Nipron

Test Data

cNSP-300P-S20-11

(AC85~264V And DC24V Battery INPUT)

NON-STOP POWER SUPPLY

Approved by : Osami Nakano

Prepared by : Naoki Yamamoto

INPUT	:	AC 85V ~ 264V		
		Battery 24V		
OUTPUT	:	V1: 5V	14A	(Peak 30A)
		V2: 3.3V	9.4A	(Peak 28A)
		V3: 12V	7A	(Peak 15A)
		V4: -5V	0.3A	
		V5: -12V	0.8A	
		V6: 5Vs	1.5A	(Peak 2.5A)

株式会社 ニプロン
Nipron.Co.,Ltd.

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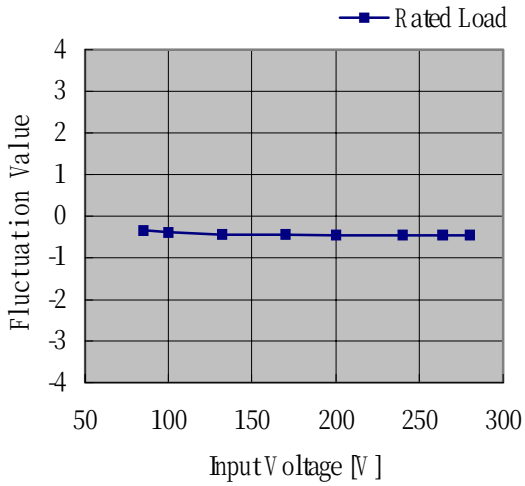
1. **Line Regulation** ‥‥‥

Model	eNSP-300P-S20-11
Item	Line Regulation

V1：5V 14A

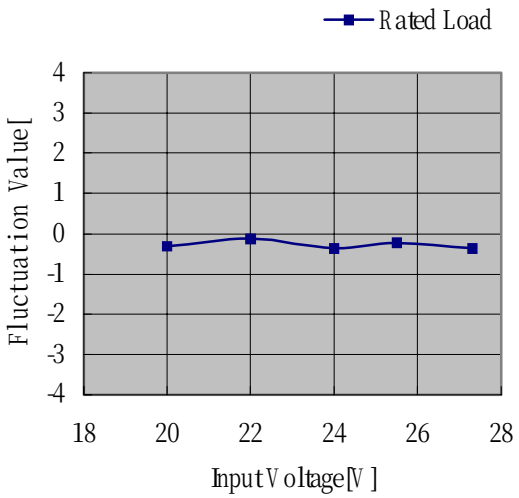
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	4.983	-0.34
100	4.980	-0.40
240	4.977	-0.46
264	4.977	-0.46

at Back up by Battery



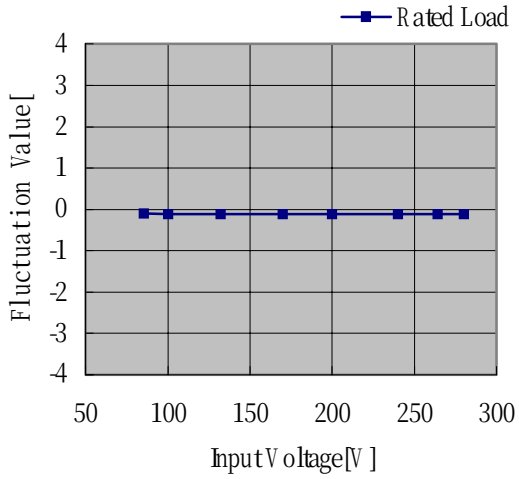
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	4.984	-0.32
24	4.982	-0.36
27	4.982	-0.36

Model	eNSP-300P-S20-11
Item	Line Regulation

V2：3.3V 9.4A

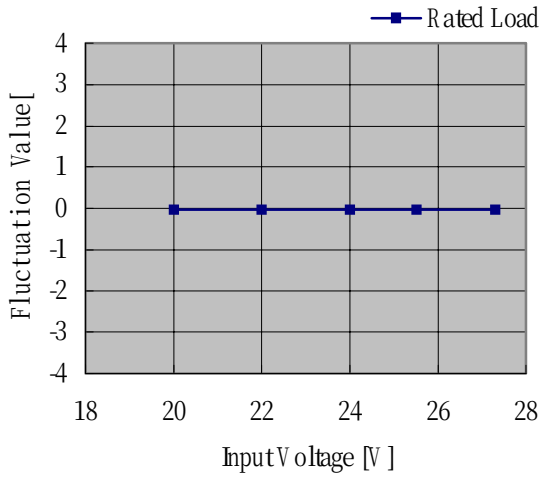
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	3.297	-0.09
100	3.296	-0.12
240	3.296	-0.12
264	3.296	-0.12

at Back up by Battery



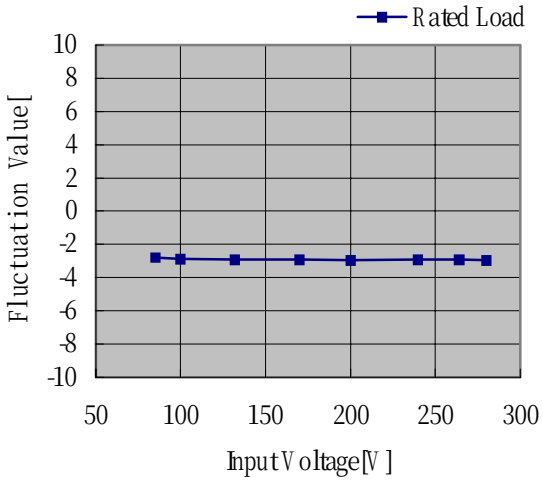
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	3.299	-0.03
24	3.299	-0.03
27	3.299	-0.03

Model	eNSP-300P-S20-11
Item	Line Regulation

V3：12V 7A

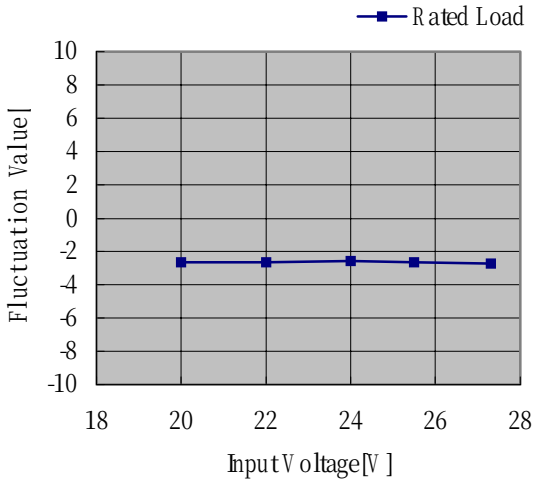
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	11.662	-2.817
100	11.654	-2.883
240	11.647	-2.942
264	11.647	-2.942

at Back up by Battery



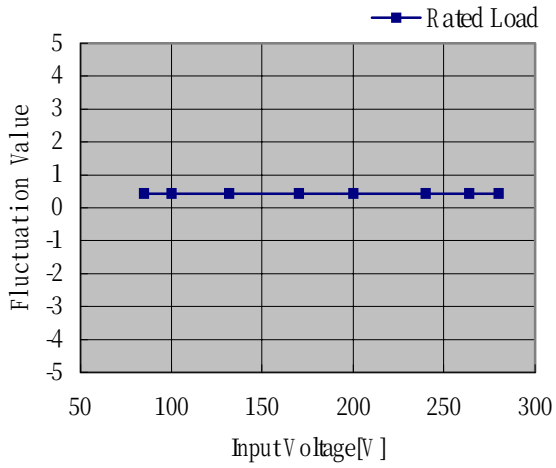
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	11.678	-2.683
24	11.687	-2.608
27	11.672	-2.773

Model	eNSP-300P-S20-11
Item	Line Regulation

V4:-5V 0.3A

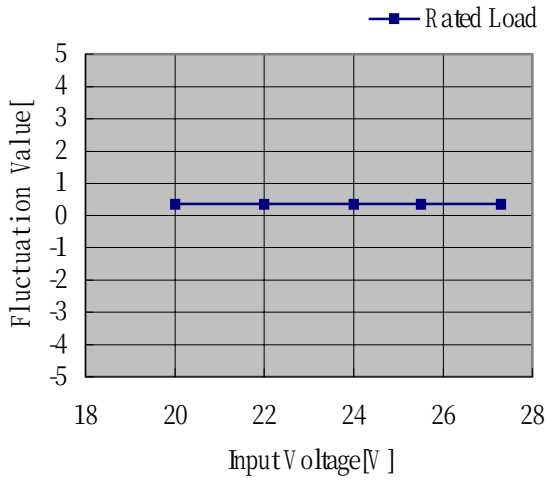
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	-5.022	0.44
100	-5.022	0.44
240	-5.022	0.44
264	-5.022	0.44

at Back up by Battery



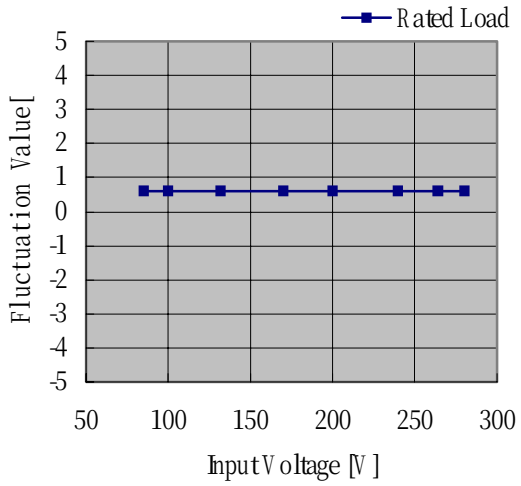
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-5.017	0.34
24	-5.017	0.34
27	-5.017	0.34

Model	eNSP-300P-S20-11
Item	Line Regulation

V5:-12V 0.8A

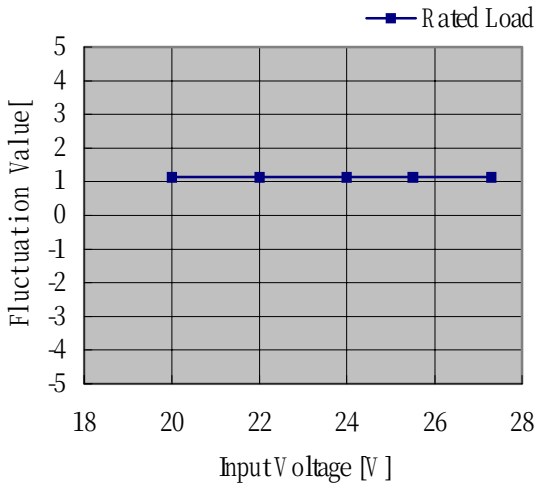
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	-12.072	0.6
100	-12.072	0.6
240	-12.072	0.6
264	-12.072	0.6

at Back up by Battery



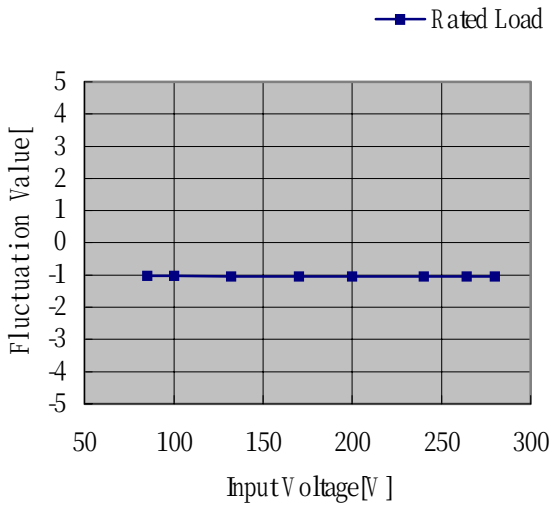
at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	-12.136	1.13
24	-12.136	1.13
27	-12.136	1.13

Model	eNSP-300P-S20-11
Item	Line Regulation

V6：5Vs 1.5A

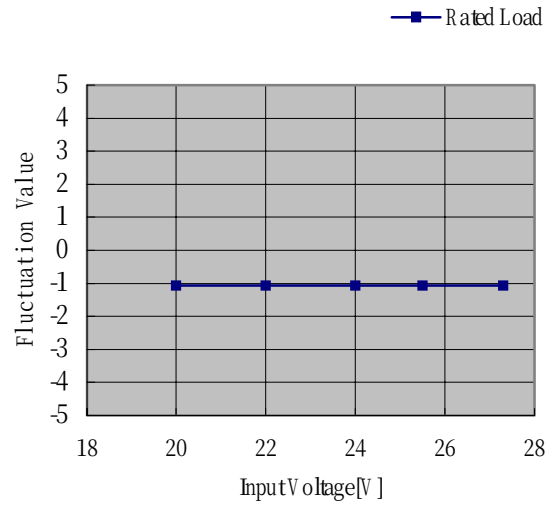
at AC Input



at AC Input

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
AC 85	4.949	-1.02
100	4.949	-1.02
240	4.948	-1.04
264	4.948	-1.04

at Back up by Battery

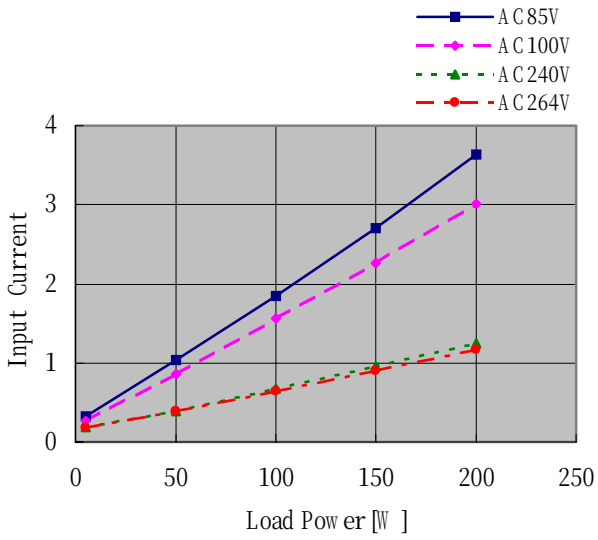


at Back up by Battery

Input Voltage [V]	Output Voltage [V]	Fluctuation Value [%]
DC 20	4.947	-1.06
24	4.947	-1.06
27	4.947	-1.06

Model	eNSP-300P-S20-11
Item	Input Current (by Load Power)

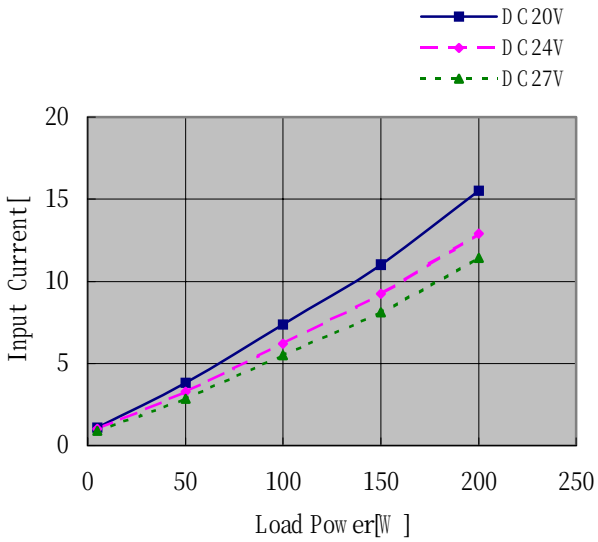
at AC Input



at AC Input

Load Power [W]	Input Current [A rms]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	0.33	0.27	0.19	0.18
50	1.04	0.86	0.39	0.39
100	1.85	1.56	0.68	0.65
150	2.70	2.26	0.95	0.90
200	3.63	3.01	1.25	1.17

at Back up by Battery

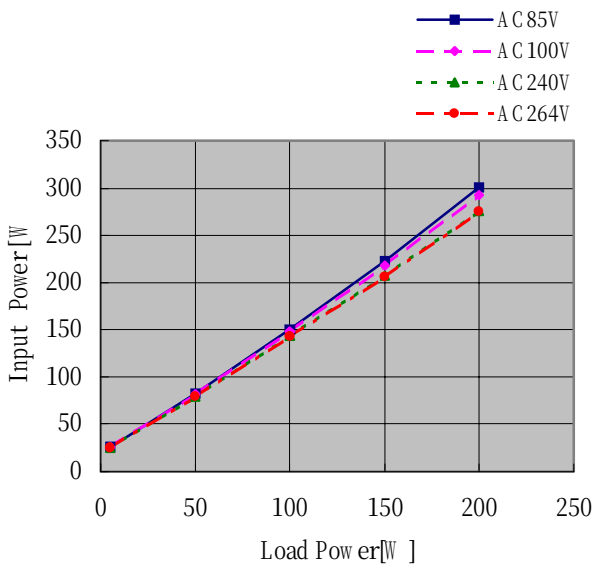


at Back up by Battery

Load Power [W]	Input Current [A]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	1.10	1.00	0.90
50	3.81	3.27	2.86
100	7.40	6.20	5.50
150	11.00	9.24	8.14
200	15.50	12.90	11.40

Model	eNSP-300P-S20-11
Item	Input Power (by Load Power)

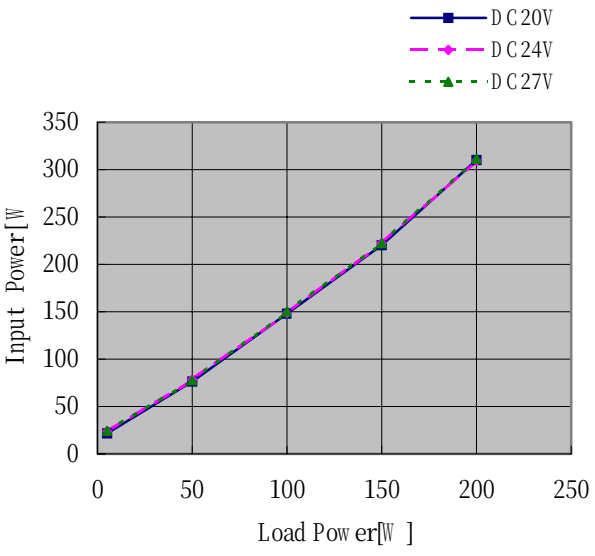
at AC Input



at AC Input

Load Power [W]	Input Power [W]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	26.03	25.67	25.16	25.00
50	82.50	81.78	78.68	78.54
100	150.03	148.36	143.32	142.61
150	222.63	217.99	207.00	205.97
200	301.30	292.95	275.68	275.02

at Back up by Battery

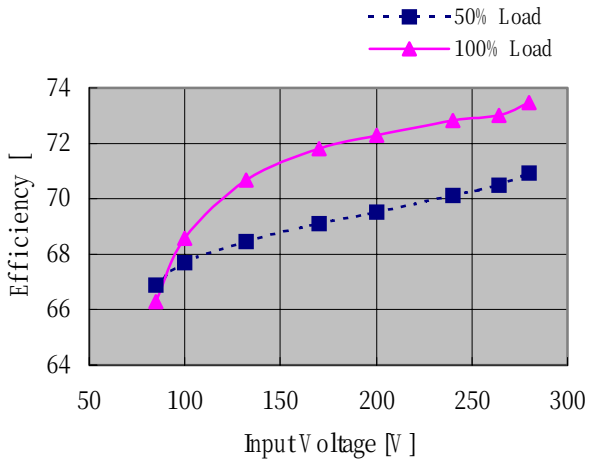


at Back up by Battery

Load Power [W]	Input Power [W]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	22.00	24.00	24.57
50	76.20	78.48	78.08
100	148.00	148.80	150.15
150	220.00	221.76	222.22
200	310.00	309.60	311.22

Model	eNSP-300P-S20-11
Item	Efficiency (by Input Voltage)

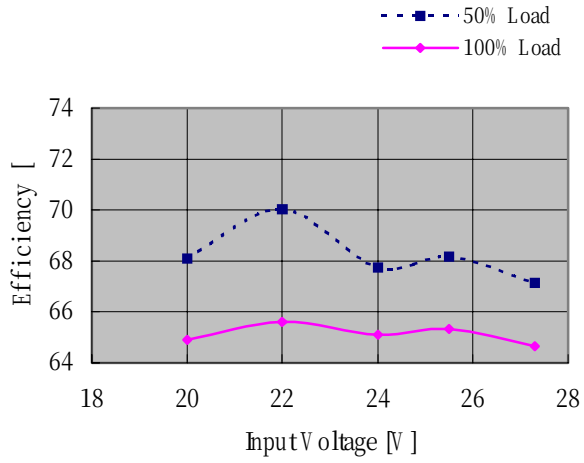
at AC Input



at AC Input

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
85	66.90	66.28
100	67.70	68.57
240	70.13	72.83
264	70.48	73.00

at Back up by Battery

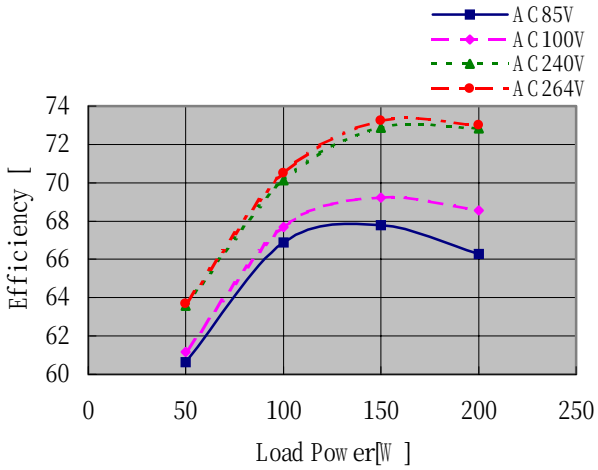


at Back up by Battery

Input Voltage [V]	Efficiency [%]	
	50% Load	100% Load
20	68.09	64.90
24	67.74	65.08
27	67.14	64.62

Model	eNSP-300P-S20-11
Item	Efficiency (by Load Power)

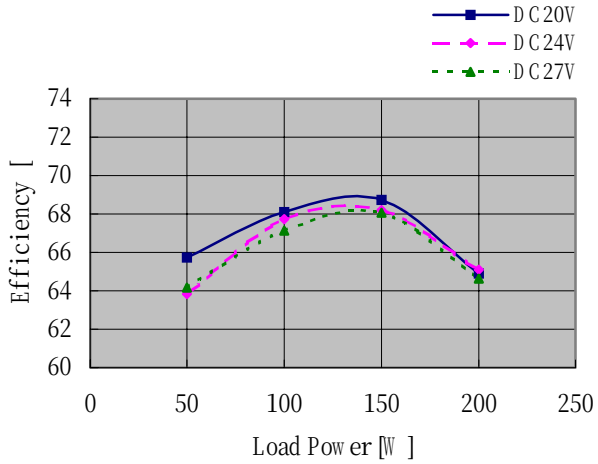
at AC Input



at AC Input

Load Power [W]	Efficiency [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
50	60.62	61.16	63.56	63.68
100	66.90	67.70	70.13	70.48
150	67.80	69.22	72.86	73.22
200	66.28	68.57	72.83	73.00

at Back up by Battery

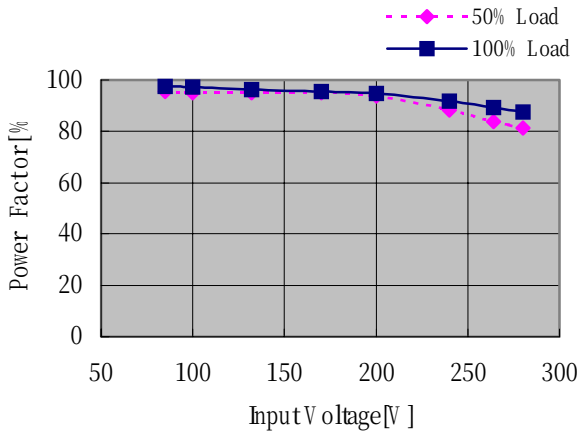


at Back up by Battery

Load Power [W]	Efficiency [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
50	65.73	63.83	64.17
100	68.09	67.74	67.14
150	68.74	68.21	68.06
200	64.00	65.08	64.62

Model	eNSP-300P-S20-11
Item	Power Factor

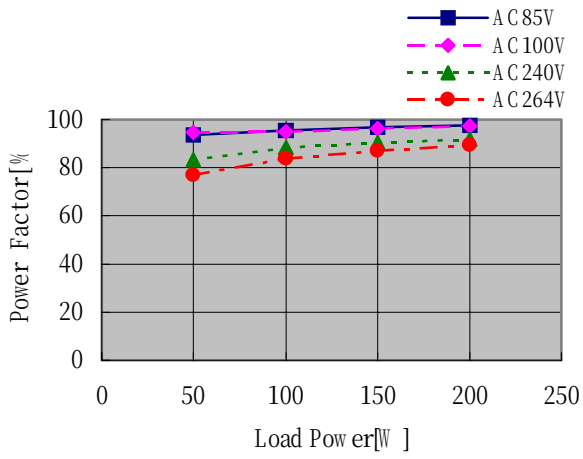
at AC Input



at AC Input

Input Voltage [V]	Power Factor [%]	
	50%Load	100% Load
85	95.55	97.60
100	94.98	97.25
240	88.36	91.89
264	83.75	89.30

at AC Input

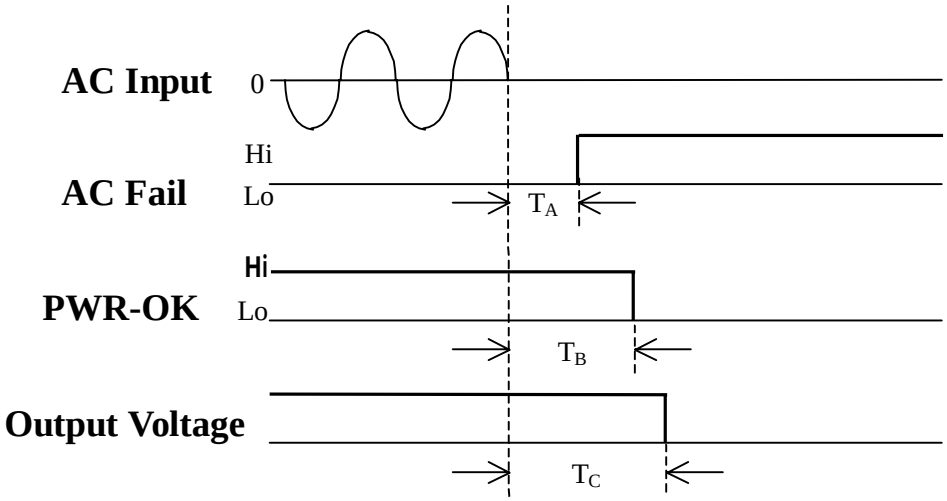


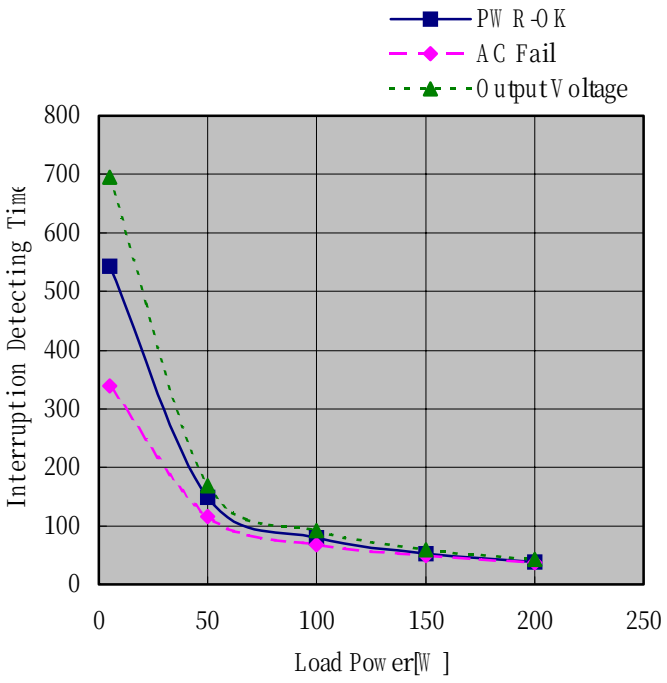
at AC Input

Load Power [W]	Power Factor [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
50	93.65	94.72	83.35	76.75
100	95.55	94.98	88.36	83.75
150	96.93	96.33	90.36	87.00
200	97.60	97.25	91.89	89.30

Model	eNSP-300P-S20-11	
Item	Instantaneous Interruption Compensation (by Load Power)	

at AC Input (85V / 100V / 240V / 264V)
AC Unit Only (without Non-Stop Unit)



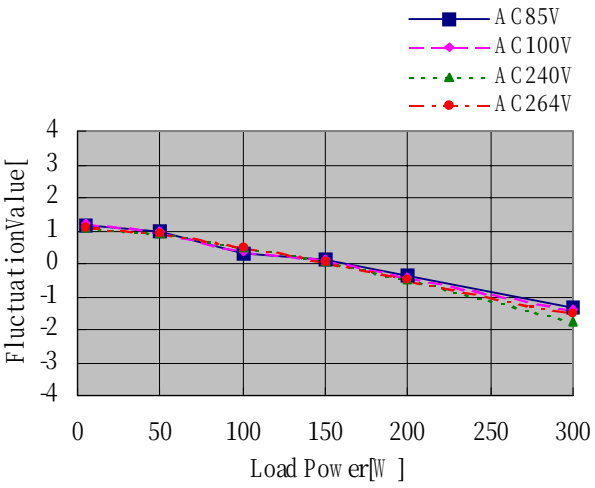


Load Power [W]	Interruption Detecting Time (ms)		
	AC Fail T_A	PWR-OK T_B	DC Output T_C
5	339	543	695
50	116	149	169
100	68	80	92
150	49	53	59
200	37	38	43

Model	eNSP-300P-S20-11
Item	Load Regulation

V1：5V 14A

at AC Input



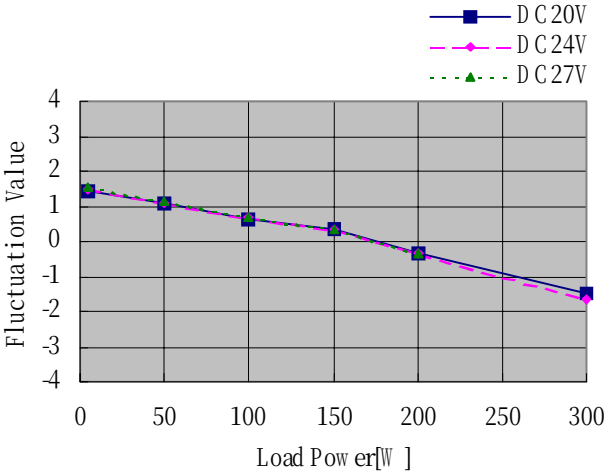
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	1.18	1.22	1.08	1.08
50	0.94	0.94	0.92	0.92
100	0.28	0.38	0.48	0.48
150	0.14	0.10	0.06	0.04
200	-0.34	-0.40	-0.46	-0.46
300	-1.34	-1.38	-1.76	-1.52

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	30.0	9.0	8.3	0.3	0.8	2.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	1.44	1.50	1.56
50	1.10	1.10	1.12
100	0.64	0.68	0.70
150	0.32	0.36	0.34
200	-0.32	-0.36	-0.36
300	-1.46	-1.68	—

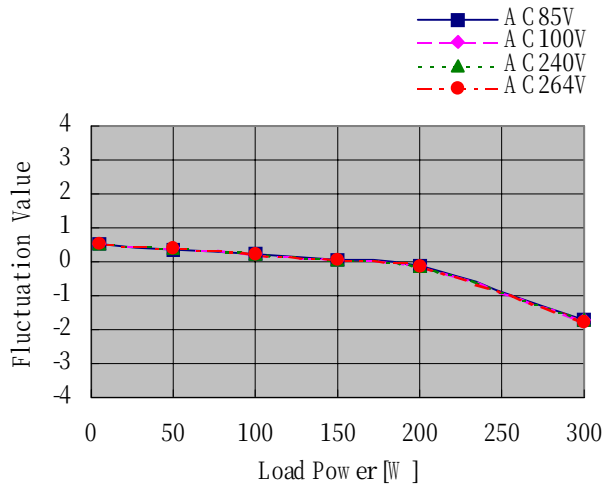
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	30.0	9.0	8.3	0.3	0.8	2.5

Model	eNSP-300P-S20-11
Item	Load Regulation

V2：3.3V 9.4A

at AC Input



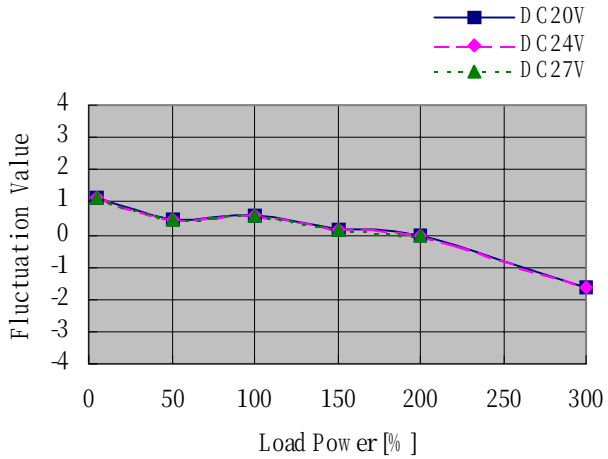
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	0.55	0.55	0.55	0.55
50	0.36	0.39	0.39	0.39
100	0.21	0.21	0.21	0.21
150	0.06	0.06	0.06	0.06
200	-0.09	-0.12	-0.12	-0.12
300	-1.73	-1.73	-1.70	-1.76

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	17.5	28.0	8.3	0.3	0.8	2.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	1.15	1.15	1.15
50	0.45	0.45	0.45
100	0.61	0.61	0.61
150	0.18	0.18	0.18
200	-0.03	-0.03	-0.03
300	-1.67	-1.67	—

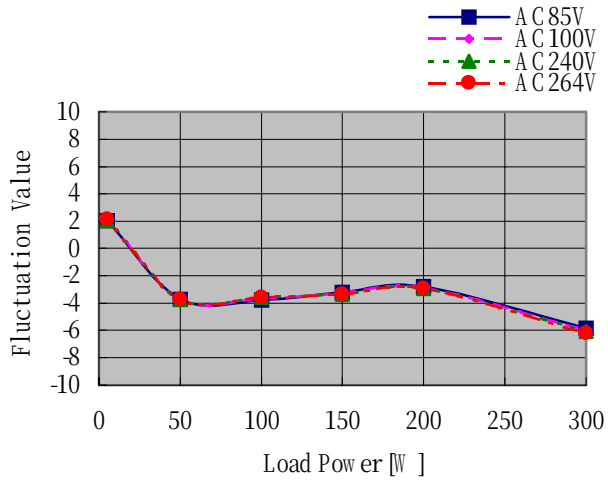
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	17.5	28	8.3	0.3	0.8	2.5

Model	eNSP-300P-S20-11
Item	Load Regulation

V3：12V 7A

at AC Input



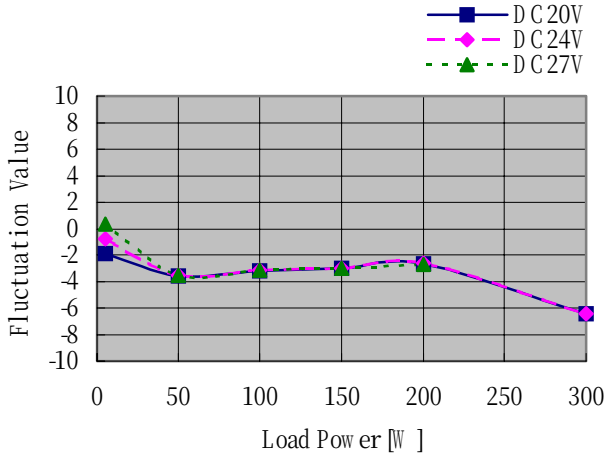
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	2.06	2.10	2.06	2.17
50	-3.72	-3.72	-3.72	-3.72
100	-3.77	-3.70	-3.60	-3.60
150	-3.23	-3.27	-3.35	-3.35
200	-2.82	-2.88	-2.94	-2.94
300	-5.86	-5.97	-6.06	-6.20

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15	9.4	7.0	0.3	0.8	1.5
300	14.0	9.1	15.0	0.3	0.8	2.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	-1.89	-0.77	0.38
50	-3.58	-3.56	-3.54
100	-3.20	-3.18	-3.17
150	-3.02	-3.02	-3.03
200	-2.68	-2.61	-2.73
300	-6.45	-6.43	—

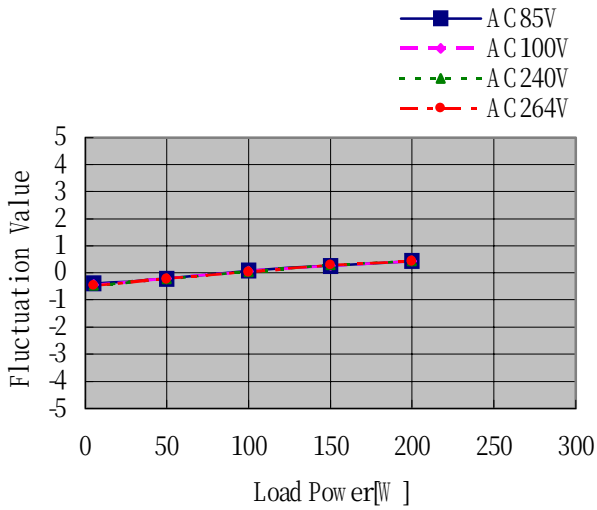
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	14.0	9.1	15.0	0.3	0.8	2.5

Model	eNSP-300P-S20-11
Item	Load Regulation

V4:-5V 0.3A

at AC Input



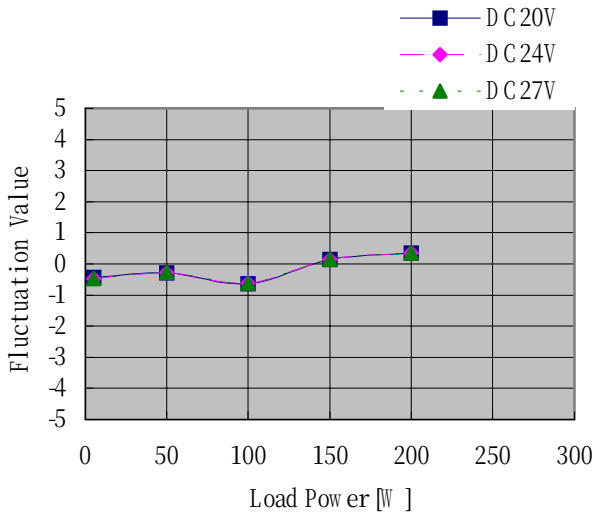
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	-0.40	-0.44	-0.46	-0.46
50	-0.22	-0.22	-0.22	-0.22
100	0.08	0.06	0.04	0.04
150	0.26	0.26	0.28	0.28
200	0.44	0.44	0.44	0.44

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15	9.4	7.0	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 DC27V
5	-0.44	-0.48	-0.48
50	-0.28	-0.28	-0.26
100	-0.64	-0.62	-0.62
150	0.14	0.14	0.14
200	0.34	0.34	0.34

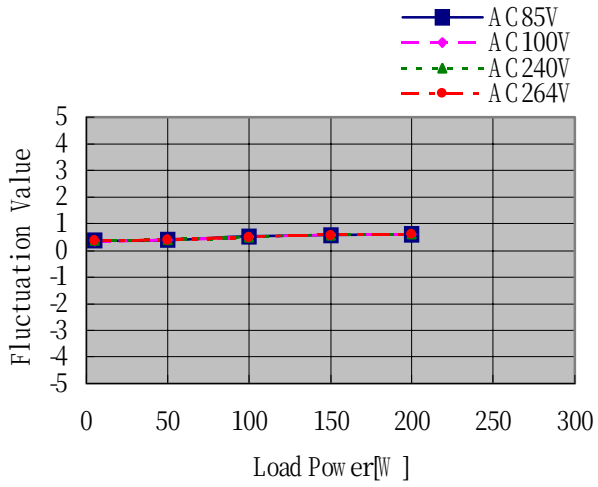
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15	9.4	7.0	0.3	0.8	1.5

Model	eNSP-300P-S20-11
Item	Load Regulation

V5:-12V 0.8A

at AC Input



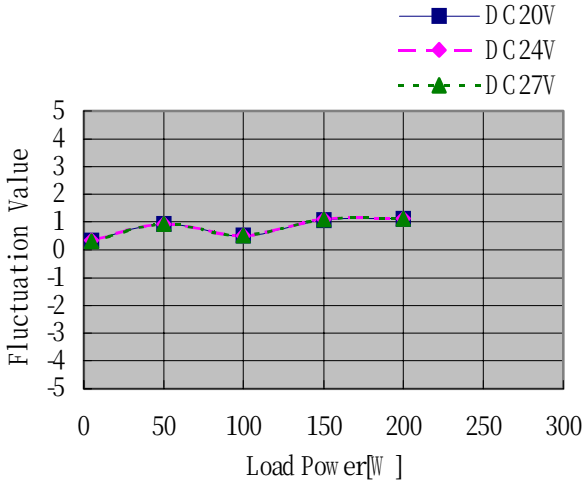
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	0.36	0.33	0.36	0.36
50	0.41	0.41	0.41	0.41
100	0.52	0.51	0.50	0.50
150	0.58	0.58	0.58	0.58
200	0.60	0.60	0.60	0.60

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15	9.4	7.0	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 DC27V
5	0.34	0.33	0.32
50	0.93	0.93	0.93
100	0.52	0.52	0.52
150	1.08	1.10	1.10
200	1.13	1.13	1.13

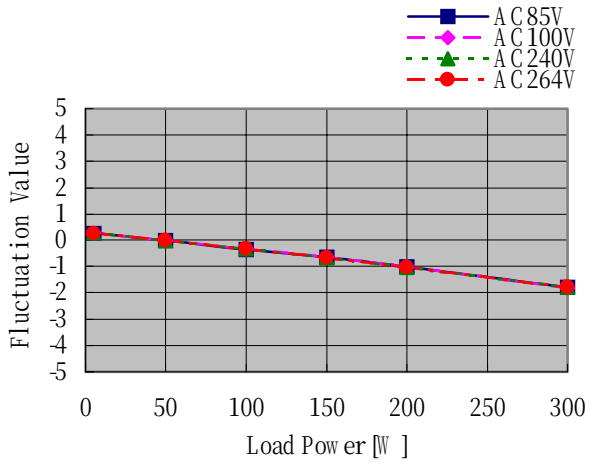
at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15	9.4	7.0	0.3	0.8	1.5

Model	eNSP-300P-S20-11
Item	Load Regulation

V6:5Vs 1.5A

at AC Input



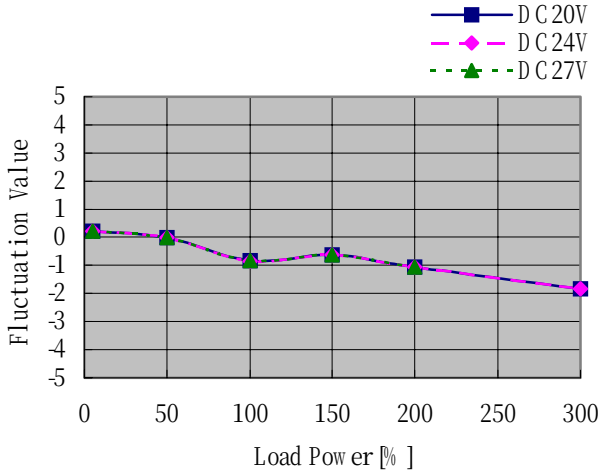
at AC Input

Load Power [W]	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
5	0.26	0.26	0.26	0.26
50	-0.02	-0.02	-0.02	-0.02
100	-0.36	-0.34	-0.34	-0.34
150	-0.66	-0.66	-0.68	-0.68
200	-1.02	-1.02	-1.04	-1.04
300	-1.80	-1.82	-1.80	-1.80

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	20.0	12.0	8.3.0	0.3	0.8	2.5

at Back up by Battery



at Back up by Battery

Load Power [W]	Fluctuation Value [%]		
	Input Voltage DC20V	Input Voltage DC24V	Input Voltage DC27V
5	0.22	0.22	0.22
50	-0.02	-0.02	-0.02
100	-0.84	-0.86	-0.84
150	-0.62	-0.62	-0.62
200	-1.06	-1.06	-1.06
300	-1.84	-1.84	—

at Load Condition

Load Power [W]	Load Current [A]					
	5V	3.3V	12V	-5V	-12V	5Vs
5	1.0	0	0	0	0	0
50	3.5	2.4	1.7	0.07	0.2	0.4
100	7.0	4.7	3.5	0.15	0.4	0.75
150	10.5	7.0	5.3	0.2	0.6	1.1
200	15.0	9.4	7.0	0.3	0.8	1.5
300	20.0	12.0	8.3.0	0.3	0.8	2.5

Model	eNSP-300P-S20-11	
Item	Ripple / Noise Voltage Test	

		V1 5V	V2 3.3V	V3 12V
Temperature	Input Voltage	Ripple / Noise (mV)	Ripple / Noise (mV)	Ripple / Noise (mV)
-5℃	AC 85 V	24 / 30	15 / 24	40 / 65
	100 V	24 / 30	15 / 24	40 / 65
	240 V	28 / 30	15 / 24	45 / 65
	264 V	28 / 30	15 / 24	42 / 65
	20 V	20 / 30	10 / 24	40 / 70
	24 V	20 / 30	10 / 24	40 / 70
	27 V	20 / 30	10 / 20	40 / 65
25℃	AC 85 V	20 / 30	15 / 24	40 / 65
	100 V	20 / 28	15 / 24	40 / 65
	240 V	20 / 28	15 / 24	42 / 65
	264 V	20 / 28	15 / 24	45 / 65
	20 V	20 / 30	10 / 24	40 / 70
	24 V	20 / 30	10 / 24	40 / 70
	27 V	20 / 30	10 / 20	40 / 65
50℃	AC 85 V	20 / 30	15 / 24	45 / 55
	100 V	20 / 30	15 / 24	45 / 55
	240 V	20 / 30	15 / 24	45 / 50
	264 V	20 / 30	10 / 20	45 / 50
	20 V	20 / 28	8 / 20	40 / 45
	24 V	20 / 28	8 / 15	40 / 45
	27 V	20 / 28	8 / 15	40 / 45
Specification		50 / 100	50 / 100	150 / 200
Judgement		Good	Good	Good

		V4 -5V	V5 -12V	V6 5VS
Temperature	Input Voltage	Ripple / Noise (mV)	Ripple / Noise (mV)	Ripple / Noise (mV)
-5℃	AC 85 V	10 / 60	15 / 50	10 / 24
	100 V	10 / 60	18 / 50	10 / 24
	240 V	10 / 30	15 / 28	10 / 24
	264 V	10 / 28	15 / 28	10 / 20
	20 V	20 / 24	15 / 24	10 / 20
	24 V	20 / 24	15 / 24	8 / 20
	27 V	20 / 24	15 / 24	10 / 20
25℃	AC 85 V	10 / 55	15 / 50	10 / 24
	100 V	10 / 55	15 / 50	10 / 24
	240 V	10 / 30	15 / 28	10 / 20
	264 V	10 / 30	15 / 28	10 / 20
	20 V	20 / 28	18 / 24	10 / 20
	24 V	20 / 24	18 / 24	10 / 20
	27 V	20 / 24	18 / 26	10 / 20
50℃	AC 85 V	10 / 60	15 / 50	10 / 24
	100 V	10 / 60	15 / 50	10 / 24
	240 V	15 / 30	15 / 30	10 / 20
	264 V	15 / 24	20 / 30	10 / 20
	20 V	20 / 28	16 / 24	10 / 20
	24 V	20 / 24	20 / 24	10 / 15
	27 V	20 / 24	20 / 28	10 / 15
Specification		50 / 100	100 / 200	50 / 100
Judgement		Good	Good	Good

Model	eNSP-300P-S20-11	
Item	Over-Current Protection	

Temperature	Input Voltage		V1 5V	V2 3.3V	V3 12V
-5℃	AC	85 V	42.5 A	34.0 A	26.0 A
		100 V	42.5 A	34.0 A	25.5 A
		240 V	42.5 A	34.0 A	25.5 A
		264 V	42.5 A	34.0 A	25.5 A
	DC	20 V	60.0 A	36.0 A	22.0 A
		24 V	60.0 A	39.0 A	22.0 A
		27 V	60.0 A	38.0 A	22.0 A
25℃	AC	85 V	42.5 A	37.0 A	21.0 A
		100 V	43.0 A	36.0 A	21.0 A
		240 V	43.0 A	36.0 A	21.0 A
		264 V	43.5 A	36.0 A	21.5 A
	DC	20 V	55.0 A	39.0 A	19.0 A
		24 V	56.0 A	39.5 A	19.0 A
		27 V	56.0 A	39.0 A	18.0 A
50℃	AC	85 V	45.0 A	35.5 A	22.5 A
		100 V	45.0 A	35.5 A	22.0 A
		240 V	45.0 A	35.5 A	22.0 A
		264 V	45.0 A	35.5 A	22.0 A
	DC	20 V	60.0 A	36.0 A	21.0 A
		24 V	60.0 A	36.0 A	21.0 A
		27 V	60.0 A	36.0 A	21.0 A
Specification			37A or More	32.5A or More	16A or More
Judgement			Good	Good	Good

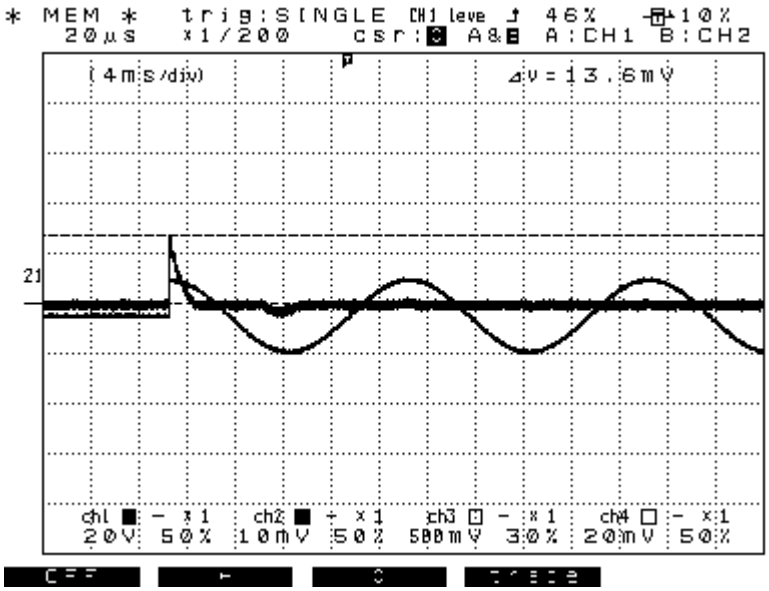
Temperature	Input Voltage		V4 -5V	V5 -12V	V6 5VS
-5℃	AC	85 V	0.7 A	1.6 A	2.9 A
		100 V	0.7 A	1.6 A	2.8 A
		240 V	0.7 A	1.6 A	2.9 A
		264 V	0.7 A	1.6 A	2.9 A
	DC	20 V	0.4 A	1.5 A	2.9 A
		24 V	0.4 A	1.6 A	2.9 A
		27 V	0.4 A	1.6 A	2.9 A
25℃	AC	85 V	0.6 A	1.6 A	2.6 A
		100 V	0.6 A	1.6 A	2.6 A
		240 V	0.6 A	1.6 A	2.6 A
		264 V	0.6 A	1.6 A	2.6 A
	DC	20 V	0.6 A	1.8 A	2.6 A
		24 V	0.6 A	1.8 A	2.6 A
		27 V	0.6 A	1.8 A	2.6 A
50℃	AC	85 V	0.6 A	1.3 A	2.6 A
		100 V	0.5 A	1.3 A	2.7 A
		240 V	0.6 A	1.3 A	2.7 A
		264 V	0.5 A	1.1 A	2.7 A
	DC	20 V	0.5 A	1.1 A	2.7 A
		24 V	0.5 A	1.0 A	2.7 A
		27 V	0.5 A	1.0 A	2.7 A
Specification			0.315A or More	0.84A or More	1.575A or More
Judgement			**Good**	**Good**	**Good**

Model	eNSP-300P-S20-11	
Item	Over-Voltage Protection	

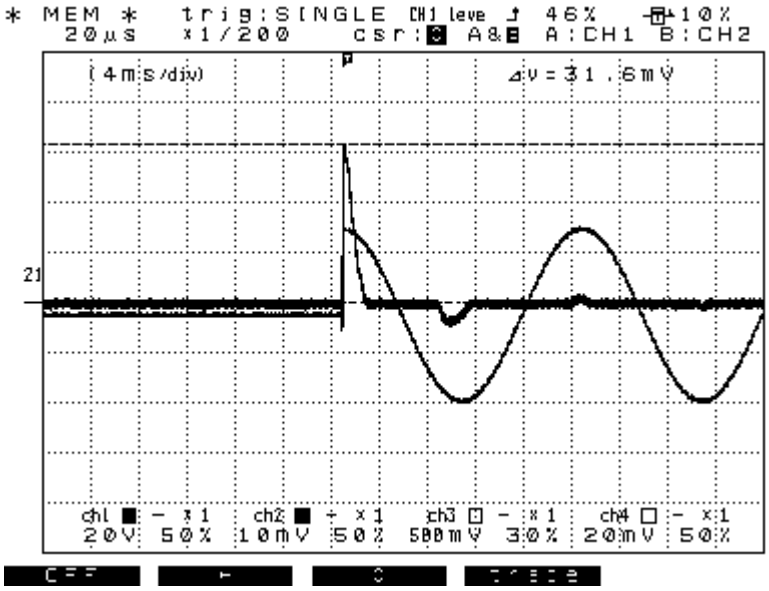
Temperature	Input Voltage	V1：5V	V2：3.3V	V3：12V
-5℃	AC100V	6.9V	4.3V	14.5V
	AC240V	6.9V	4.3V	14.4V
	DC24V	6.9V	4.3V	14.4V
25℃	AC100V	6.4V	3.9V	14.6V
	AC240V	6.5V	4.0V	14.6V
	DC24V	6.5V	4.0V	14.6V
50℃	AC100V	6.4V	3.8V	14.7V
	AC240V	6.4V	3.8V	14.7V
	DC100V	6.4V	3.8V	14.7V
Specification		5.74～7.0V	3.76～4.3V	13.4～15.6V
Judgement		Good	Good	Good

Model	eNSP-300P-S20-11	
Item	Inrush Current	

Inrush Current Wave



Wave No1	
CH1	Measuring Point: Input Voltage
	Range 200V/DIV
CH2	Measuring Point: Input Current
	Range 20A/DIV
Time Line	4ms/DIV
Conditions	Input: AC100V 50Hz Load: Rated Load
Note:	
Inrush Current Value: 27.2A	

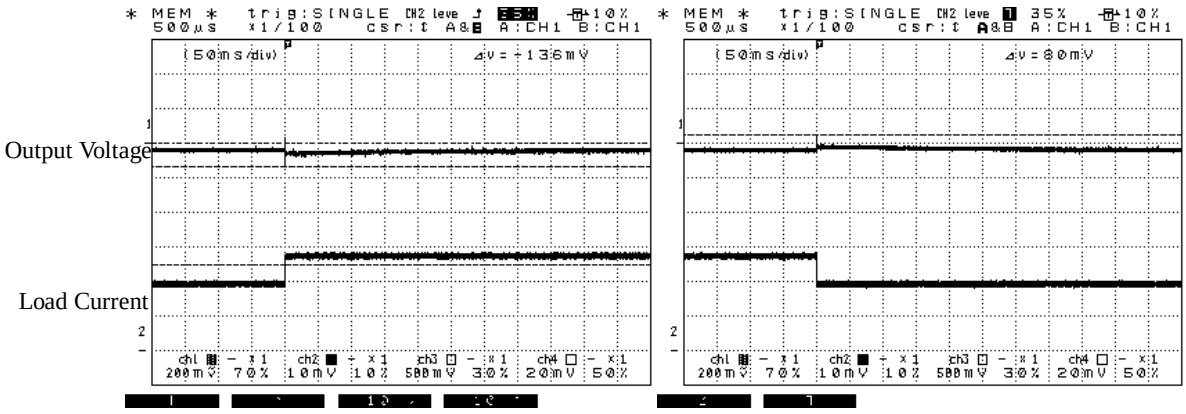


Wave No2	
CH1	Measuring Point: Input Voltage
	Range 200V/DIV
CH2	Measuring Point: Input Current
	Range 20A/DIV
Time Line	4ms/DIV
Conditions	Input: AC240V 50Hz Load: Rated Load
Note:	
Inrush Current Value: 63.2A	

Model	eNSP-300P-S20-11	
Item	Dynamic Load Response	

V1：+5V 14A

70% Load⇔ 100% Load

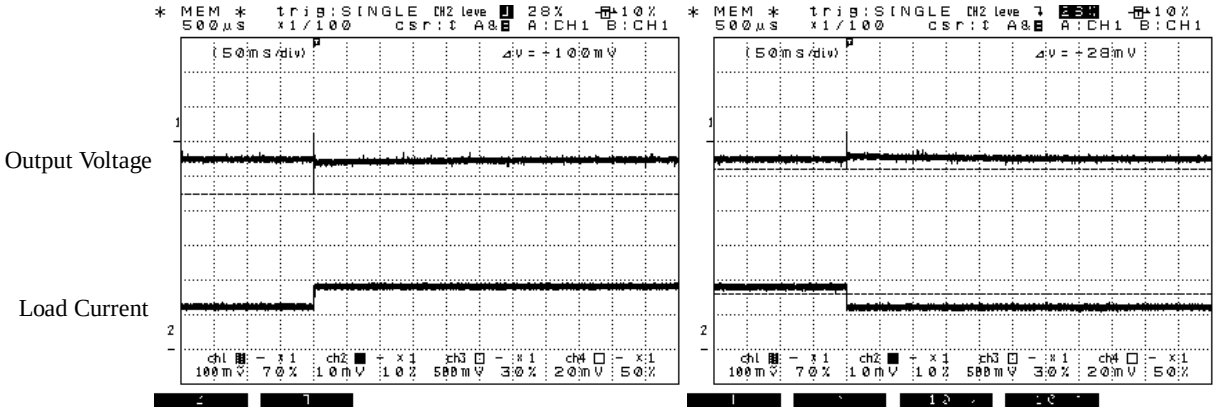


Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
70%Load→**100**% Load	**48mV** **-136mV**	**±250mV**	Good
100% Load→**70**% Load	**80mV** **- mV**		Good

Model	eNSP-300P-S20-11	
Item	Dynamic Load Response	

V2：+3.3V 9.4A

70% Load⇔ **100%** Load



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
70%Load→**100%** Load	**72mV** **-100mV**	**±165mV**	Good
100% Load→**70%** Load	**84mV** **-28mV**		Good

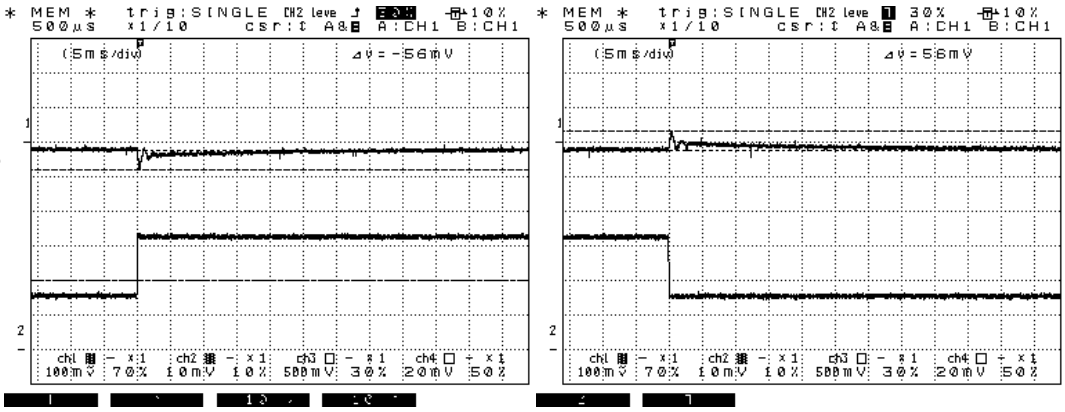
Model	eNSP-300P-S20-11	
Item	Dynamic Load Response	

V3：+12V 7A

50% Load ⇔ 100% Load

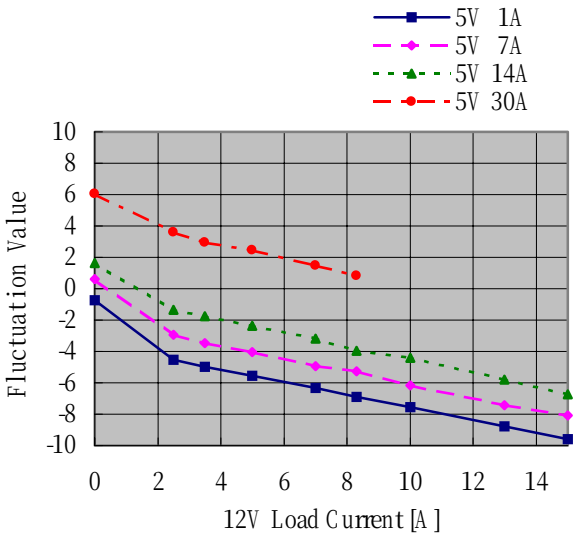
Output Voltage

Load Current



Sudden Fluctuation of Load	Fluctuation Value	ATX Specific Value	Judgement
50%Load→**100**% Load	**- mV** **-560mV**	**±600mV**	Good
100% Load→**50**% Load	**560mV** **- mV**		Good

Model	eNSP-300P-S20-11
Item	12V Cross Regulation

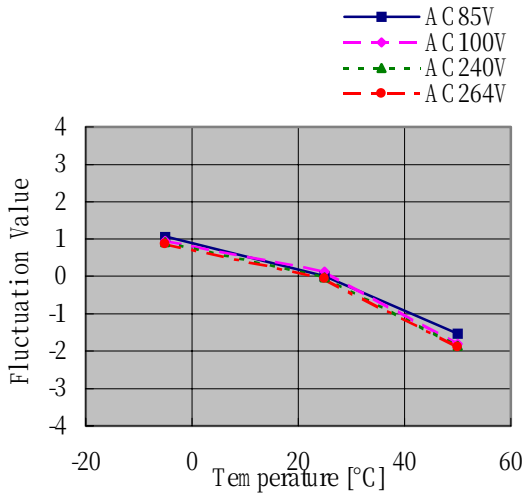


12V Load Current	12V Voltage Value [V]			
	5V 1A	5V 7A	5V 14A	5V 30A
0A	11.912	12.072	12.268	12.803
2A	11.458	11.648	11.909	12.504
3.5A	11.402	11.582	11.858	12.427
5A	11.334	11.513	11.785	12.370
7A	11.242	11.407	11.686	12.250
8.3A	11.172	11.369	11.595	12.170
10A	11.093	11.262	11.539	-
13A	10.949	11.107	11.374	-
15A	10.85	11.032	11.260	-

12V Load Current	Fluctuation Value [%]			
	5V 1A	5V 7A	5V 14A	5V 30A
0A	-0.733	0.600	1.624	6.055
2A	-4.517	-2.933	-1.350	3.579
3.5A	-4.983	-3.483	-1.773	2.941
5A	-5.550	-4.058	-2.377	2.469
7A	-6.317	-4.942	-3.197	1.475
8.3A	-6.900	-5.258	-3.951	0.812
10A	-7.558	-6.150	-4.415	-
13A	-8.758	-7.442	-5.782	-
15A	-9.583	-8.067	-6.726	-

Model	eNSP-300P-S20-11
Item	Ambient Temperature Drift

V1：5V 14A

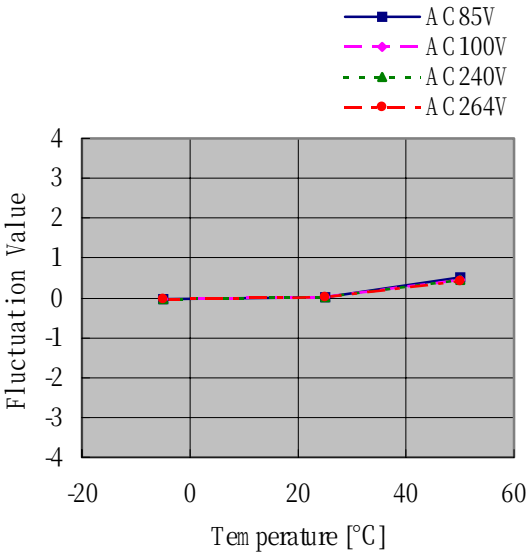


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	5.053	5.047	5.045	5.043
25	5.000	5.006	4.998	4.997
50	4.923	4.909	4.907	4.905

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	1.060	0.940	0.900	0.860
25	0.000	0.120	-0.040	-0.060
50	-1.540	-1.820	-1.860	-1.900

V2：3.3V 9.4A



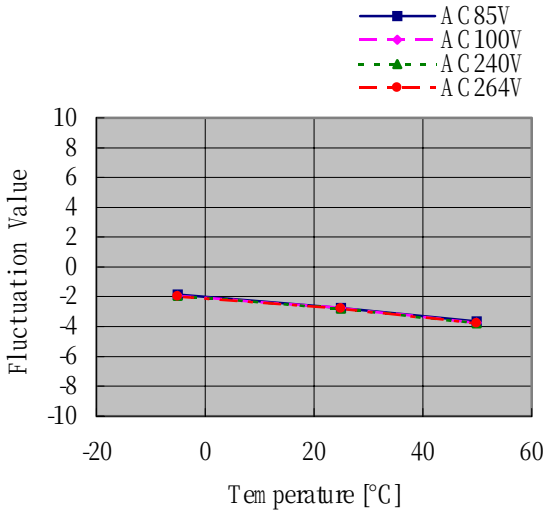
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	3.299	3.299	3.299	3.299
25	3.301	3.301	3.301	3.301
50	3.317	3.315	3.315	3.314

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-0.030	-0.030	-0.030	-0.030
25	0.030	0.030	0.030	0.030
50	0.515	0.455	0.455	0.424

Model	eNSP-300P-S20-11
Item	Ambient Temperature Drift

V3：12V 7A

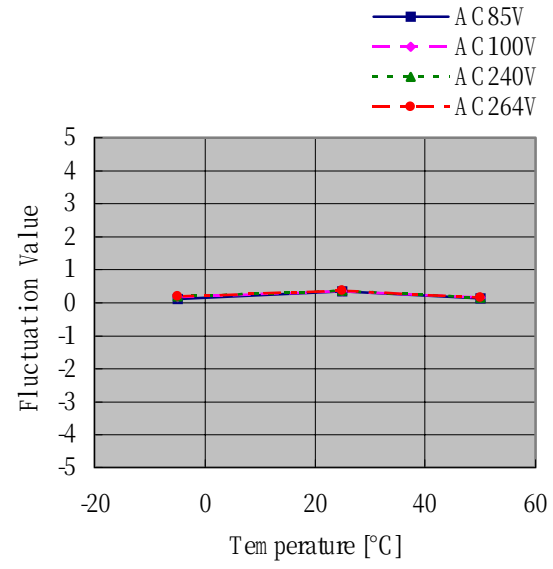


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	11.774	11.767	11.764	11.760
25	11.667	11.667	11.661	11.661
50	11.559	11.551	11.547	11.543

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-1.883	-1.942	-1.967	-2.000
25	-2.775	-2.775	-2.825	-2.825
50	-3.675	-3.742	-3.775	-3.808

V4：-5V 0.3A



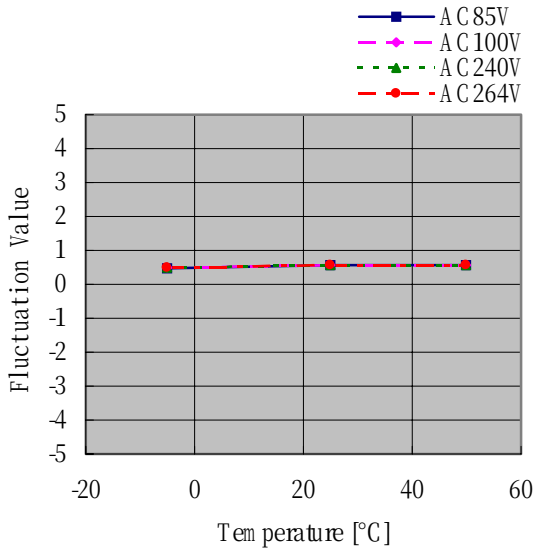
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-5.006	-5.009	-5.010	-5.010
25	-5.017-	5.017	-5.018	-5.018
50	-5.007	-5.008	-5.008	-5.008

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	0.120	0.180	0.200	0.200
25	0.340	0.340	0.360	0.360
50	0.140	0.160	0.160	0.160

Model	eNSP-300P-S20-11
Item	Ambient Temperature Drift

V5：-12V 0.8A

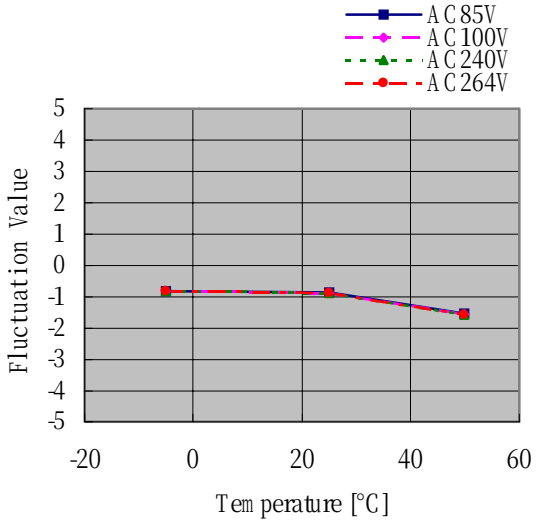


at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-12.056	-12.058	-12.059	-12.059
25	-12.068	-12.068	-12.068	-12.068
50	-12.068	-12.068	-12.068	-12.068

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	0.467	0.483	0.492	0.492
25	0.567	0.567	0.567	0.567
50	0.567	0.567	0.567	0.567

V6：5Vs 1.5A



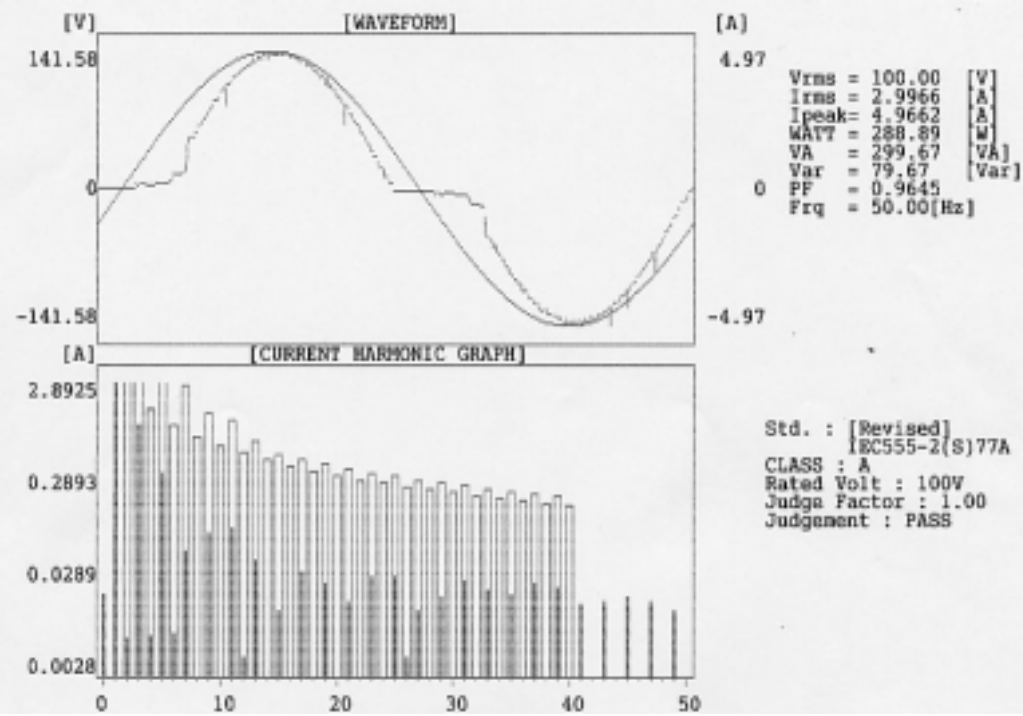
at AC Input

Temperature (℃)	Output Voltage [V]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	4.959	4.959	4.959	4.959
25	4.957	4.956	4.956	4.956
50	4.923	4.922	4.921	4.921

Temperature (℃)	Fluctuation Value [%]			
	Input Voltage AC85V	Input Voltage AC100V	Input Voltage AC240V	Input Voltage AC264V
-5	-0.820	-0.820	-0.820	-0.820
25	-0.860	-0.880	-0.880	-0.880
50	-1.540	-1.560	-1.580	-1.580

Model	eNSP-300P-S20-11	
Item	Harmonic Current	

Measuring Instrument ： MP701(Keisoku Giken)

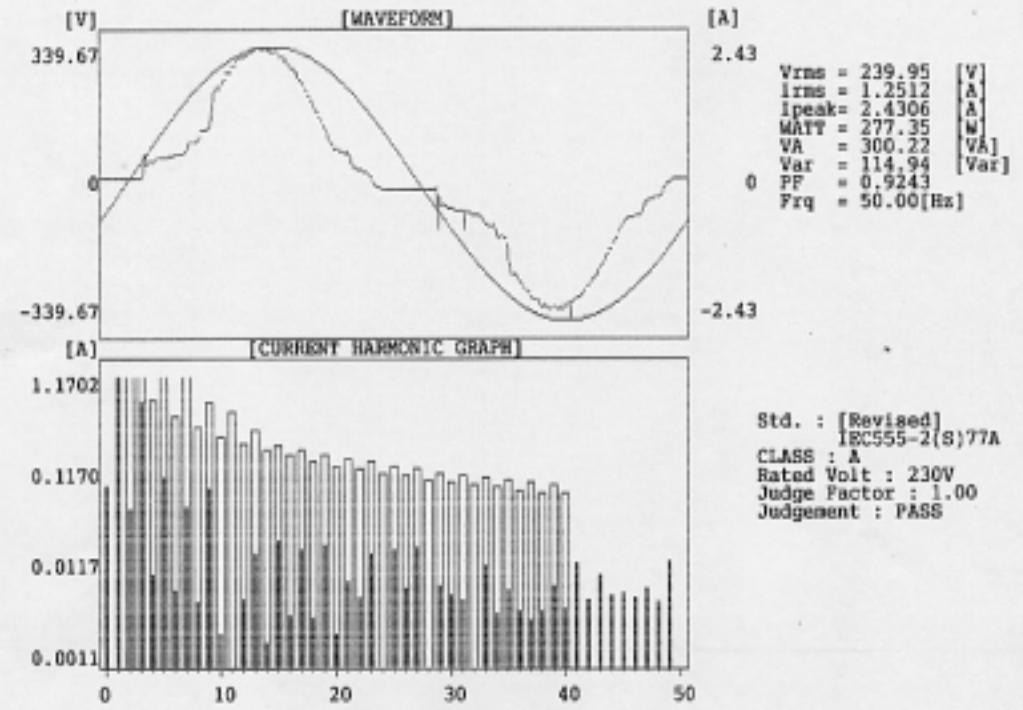


[CURRENT HARMONIC DATA]

No	(A)	No	(A)	No	(A)	No	(A)
00	0.0135	13	0.0306	26	0.0031	39	0.0157
01	2.8925	14	0.0028	27	0.0092	40	0.0015
02	0.0048	15	0.0092	28	0.0015	41	0.0108
03	0.7195	16	0.0022	29	0.0125	42	0.0022
04	0.0050	17	0.0231	30	0.0025	43	0.0112
05	0.2408	18	0.0025	31	0.0188	44	0.0007
06	0.0053	19	0.0171	32	0.0015	45	0.0129
07	0.0367	20	0.0022	33	0.0146	46	0.0028
08	0.0025	21	0.0114	34	0.0015	47	0.0115
09	0.0564	22	0.0015	35	0.0137	48	0.0015
10	0.0025	23	0.0204	36	0.0015	49	0.0090
11	0.0637	24	0.0018	37	0.0173		
12	0.0031	25	0.0202	38	0.0007		

Model	eNSP-300P-S20-11	
Item	Harmonic Current	

Measuring Instrument ： MP701(Keisoku Giken)



[CURRENT HARMONIC DATA]

No	(A)	No	(A)	No	(A)	No	(A)
00	0.0579	13	0.0115	26	0.0052	39	0.0055
01	1.1702	14	0.0014	27	0.0137	40	0.0032
02	0.0339	15	0.0164	28	0.0008	41	0.0091
03	0.4236	16	0.0026	29	0.0055	42	0.0040
04	0.0072	17	0.0130	30	0.0044	43	0.0070
05	0.0732	18	0.0025	31	0.0039	44	0.0042
06	0.0048	19	0.0143	32	0.0004	45	0.0045
07	0.0352	20	0.0017	33	0.0088	46	0.0040
08	0.0038	21	0.0060	34	0.0029	47	0.0052
09	0.0563	22	0.0042	35	0.0049	48	0.0038
10	0.0017	23	0.0116	36	0.0030	49	0.0099
11	0.0008	24	0.0005	37	0.0024		
12	0.0038	25	0.0126	38	0.0030		

Model	eNSP-300P-S20-11	
Item	Leakage Current Test	

Temperature Room Temperature
Input AC100V、240V
Load Rated Load

測定値

Input Voltage (V)	at Rated Load (mA)
100V	0.34
240V	0.85

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

Model	eNSP-300P-S20-11	
Item	Line Noise Tolerance	

Temperature	Room Temperature
Input	AC100V,60Hz
Load	Rated Load
Noise Impressed Voltage	±2000V
Repeat Cycle	10～35ms
Pulse Width	100,800ns

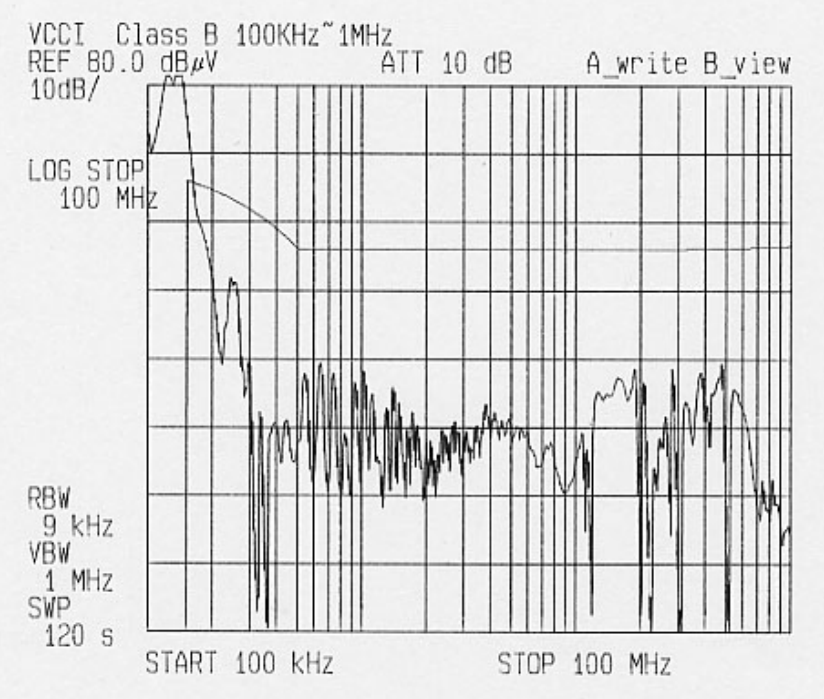
Normal	Pulse Impressed Mode			
	100ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common R Phase	Pulse Impressed Mode			
	100ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○
Common S Phase	Pulse Impressed Mode			
	100ns		800ns	
	Polarity +	Polarity -	Polarity +	Polarity -
	○	○	○	○

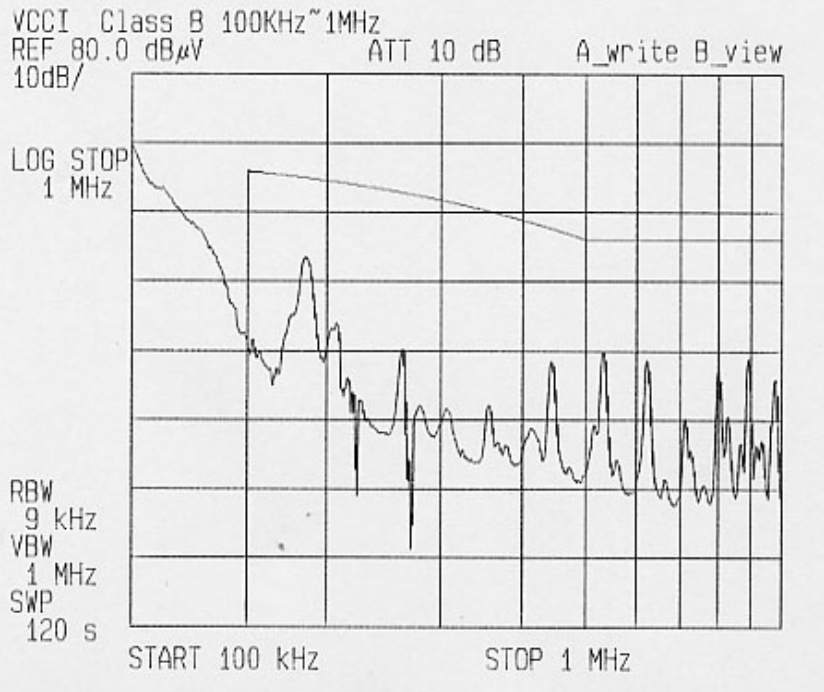
○→No Trouble
△→Faulty Operation of Over-Voltage and so on
×→Power Supply Breakdown

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

Model	eNSP-300P-S20-11	
Item	Conduction Emission	

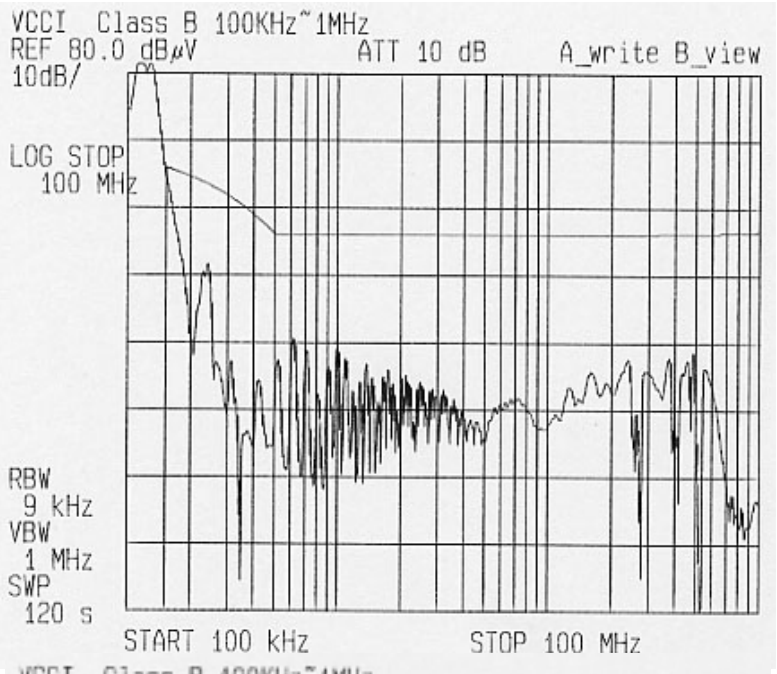
Temperature	Room Temperature
Input	AC100V
Load	Rated Load
Mesearing Point	L-FG
Measuring Instrument	R3261A (Advantest)
Phase	A

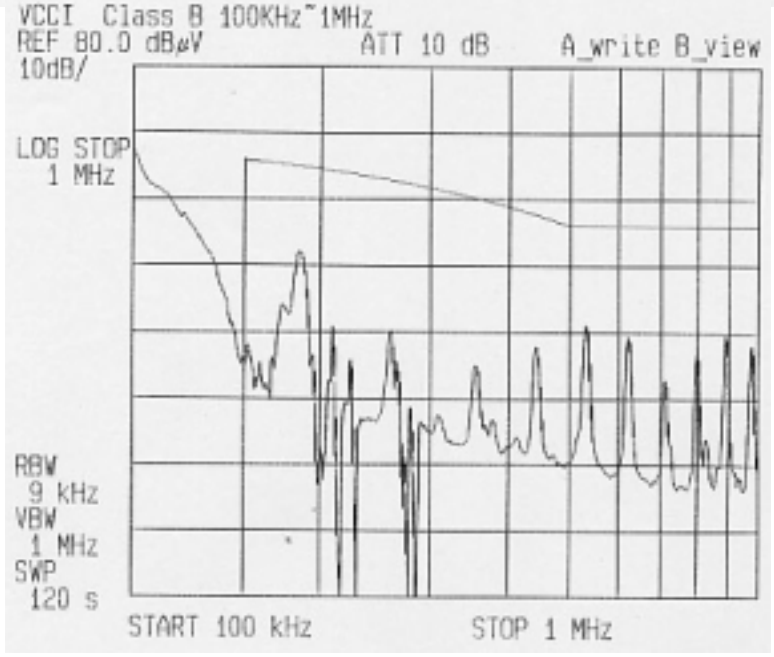




Model	eNSP-300P-S20-11	
Item	Conduction Emission	

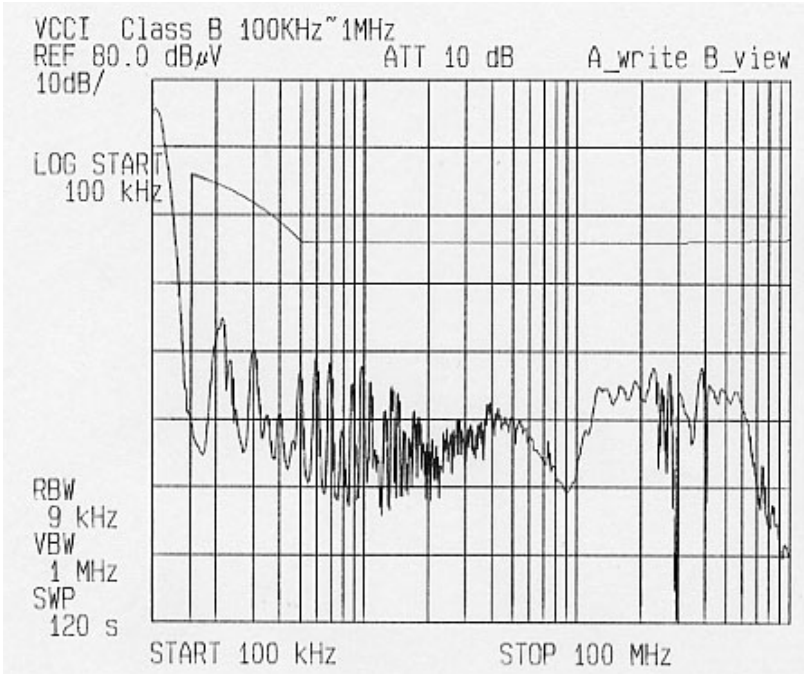
Temperature Room Temperaure
Input AC100V
Load Rated Load
Measuring Point N-FG
Measuring Instrument R3261A (Advantest)
Phase B



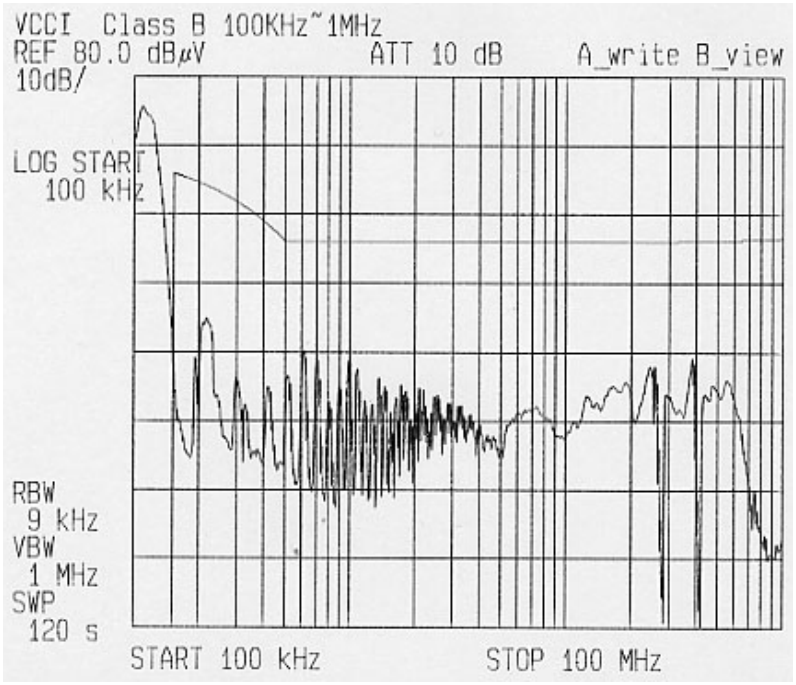


Model	eNSP-300P-S20-11	
Item	Conduction Emission	

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

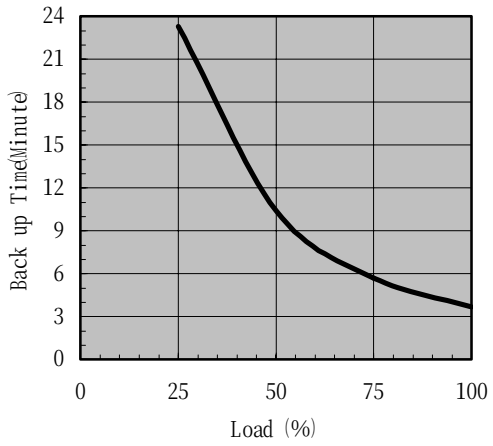


Phase B

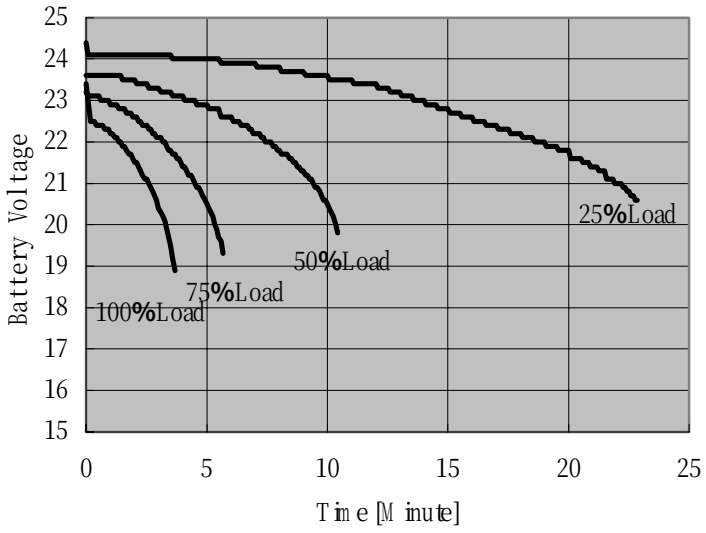


Model	eNSP-300P-S20-11	
Item	Battery Discharge	

Back up Time



Load Power [%]	Back up Time [Minute]
25	23.3
50	10.4
75	5.7
100	3.7

※100%Load = 200W

Battery Voltage