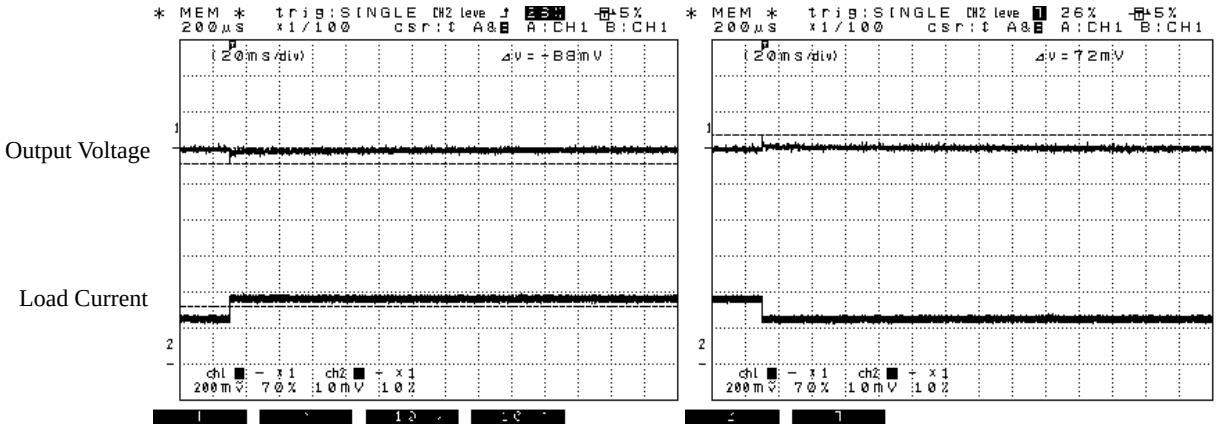


Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgment
70%Load→100% Load	– mV -100mV	±250mV	Good
100% Load→70% Load	100mV – mV		Good

Model	aNSP3-250P-S20	
Item	Dynamic Load Response	

V2：+3.3V 9.4A

70% Load⇔ 100% Load

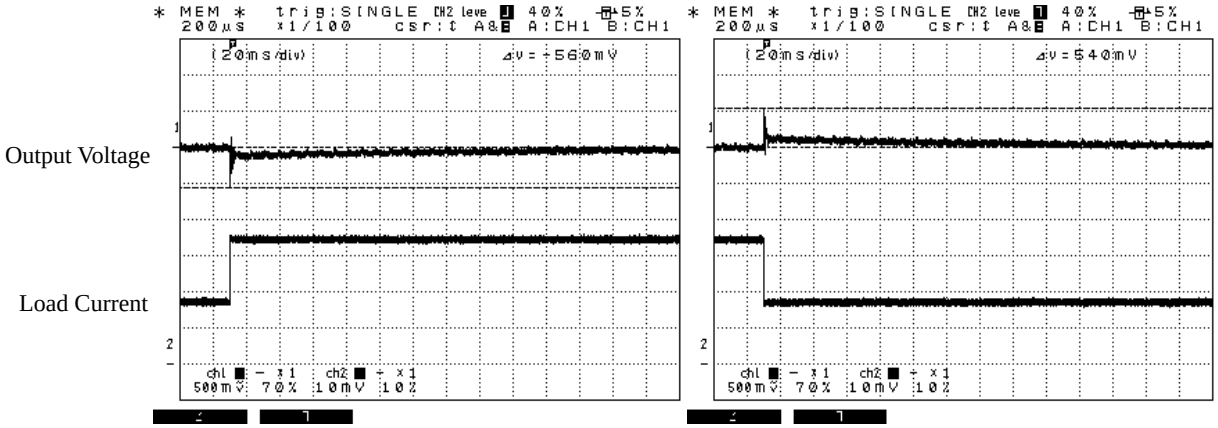


Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgment
70%Load→100% Load	－ mV -88mV	±165mV	Good
100% Load→70% Load	72mV － mV		Good

Model	aNSP3-250P-S20	
Item	Dynamic Load Response	

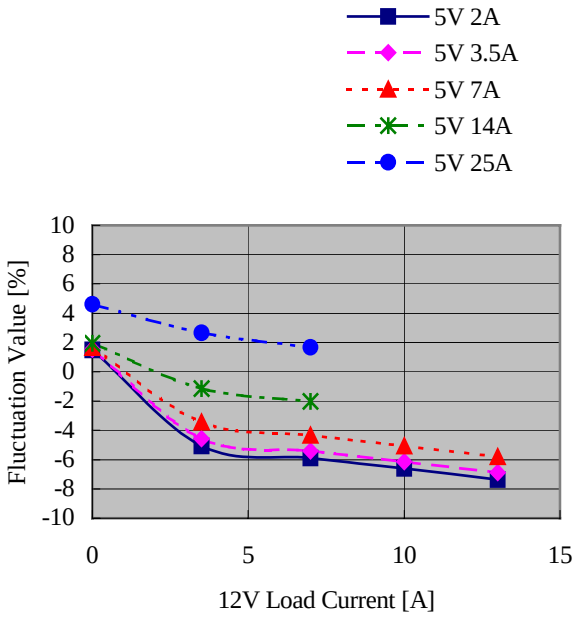
V3：+12V 7A

50% Load ⇔ 100% Load



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgment
50%Load→100% Load	140mV -560mV	±600mV	Good
100% Load→50% Load	540mV -100mV		Good

Model	aNSP3-250P-S20
Item	12V Cross Regulation

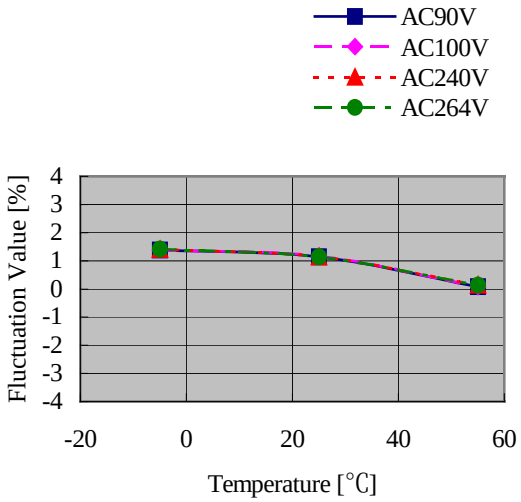


12V Load Current	12V Voltage Value [V]				
	5V 2A	5V 3.5A	5V 7A	5V 14A	5V 15A
0A	12.178	12.185	12.197	12.234	12.553
3.5A	11.393	11.452	11.587	11.863	12.320
7A	11.293	11.350	11.481	11.757	12.200
10A	11.206	11.262	11.393	-	-
13A	11.116	11.173	11..304	-	-

12V Load Current	Fluctuation Value [%]				
	5V 1.5A	5V 3.75A	5V 7.5A	5V 14A	5V 15A
0A	1.48	1.54	1.64	1.95	4.61
3.5A	-5.06	-4.57	-3.44	-1.14	2.67
7A	-5.89	-5.42	-4.33	-2.03	1.67
10A	-6.62	-6.15	-5.06	-	-
13A	-7.37	-6.89	-5.80	-	-

Model	aNSP3-250P-S20
Item	Ambient Temperature Drift

V1：5V 14A

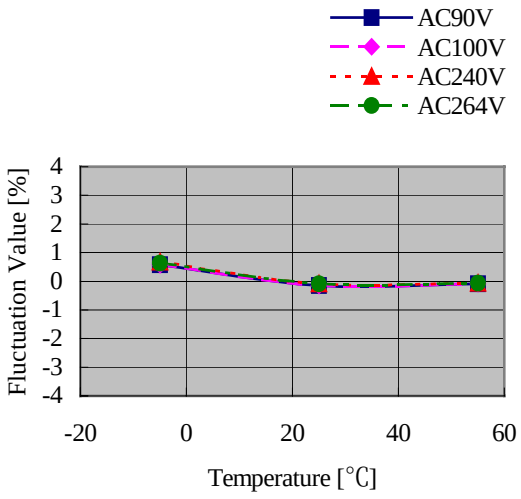


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	5.069	5.069	5.070	5.071
25	5.057	5.058	5.057	5.057
55	5.004	5.004	5.007	5.007

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	1.38	1.38	1.40	1.42
25	1.14	1.16	1.14	1.14
55	0.08	0.08	0.14	0.14

V2：3.3V 9.4A



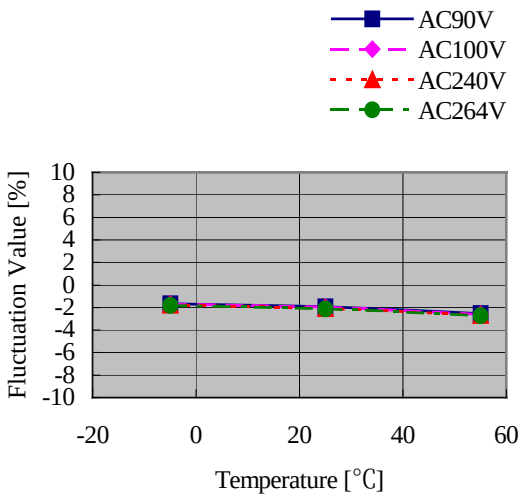
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	3.319	3.319	3.322	3.321
25	3.295	3.295	3.297	3.297
55	3.297	3.297	3.298	3.298

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	0.58	0.58	0.67	0.64
25	-0.15	-0.15	-0.09	-0.09
55	-0.09	-0.09	-0.06	-0.06

Model	aNSP3-250P-S20
Item	Ambient Temperature Drift

V3：12V 7A

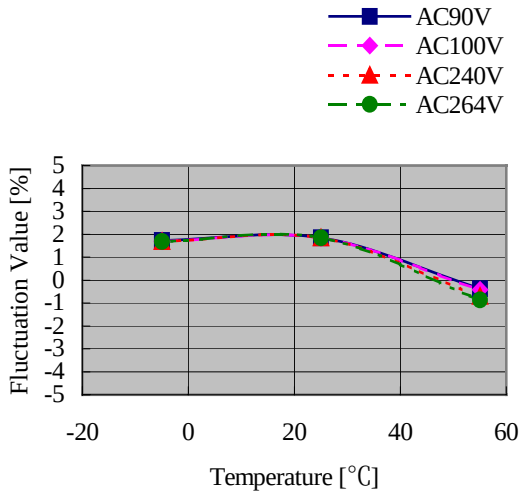


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	11.799	11.794	11.784	11.781
25	11.765	11.762	11.748	11.743
55	11.694	11.687	11.677	11.673

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-1.68	-1.72	-1.80	-1.83
25	-1.96	-1.98	-2.10	-2.14
55	-2.55	-2.61	-2.69	-2.72

V4：-5V 0.3A



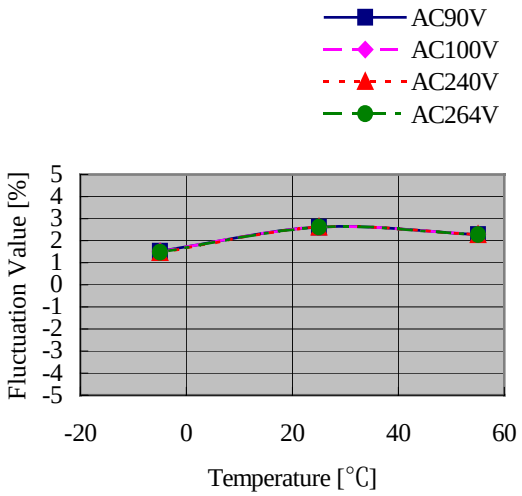
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-5.086	-5.085	-5.084	-5.084
25	-5.092	-5.092	-5.092	-5.092
55	-4.981	-4.979	-4.965	-4.957

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	1.72	1.70	1.68	1.68
25	1.84	1.84	1.84	1.84
55	-0.38	-0.42	-0.70	-0.86

Model	aNSP3-250P-S20
Item	Ambient Temperature Drift

V5：-12V 0.8A

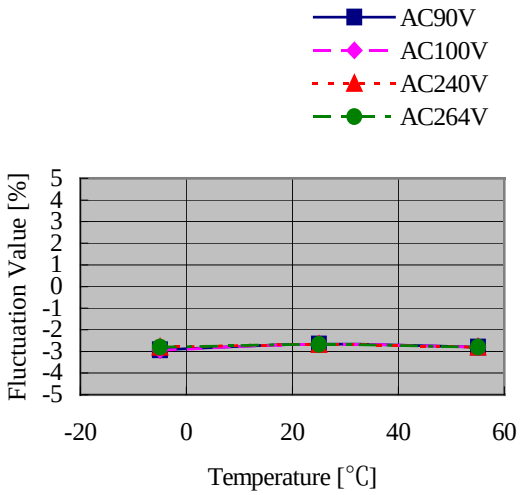


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-12.183	-12.182	-12.176	-12.177
25	-12.313	-12.313	-12.313	-12.313
55	-12.273	-12.275	-12.274	-12.274

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	1.53	1.52	1.47	1.48
25	2.61	2.61	2.61	2.61
55	2.28	2.29	2.28	2.28

V6：5Vs 1.5A



at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	4.854	4.853	4.860	4.860
25	4.867	4.867	4.866	4.866
55	4.860	4.860	4.860	4.860

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC90V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-2.92	-2.94	-2.80	-2.80
25	-2.66	-2.66	-2.68	-2.68
55	-2.80	-2.80	-2.80	-2.80

Model	aNSP3-250P-S20	
Item	Leakage Current Test	

Temperature Room Temperature
Input AC100V、240V
Load Rated Load 、Minimum Load

Input Voltage (V)	at Rated Load (mA)	at Minimum Load (mA)
100V	0.41	0.42
240V	0.74	0.75

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

Model	aNSP3-250P-S20	
Item	Line Noise Tolerance	

Temperature	Room Temperature
Input	AC100V,60Hz
Load	Rated Load
Noise Impressed Voltage	±2000V
Repeat Cycle	10～35ms
Pulse Width	100,1000ns

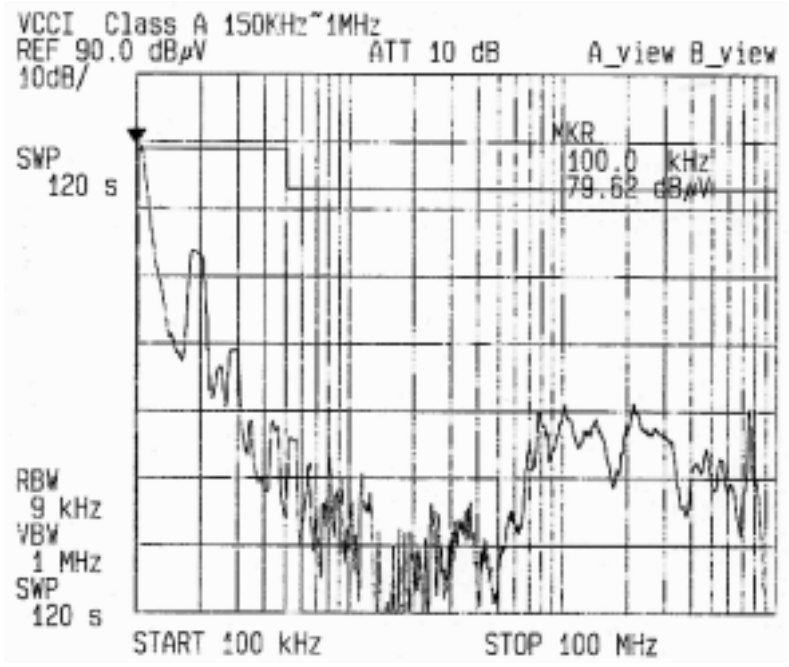
Normal	Pulse Impressed Mode			
	100ns		1000ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common R Phase	Pulse Impressed Mode			
	100ns		1000ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common S Phase	Pulse Impressed Mode			
	100ns		1000ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○

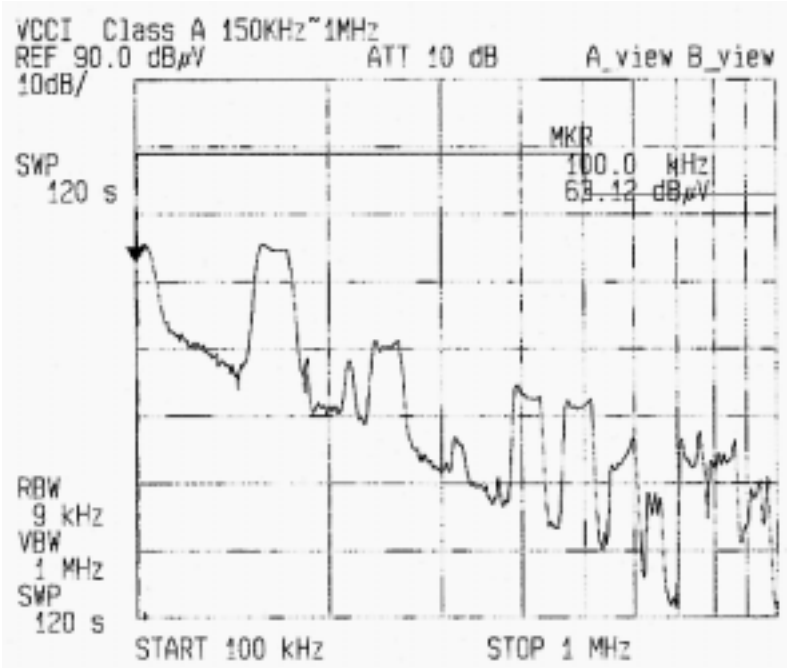
○→No Trouble
△→Faulty Operation of Over-Voltage and so on
×→Power Supply Breakdown

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

Model	aNSP3-250P-S20	
Item	Conduction Emission	

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

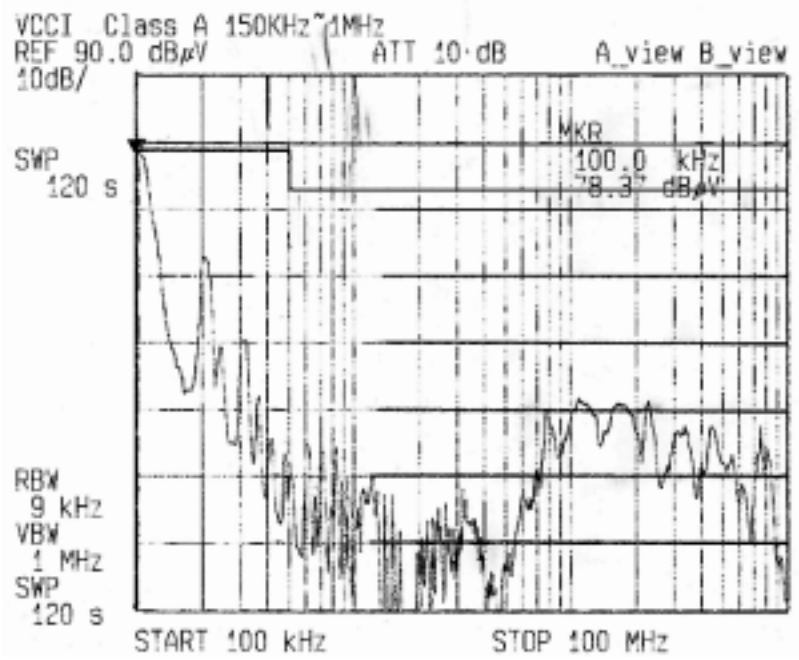




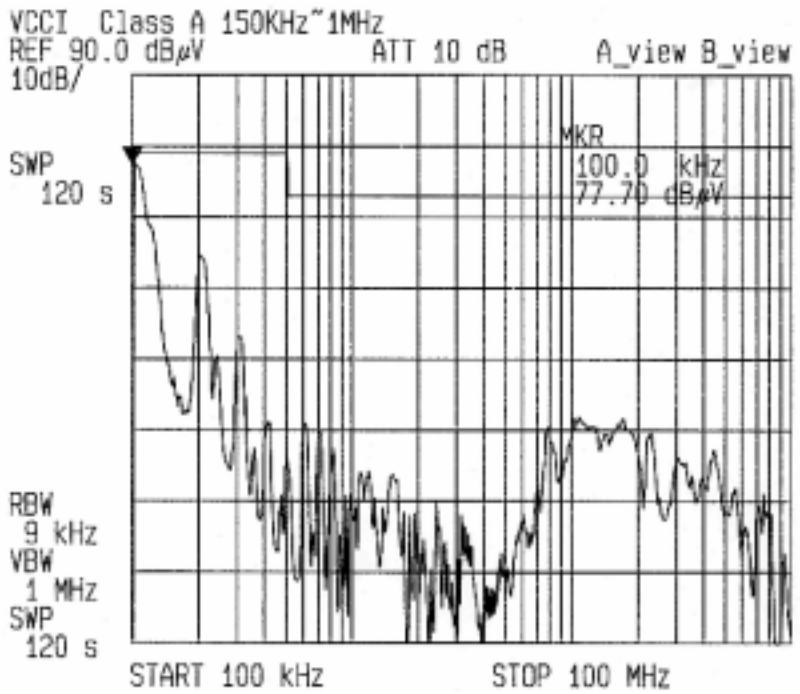
Model	aNSP3-250P-S20	
Item	Conduction Emission	

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

Phase A

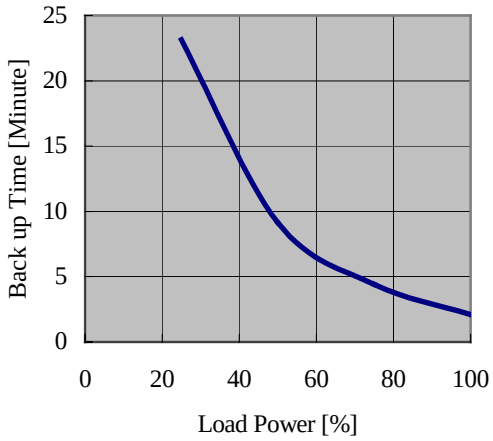


Phase B



Model	aNSP3-250P-S20	
Item	Battery Discharge	

Back up Time

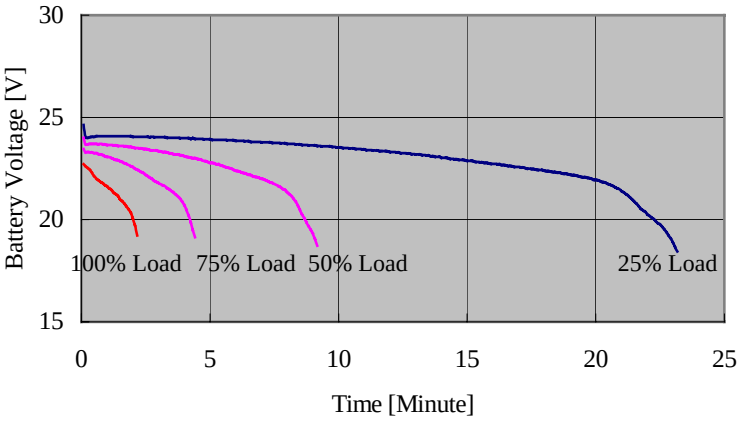


At Room Temperature (25℃)

Load Power [%]	Back up Time [Minute]
25	23.13
50	9.13
75	4.42
100	2.10

※100%Load =203.6W

Battery Voltage



Battery：PS2698L(Lead-Acid Battery)