

RT-3 TEST DATA

QUALITY

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DRAWING No.	1104-4-200	
DRAWN BY	CHECKED BY	APPROVED BY
中島	布川	T. Anai
59.1.7	59.1.7	59.1.12

 NEMIC-LAMBDA

RT-3 SPECIFICATIONS

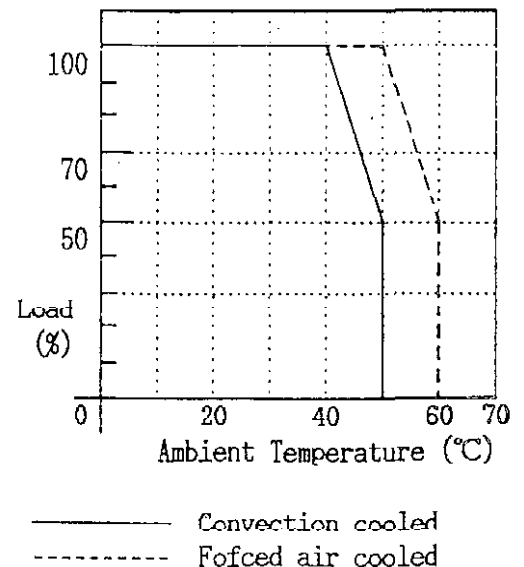
1104-4-150A

Items		Model	RT-3-522			RT-3-5FF			RT-3-525		
			CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
1	Nominal Output Voltage	V	+ 5	+ 12	- 12	+ 5	+ 15	- 15	+ 5	+ 12	5
2	Maximum Output Current	A	3.0	1.2	0.3	3.0	1.2	0.3	3.0	1.2	0.3
3	Maximum Output Power/CH	W	15.0	14.4	3.6	15.0	18.0	4.5	15.0	14.4	1.5
4	Maximum Output Power	W	33.0						30.9		
5	Efficiency (Typ) (*1)	%	65			65			65		
6	Input Voltage Range	—	85 ~ 132VAC (47 ~ 440Hz) or 110 ~ 175VDC								
7	Input Current (Typ) (*1)	A	0.92			0.92			0.87		
8	In-rush Current (Typ) (*2)	A	30A at 100VAC (130VDC)								
9	Output Voltage Range (*1)	%	CH1 - Fixed ($\pm 1\%$ Max); CH2, CH3 - Fixed ($\pm 5\%$ Max)								
10	Ripple & Noise - Maximum - (Typical)	mV	120 (30)	150 (50)	150 (80)	120 (30)	150 (50)	150 (80)	120 (30)	150 (50)	150 (80)
11	Maximum Line Regulation (*3)	mV	20	48	48	20	60	60	20	48	20
12	Maximum Load Regulation (*4)	mV	100	240	240	100	300	300	100	240	100
13	Over Current Protection (*5)	A	3.3~	1.3~	0.4~	3.3~	1.3~	0.4~	3.3~	1.3~	0.4~
14	Over Voltage Protection	V	—								
15	Hold-Up Time (Typ) (*6)	ms	16								
16	Remote Sensing	—	—								
17	Remote ON/OFF Control	—	—								
18	Parallel Operation	—	—								
19	Series Operation	—	Possible								
20	Operating Temperature (*8)	°C	0 ~ +60								
21	Operating Humidity	%	30% ~ 90% RH								
22	Storage Temperature	°C	-30 ~ +85								
23	Storage Humidity	%	10% ~ 95% RH								
24	Cooling	—	Convection cooled								
25	Temperature Coefficient	%	CH1... 1% (Typ) ; CH2,CH3...Less than 2% at 0°C ~ +60°C								
26	Withstand Voltage (*7)	—	Input - Chassis, Input - Output...1.5kVAC 1min Output - Chassis... 500VAC 1min								
27	Isolation Resistance	Ω	More than 100M Ω at 25°C and 70% RH Output-Chassis...500VDC								
28	Vibration	—	Less than 9.8m/s ²								
29	Shock	—	Less than 98.1m/s ²								
30	Weight	g	440								
31	Size (W·H·D)	mm	37 · 97 · 153.5			Refer to Outline Drawing					

Derating Curve (Vertical mounting)

NOTES

- *1 : At 100VAC & Maximum Output Power.
- *2 : Typical value on cold start, Ta=25°C
- *3 : From 85 ~ 132VAC or 110 ~ 175VDC, constant load.
- *4 : From No load ~ Full load, constant input voltage.
- *5 : CH1 Constant current limiting with automatic recovery.
CH2, CH3 Fold back limiting with automatic recovery.
(Refer to instruction manual for details)
- *6 : At 85VAC, Nominal output voltage & Maximum output power.
- *7 : Refer to instruction manual for testing procedure.
- *8 : Ratings - Refer to Derating Curve on the right.
- Load(%) is percent of maximum output power or maximum output current, whichever is greater.
- Refer to instruction manual for further mounting details.



2-1. Regulation-line and load, temp. drift

1. Regulation line and load

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Conditions Ta: 25°C

CH1

I _{out} \ V _{in}	AC 85 v	AC 100v	AC 132v	line regulation	
0 A	5.053 v	5.053 v	5.053 v	0 mv	0 %
1.5 A	5.043 v	5.043 v	5.043 v	0 mv	0 %
3 A	5.034 v	5.035 v	5.035 v	1 mv	0.02 %
load regulation	19 mv	18 mv	18 mv		
	0.38 %	0.36 %	0.36 %		

CH2

I _{out} \ V _{in}	AC 85 v	AC 100v	AC 132v	line regulation	
0 A	12.014 v	12.023 v	12.028 v	14 mv	0.12 %
0.6 A	11.980 v	11.979 v	11.978 v	2 mv	0.02 %
1.2 A	11.905 v	11.902 v	11.900 v	5 mv	0.04 %
load regulation	109 mv	121 mv	128 mv		
	0.91 %	1.01 %	1.07 %		

CH3

I _{out} \ V _{in}	AC 85 v	AC 100v	AC 132v	line regulation	
0 A	-12.042 v	-12.058 v	-12.070 v	28 mv	0.23 %
0.15 A	-12.069 v	-12.068 v	-12.068 v	1 mv	0.01 %
0.3 A	-12.020 v	-12.013 v	-12.008 v	12 mv	0.1 %
load regulation	49 mv	55 mv	62 mv		
	0.41 %	0.46 %	0.52 %		

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2. Temperature drift

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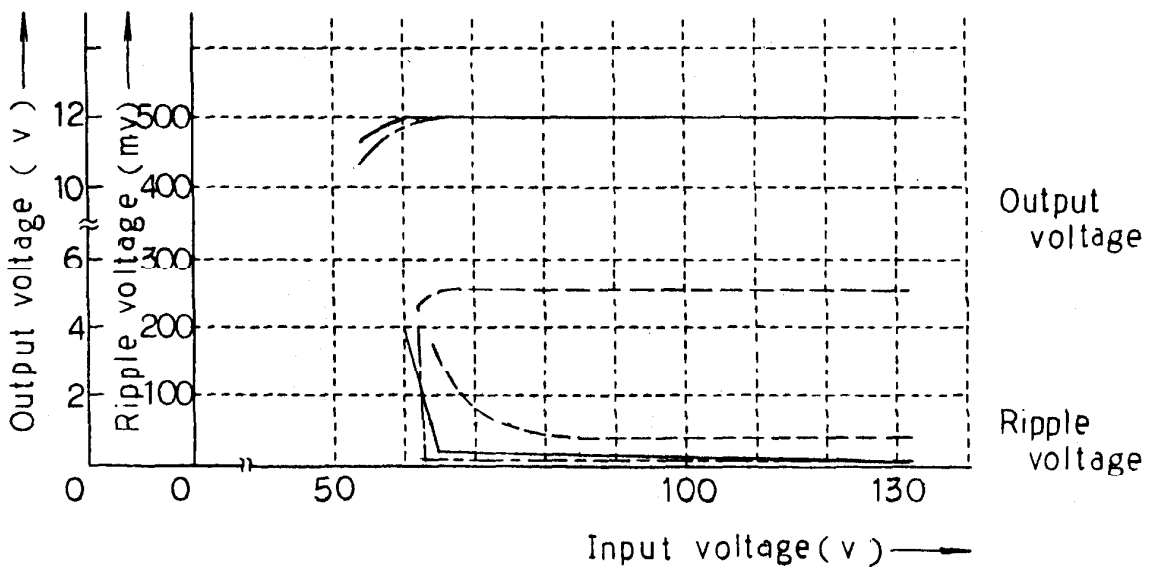
Conditions Vin : AC 100v
Iout : Rated

Vout / Ta	0 °c	25 °c	40 °c	Temp. stability	
CH1	4.996 v	5.035 v	5.031 v	39 mv	0.78 %
CH2	11.987 v	11.902 v	11.913 v	85 mv	0.71 %
CH3	-12.043 v	-12.013 v	-12.053 v	40 mv	0.33 %

2-2. Output voltage and ripple voltage v.s. input voltage

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Conditions Iout : Rated
Ta : 25 °c
Vout : CH1 -----
CH2 -----
CH3 -----

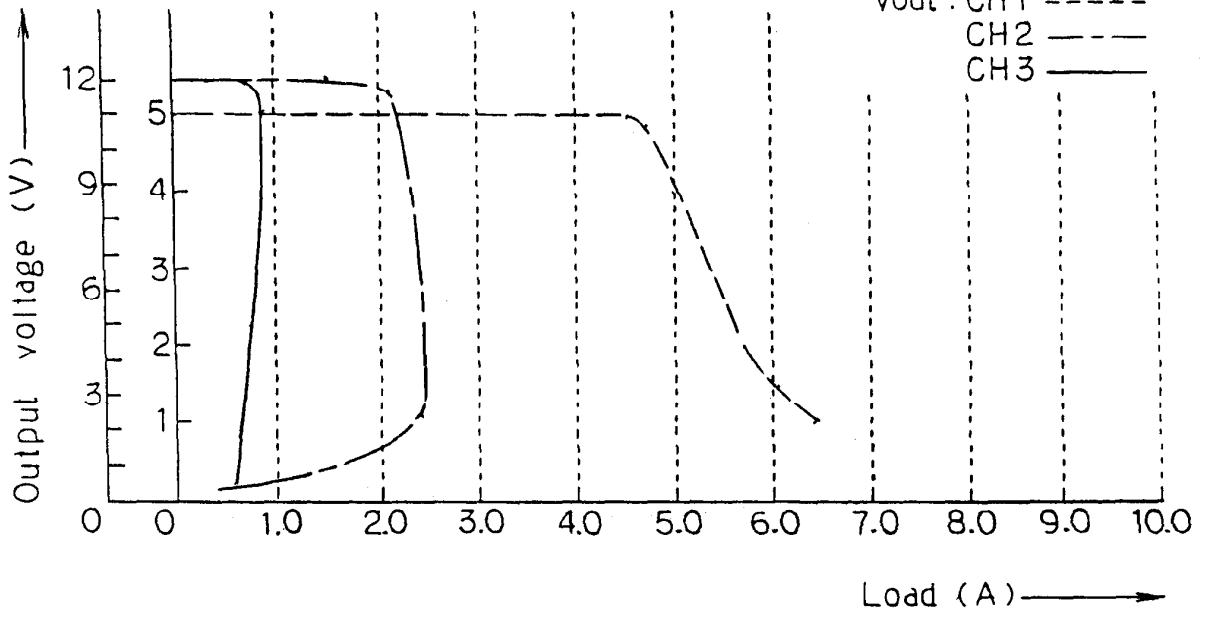


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2-3.0.C.P Characteristics

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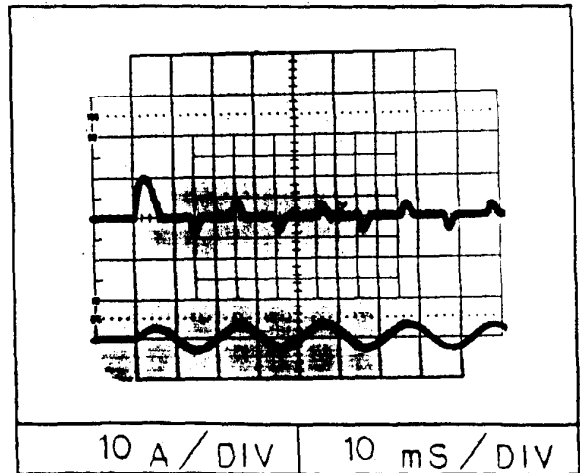
Conditions Vin : AC100v
Ta : 25°C
Vout : CH1 - - - - -
CH2 - - - - -
CH3 - - - - -



2-4. Inrush current waveform

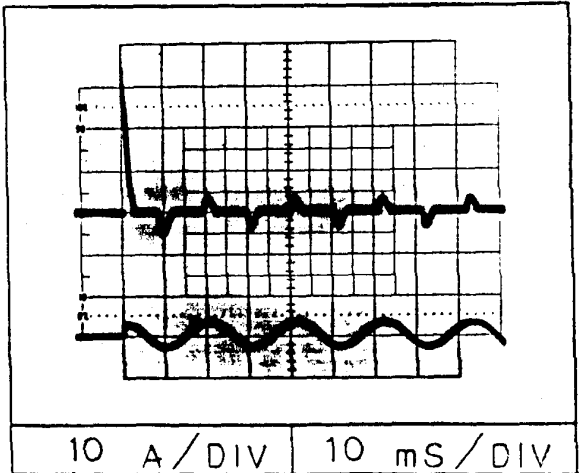
Conditions Vin : AC100v
Vout : Rated
Iout : Rated
Ta : 25°C

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Switch in phase angle of input AC voltage

$\phi = 0^\circ$



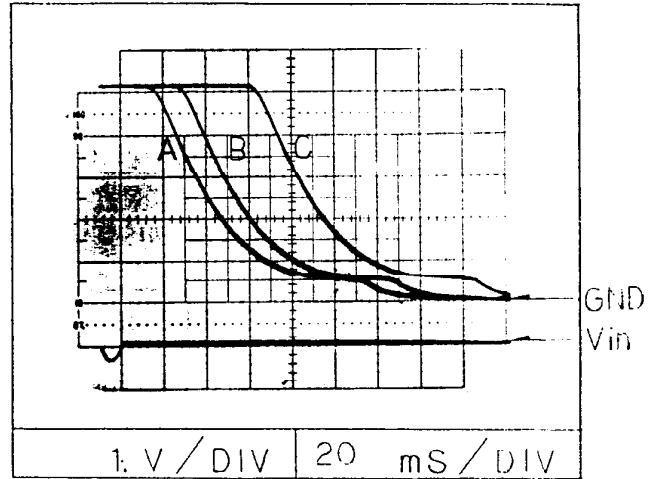
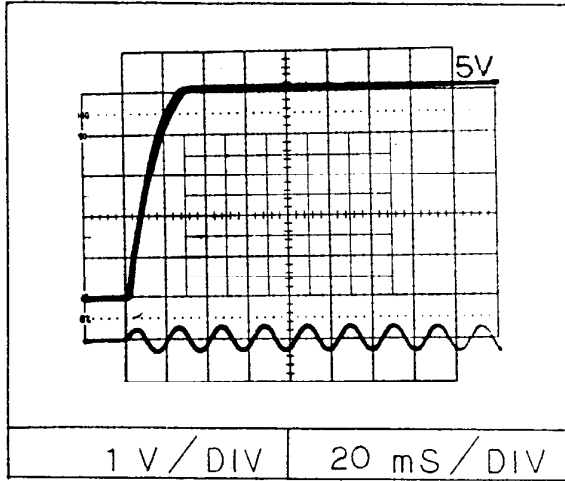
Switch in phase angle of input AC voltage

$\phi = 90^\circ$

Output rise time , Output fall time

Vout : 5V

Conditions Vin : AC85v,100v,132v
Iout : Rated
Ta : 25°C



Vout : 5V, 12V, -12V

Conditions Vin : AC100v
Iout : Rated
Ta : 25°C

