

QUALITY

TEST DATA

SWT65 -- *

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Terminology

Definition

V_{in}	-----	Input voltage
V_{out}	-----	Output voltage
I_{in}	-----	Input current
I_{out}	-----	Output current
T_a	-----	Ambient temperature

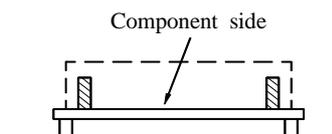
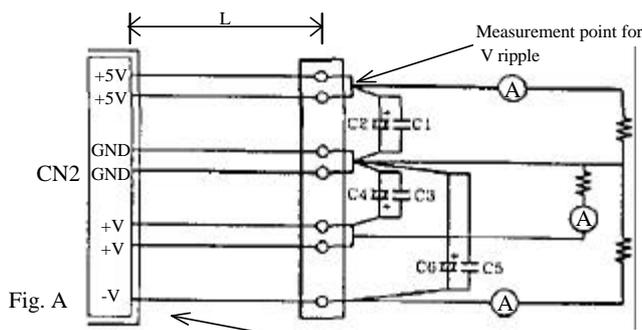
SWT65 SPECIFICATION

CA703-01-01D

ITEMS		MODEL	SWT65-522			SWT65-525			SWT65-5FF		
			CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
1	NOMINAL OUTPUT	V	+5	+12	-12	+5	+12	-5	+5	+15	-15
2	MIN. OUTPUT CURRENT	A	0.3	0	0	0.3	0	0	0.3	0	0
3	MAX. OUTPUT CURRENT	A	6	2.5	0.5	6	2.5	0.5	6	1.8	0.5
4	PEAK OUTPUT CURRENT	A	-	-	-	-	-	-	-	-	-
5	MAX. OUTPUT POWER	W	66			62.5			64.5		
6	EFFICIENCY (TYP) (* 1)	-	72%								
7	INPUT VOLTAGE RANGE (* 2)	-	AC85 -132V , 170-265V(auto selectable), 47-63Hz								
8	INPUT CURRENT (TYP) (* 1)	-	1.71A(Vin=100VAC) / 0.86A(Vin=200VAC)								
9	INRUSH CURRENT (TYP)	-	30A / 100VAC, 30A / 200VAC (cold start , Ta=25°C)								
10	OUTPUT VOLTAGE	-	CH1 +5V fixed, CH2.3 fixed Shipment condition: CH1: ±1% CH2(+12V): ±3% ; CH2(+15V):±5% CH3: ±5%								
11	MAX. RIPPLE & NOISE (* 3)	-	±5V: 120mV; ±12V: 150mV; ±15V: 150mV								
12	MAX. LINE REGULATION (*3,4)	-	CH1: 1%, CH2: 2%, CH3: 1%								
13	MAX. LOAD REGULATION (*3,5)	-	CH1: 2%, CH2: 4%, CH3: 2%								
14	MAX. TEMPERATURE (*3,6)	-	0.04%/°C								
15	OVER CURRENT (* 7)	-	Automatic recovery, O.C.P point : 105% ~								
16	OVER VOLTAGE (* 8)	-	6V ~ (CH1 only)								
17	HOLD - UP TIME (TYP) (* 1)	-	17ms (Input 100 VAC)								
18	OPERATING (* 9)	-	Convection cooling 0-50°C:100% load; 60°C:70% load								
19	OPERATING HUMIDITY	-	30%~90%RH								
20	STORAGE TEMPERATURE	-	-20°C ~ +85°C								
21	STORAGE HUMIDITY	-	10%~95%RH								
22	COOLING	-	Convection cooling								
23	EMI	-	Conform to FCC-B, VCCI-2, EN55022B								
24	WITHSTAND VOLTAGE	-	I/P-O/P: 3kVAC(20mA), I/P-FG: 2.5kVAC(20mA), O/P-FG: 500VAC(100mA) for 1min								
25	ISOLATION RESISTANCE	-	More than 100MΩ at Ta=25°C and 70%RH, Output - FG 500VDC								
26	VIBRATION	-	10 - 55Hz Amplitude (sweep 1min) Less than 19.6m/s ² X ,Y ,Z 1Hr each								
27	SHOCK	-	Less than 196.1m/s ²								
28	OUTPUT GROUNDING	-	All channels common ground (2 terminals)								
29	SAFETY	-	Conform to UL1950, CSA950, EN60950, DENTORI								
30	WEIGHT	-	350g								
31	SIZE (W*D*H)	m/m	88.9 x 152.4 x 45.0								
		inch	3.50 x 6.00 x 1.77 (3.15 x 4.80 mounting hole Φ 3.5mm)								

NOTES:

- *1: At 100VAC, 200VAC and MAX. OUTPUT POWER (Convection cooling), Ta=25°C.
- *2: For cases where conformance to various safety specs (UL,CSA, EN) are required to be described as 100-120VAC, 200-240VAC, 50/60 Hz on name plate.
- *3: Please refer to Fig A for measurement determination of line & load regulation and output ripple voltage.
(Measure with JEITA RC-9131 probe)
- *4: From 85-132VAC / 170-265VAC, constant load.
- *5: From Min. load - Full load (Maximum power), constant input voltage.
- *6: From 0°C ~ +50°C, constant input voltage and load.
- *7: Current limiting with automatic recovery. Avoid to operate over load or dead short for more than 30 seconds.
- *8: Over voltage clamping by zener diode
- *9: At standard mounting method, Fig B.



L: 150mm AWG#18
 C1,C3,C5: Film Cap 0.1μF
 C2,C4,C6: Elec. Cap 100μF
 Bandwidth of scope: 100MHz

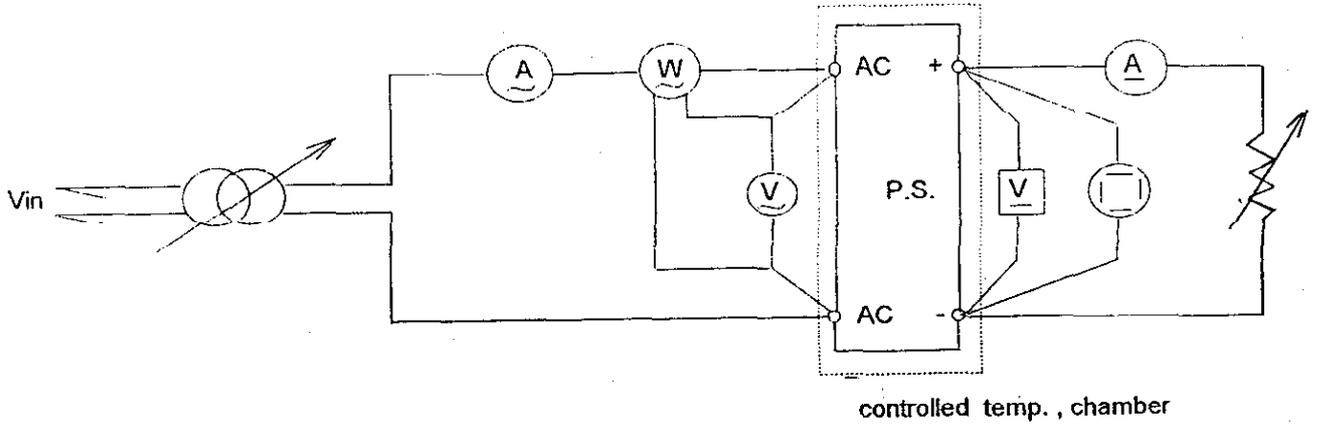
Fig. B

2. EVALUATION METHOD

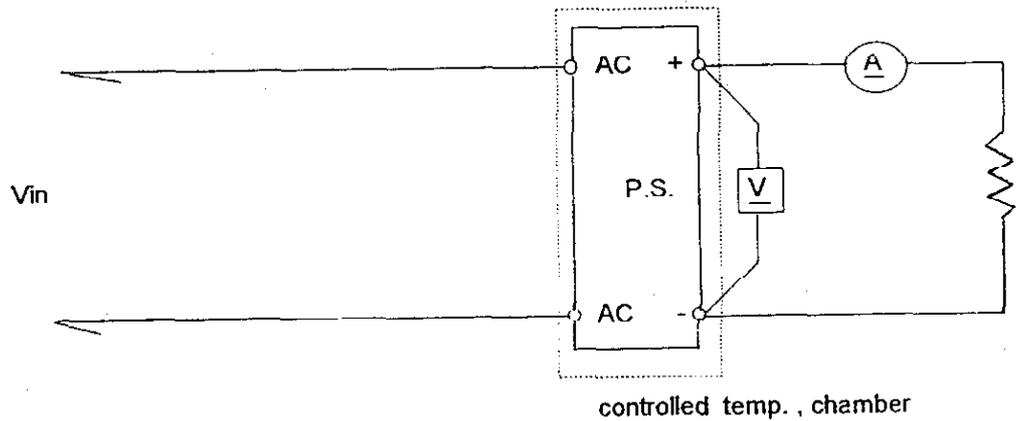
SWT65 - *

2-1 Circuits used for determination

(1) Steady state data

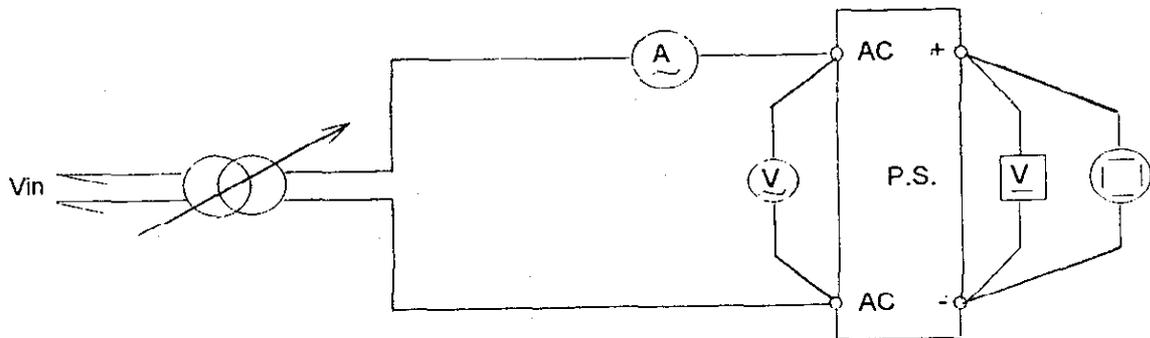


(2) Warm up voltage drift characteristics

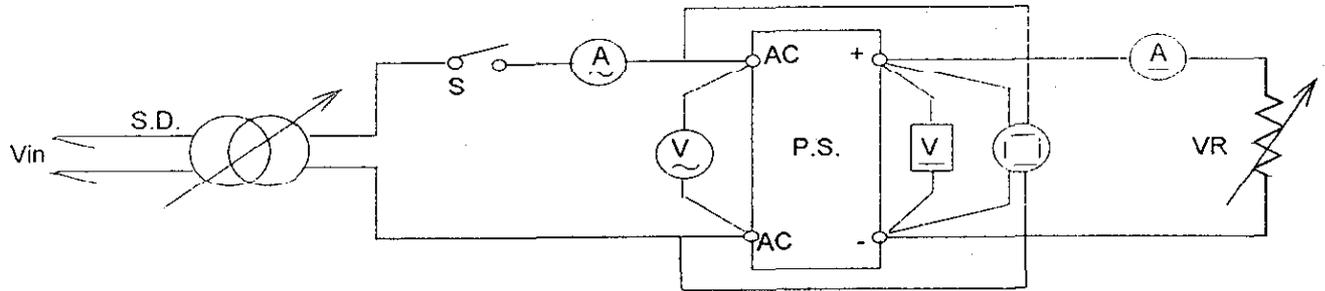


(3) Over current protection (OCP) characteristics Same as steady state data

(4) Over voltage protection (OVP) characteristics

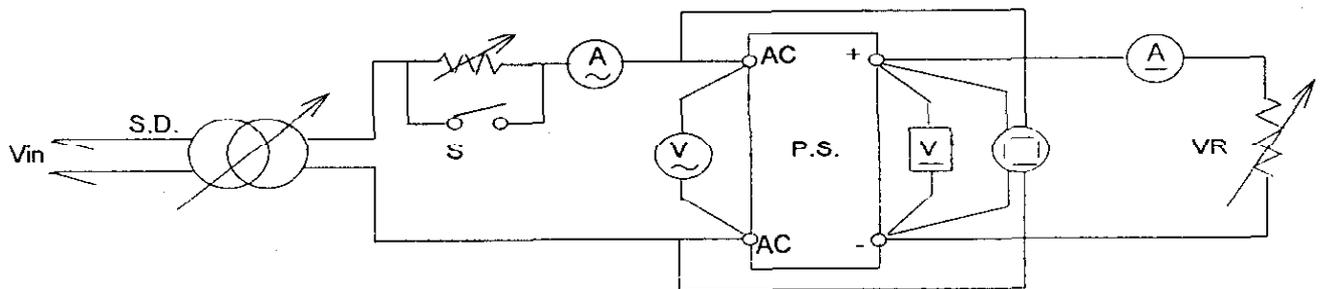


(5) Output rise characteristics

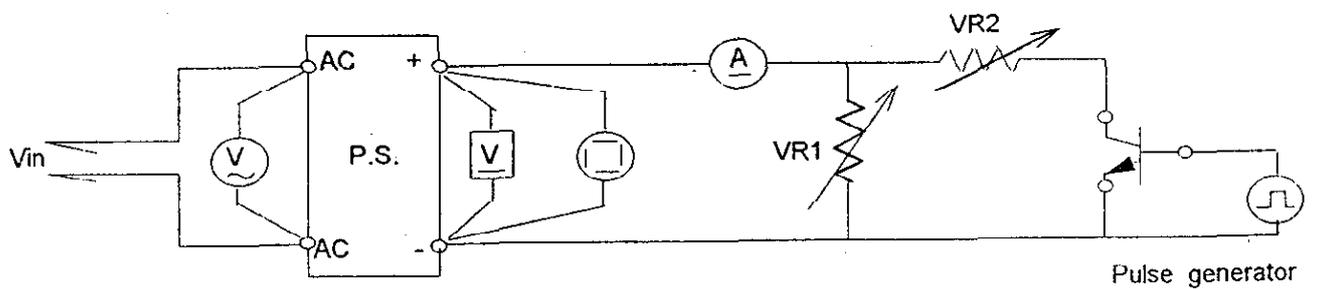


(6) Output fall characteristics same as output rise characteristics

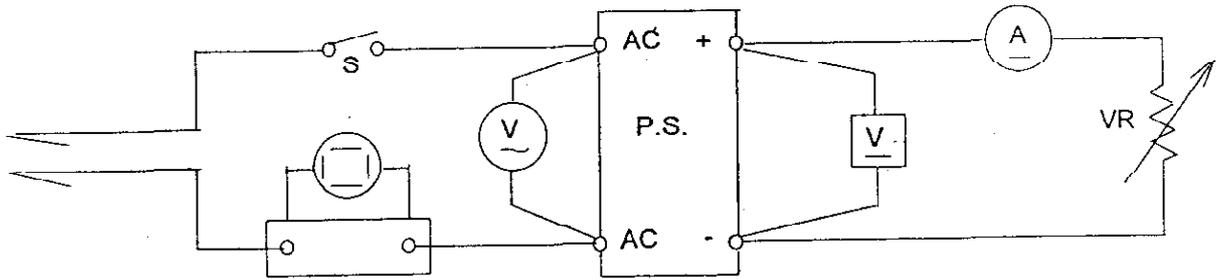
(7) Dynamic line response characteristics



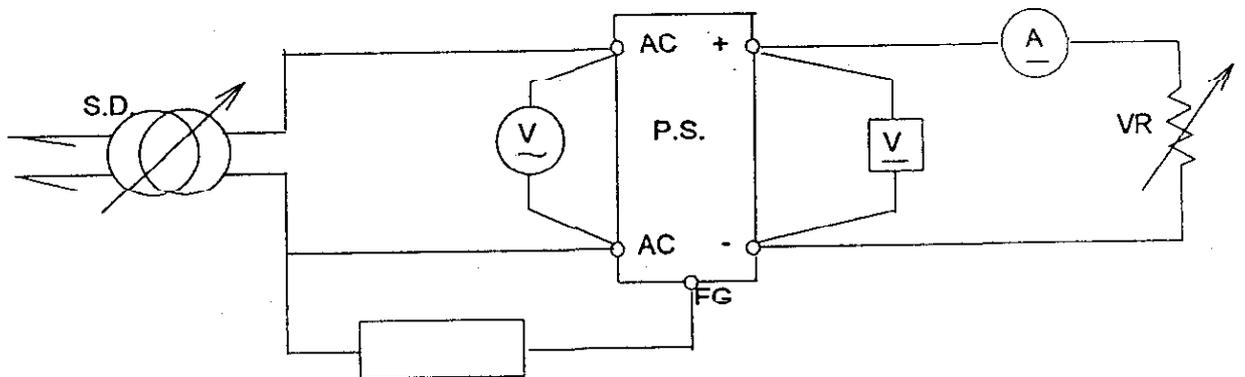
(8) Dynamic load response characteristics



(9) Inrush current characteristics



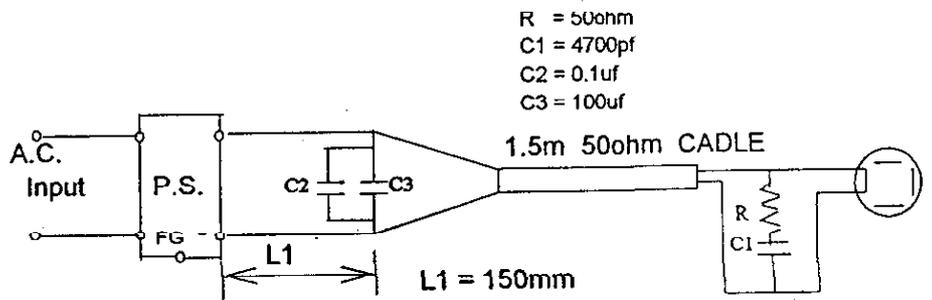
(10) Leakage current characteristics



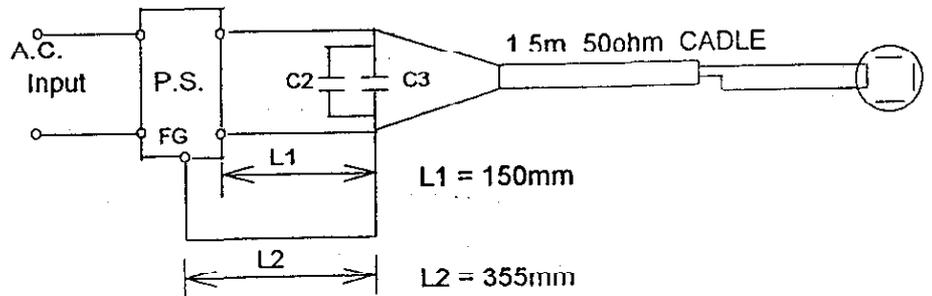
Leakage current meter

Note: Leakage current measured through a 1Kohm resistor
Range wed: AC + DC

(11) Output - ripple, noise
a) NORMAL MODE



b) NORMAL + COMMON MODE



2 - 2 List of equipment

	EQUIPMENT USED	MANUFACTURER	MODEL NO.
1	Oscilloscope	HITACHI	V - 1050
2	Digital storage oscilloscope	TEKTRONIX	TDS - 540A
3	Digital multimeter	MASTECH	DM8145A
4	Digital watt/current/volt meter	HIOKI	3186
5	DC Ampere meter	YOKOGAWA	2051
6	Autotransformer	YUYAO	TDGC - 2
7	Variable resistive load	IWASHITA	D - 5
8	Electric load	KIKUSUI	PLZ72W, PLZ300W
9	Digirush currenter	TAKAMISAWA	PSA - 200
10	Current Probe/Amplifier	TEKTRONIX	A6303/AM503B
11	Controlled Temp. Chamber	HIFLEX	FXL400
12	Leakage current meter	YOKOGAWA	3226
13	AC Power Supply	KIKUSUI	PCR - 2000L

REGULATION - Line & Load,Temp. Drift

SWT65-522

CH1

1. Regulation - Line & Load

Conditions
CH2,CH3: Ta = 25°C
Iout = 100%

Iout / Vin	AC 85V	AC 100V	AC 132V	Line Regulation	
Min Load	5.085V	5.085V	5.084V	0.001V	0.02%
50%	5.085V	5.084V	5.083V	0.002V	0.04%
100%	5.084V	5.086V	5.086V	0.002V	0.04%
Load	0.001V	0.002V	0.003V		
Regulation	0.02%	0.04%	0.06%		

2.. Temperature Drift

Conditions Vin = 100VAC
Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	5.096V	5.086V	5.086V	0.010V	0.20%

CH2

1. Regulation - Line & Load

Conditions CH1,CH3: Ta = 25°C
Iout = 100%

Iout / Vin	AC 85V	AC 100V	AC 132V	Line Regulation	
Min Load	12.259V	12.256V	12.254V	0.005V	0.04%
50%	12.109V	12.104V	12.101V	0.008V	0.07%
100%	12.200V	12.193V	12.167V	0.033V	0.28%
Load	0.150V	0.152V	0.153V		
Regulation	1.25%	1.27%	1.28%		

2.. Temperature Drift

Conditions Vin = 100VAC
Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	12.210V	12.193V	12.175V	0.035V	0.29%

CH3

1. Regulation - Line & Load

Conditions CH1,CH2: Ta = 25°C
Iout = 100%

Iout / Vin	AC 85V	AC 100V	AC 132V	Line Regulation	
Min Load	-12.033V	-12.032V	-12.031V	0.002V	0.02%
50%	-12.033V	-12.032V	-12.031V	0.002V	0.02%
100%	-11.999V	-11.996V	-12.002V	0.006V	0.05%
Load	0.034V	0.036V	0.029V		
Regulation	0.28%	0.30%	0.24%		

2.. Temperature Drift

Conditions Vin = 100VAC
Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	-12.023V	-11.996V	-11.996V	0.027V	0.23%

REGULATION - Line & Load,Temp. Drift

SWT65-522

CH1**1. Regulation - Line & Load**

Conditions

Ta = 25°C

CH2,CH3:

Iout = 100%

Iout / Vin	AC 170V	AC 200V	AC 265V	Line Regulation	
Min Load	5.085V	5.084V	5.084V	0.001V	0.02%
50%	5.084V	5.083V	5.083V	0.001V	0.02%
100%	5.083V	5.085V	5.085V	0.002V	0.04%
Load Regulation	0.002V	0.002V	0.002V		
	0.04%	0.04%	0.04%		

2.. Temperature Drift

Conditions

Vin = 200VAC

Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	5.094V	5.085V	5.084V	0.010V	0.20%

CH2**1. Regulation - Line & Load**

Conditions

Ta = 25°C

CH1,CH3:

Iout = 100%

Iout / Vin	AC 170V	AC 200V	AC 265V	Line Regulation	
Min Load	12.258V	12.256V	12.252V	0.006V	0.05%
50%	12.112V	12.110V	12.104V	0.008V	0.07%
100%	12.181V	12.173V	12.161V	0.020V	0.17%
Load Regulation	0.146V	0.146V	0.148V		
	1.22%	1.22%	1.23%		

2.. Temperature Drift

Conditions

Vin = 200VAC

Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	12.196V	12.173V	12.172V	0.024V	0.20%

CH3**1. Regulation - Line & Load**

Conditions

Ta = 25°C

CH1,CH2:

Iout = 100%

Iout / Vin	AC 170V	AC 200V	AC 265V	Line Regulation	
Min Load	-12.035V	-12.037V	-12.038V	0.003V	0.03%
50%	-12.030V	-12.028V	-12.029V	0.002V	0.02%
100%	-12.012V	-12.013V	-12.014V	0.002V	0.02%
Load Regulation	0.023V	0.024V	0.024V		
	0.19%	0.20%	0.20%		

2.. Temperature Drift

Conditions

Vin = 200VAC

Iout = 100%

Ta(°C)	0	25	50	Temp. Stability	
Vout	-12.025V	-12.013V	-12.003V	0.022V	0.18%

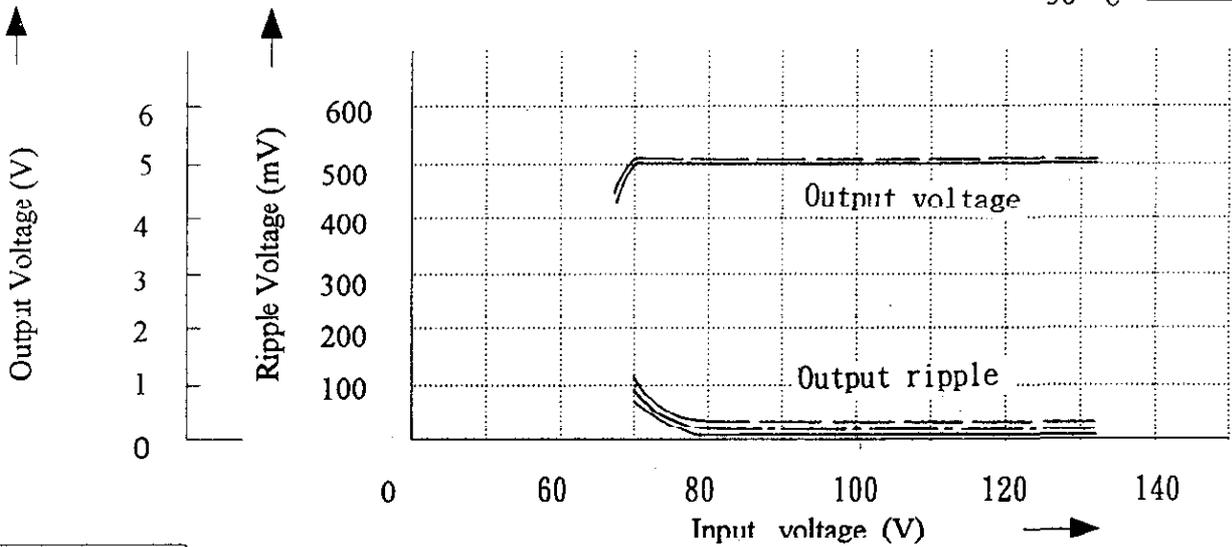
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OUTPUT VOLTAGE AND RIPPLE v.s INPUT VOLTAGE

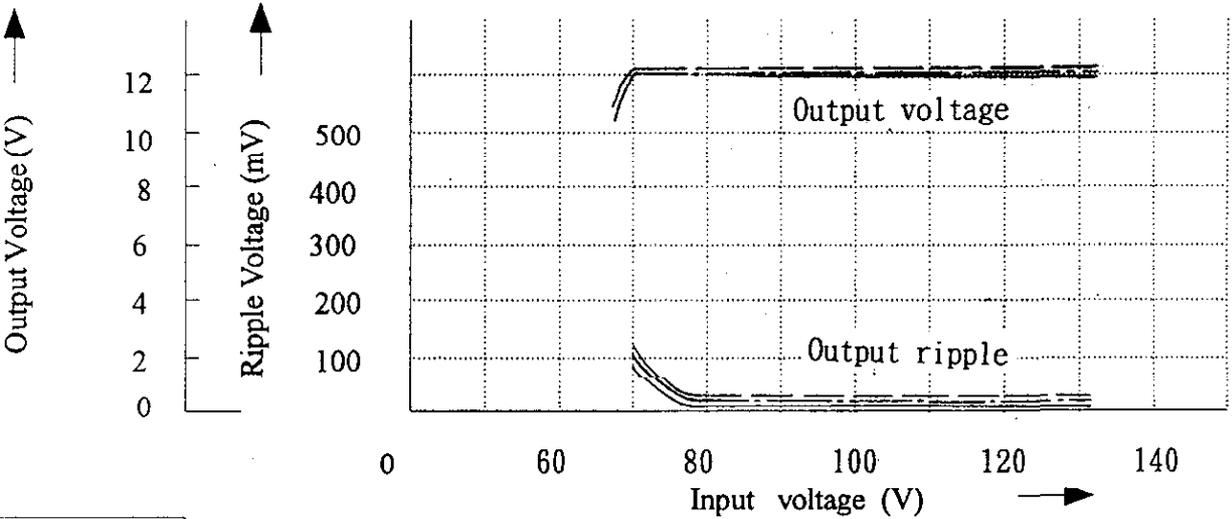
SWT65 - 522

Conditions $I_{out} = 100\%$
 $T_a: 0^\circ\text{C}$ — — —
 25°C - - - -
 50°C ————

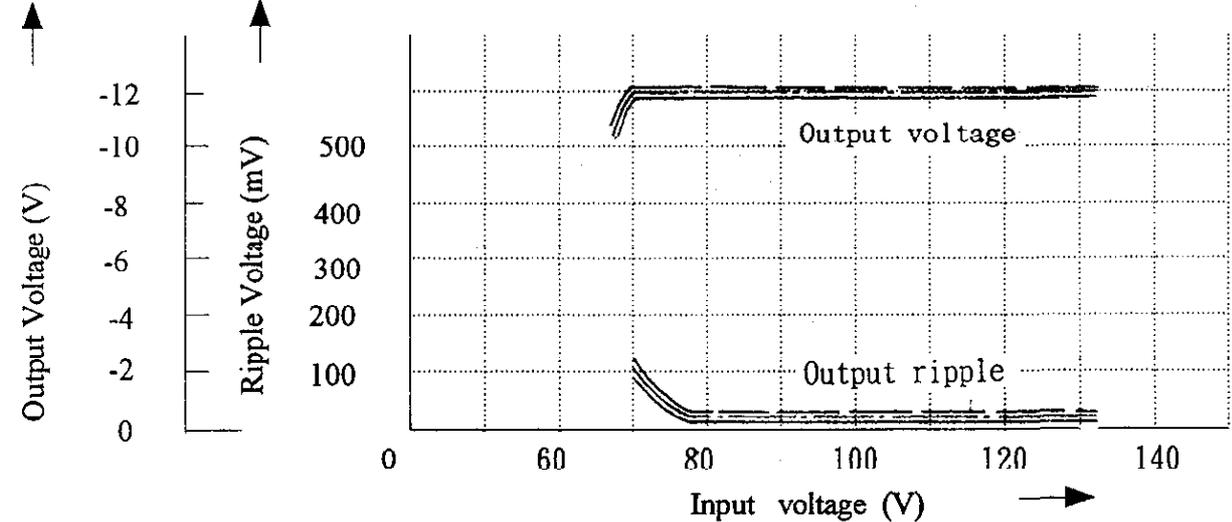
CH1



CH2



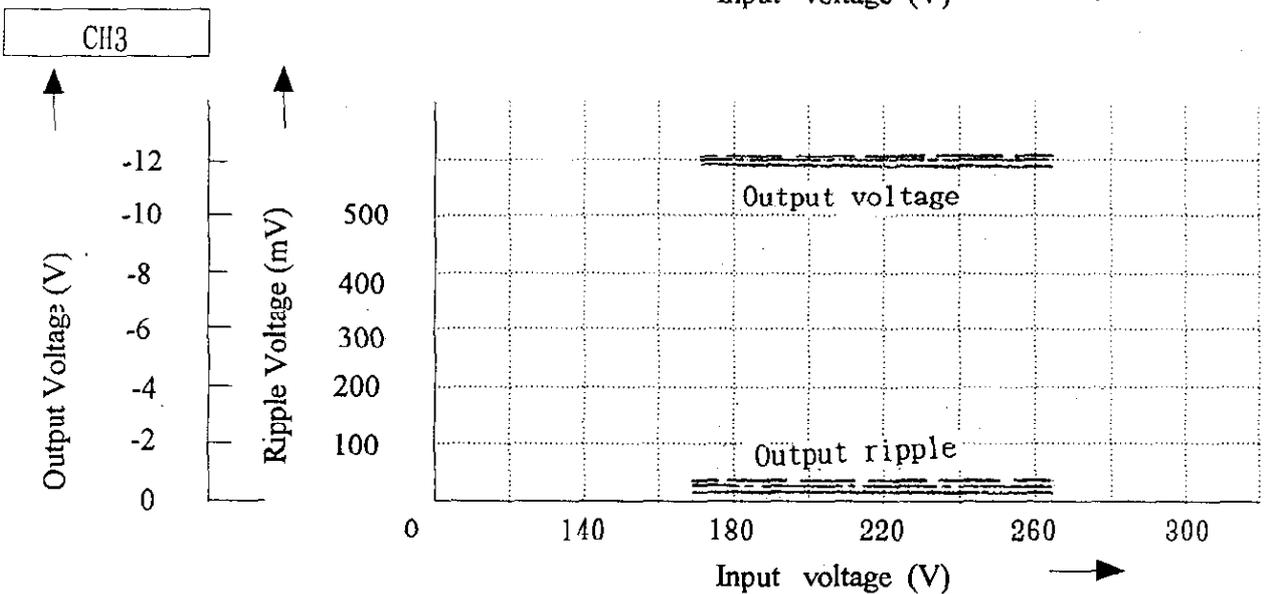
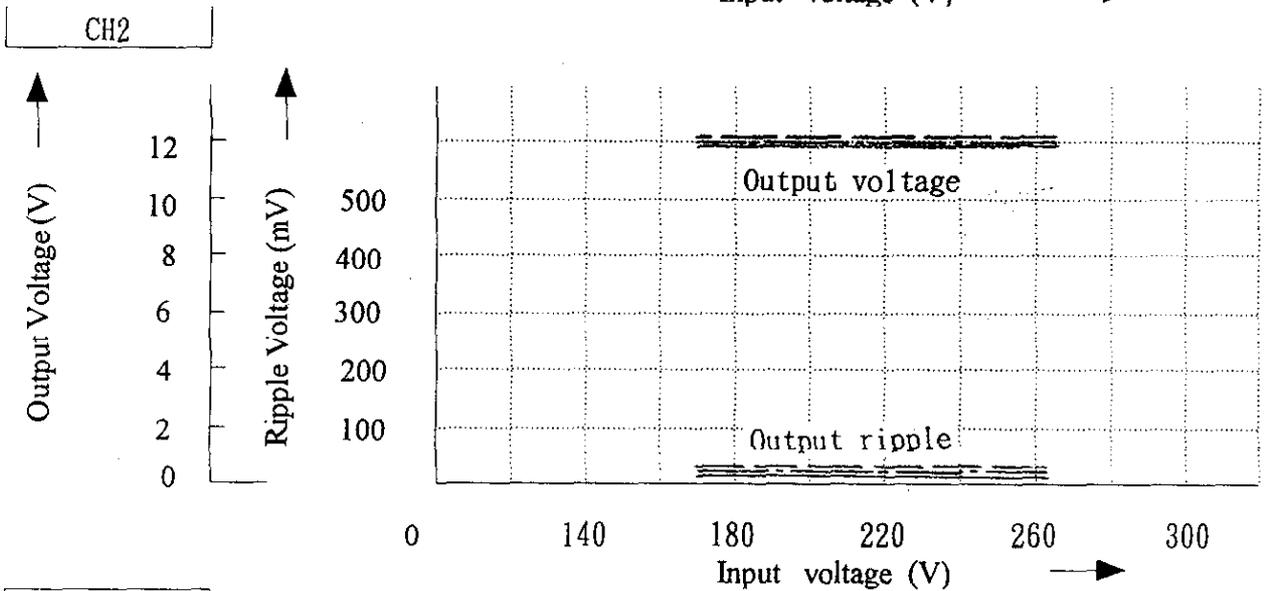
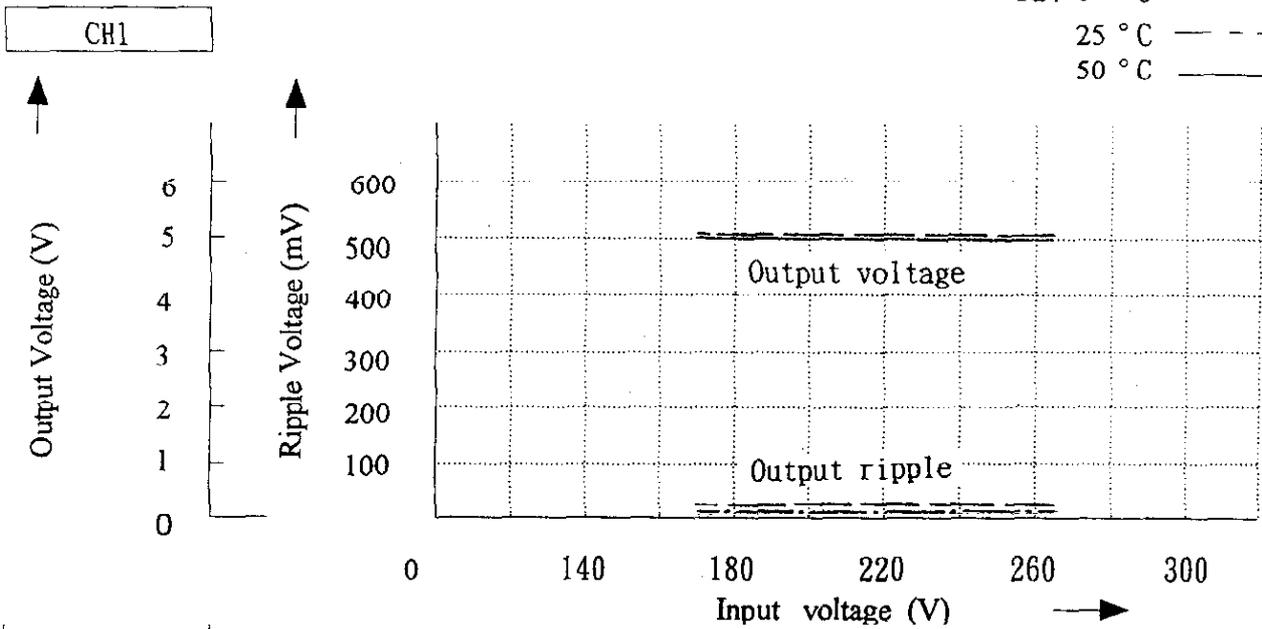
CH3



OUTPUT VOLTAGE AND RIPPLE v.s INPUT VOLTAGE

SWT65 - 522

Conditions $I_{out} = 100\%$
 $T_a : 0\text{ }^{\circ}\text{C}$ — — —
 $25\text{ }^{\circ}\text{C}$ - - - -
 $50\text{ }^{\circ}\text{C}$ — — —



EFFICIENCY AND INPUT CURRENT v.s

SWT65 - *

OUTPUT CURRENT

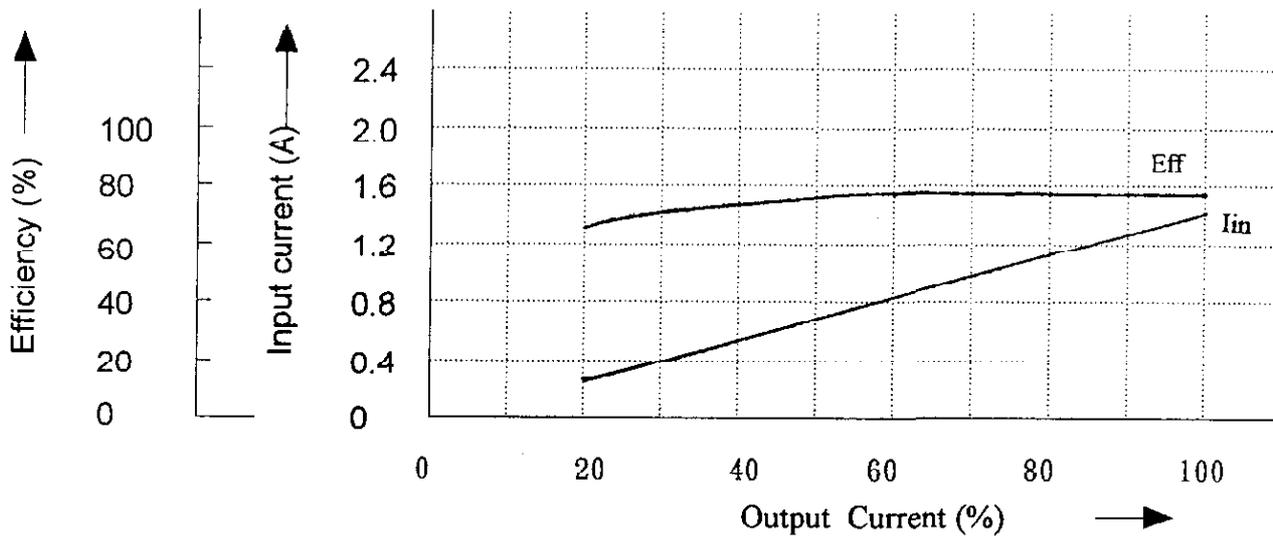
Conditions

$V_{inA} = 100VAC$

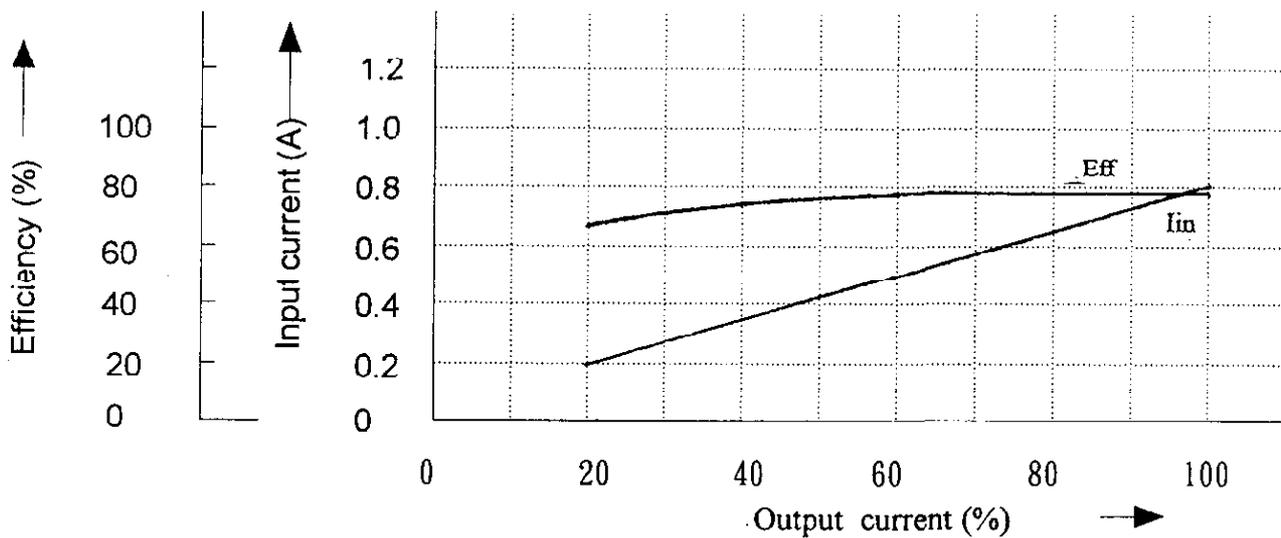
$V_{inB} = 200VAC$

$T_a = 25\text{ }^\circ C$

A: 100VAC



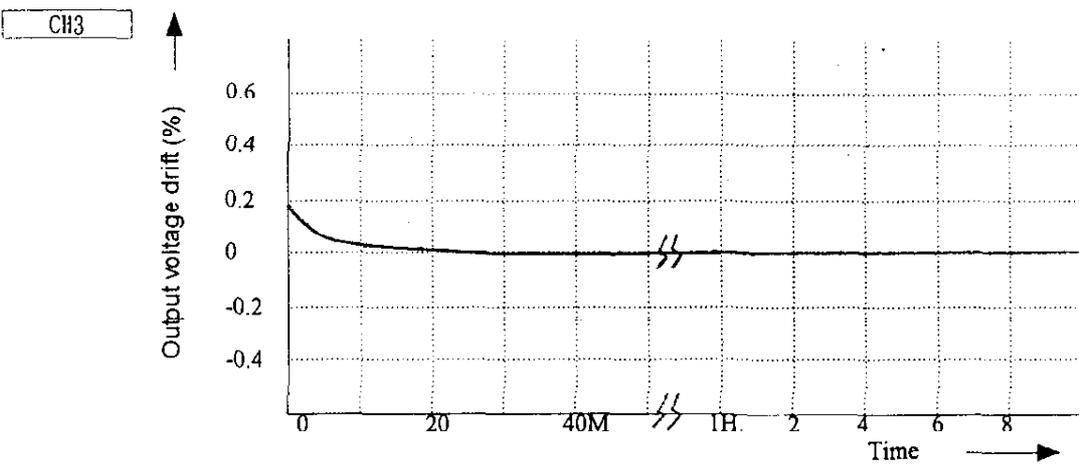
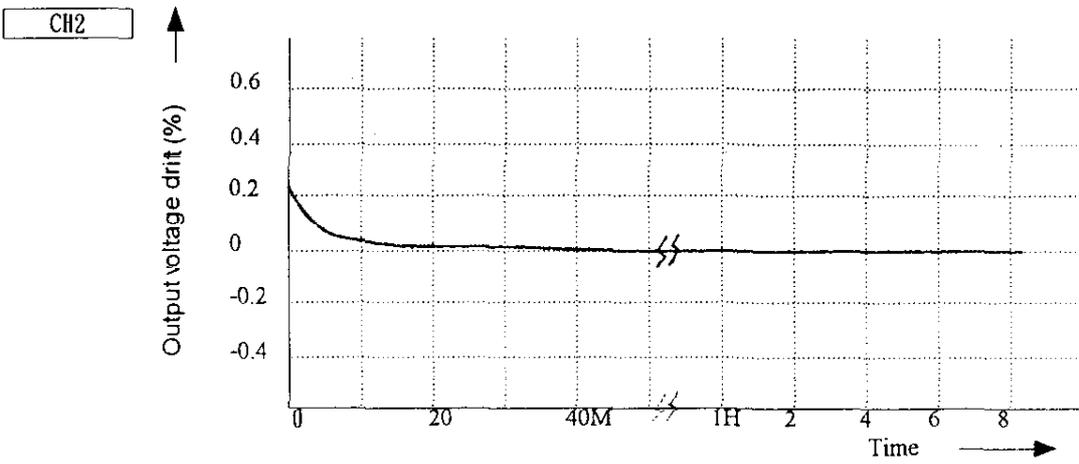
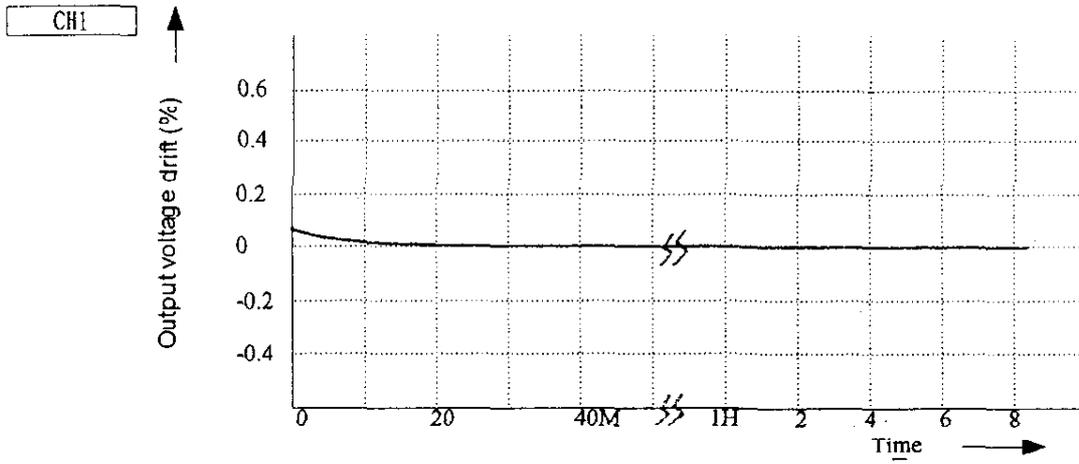
B: 200VAC



WARM UP DRIFT

SWT65 - 522

Conditions
 $V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25\text{ }^{\circ}C$



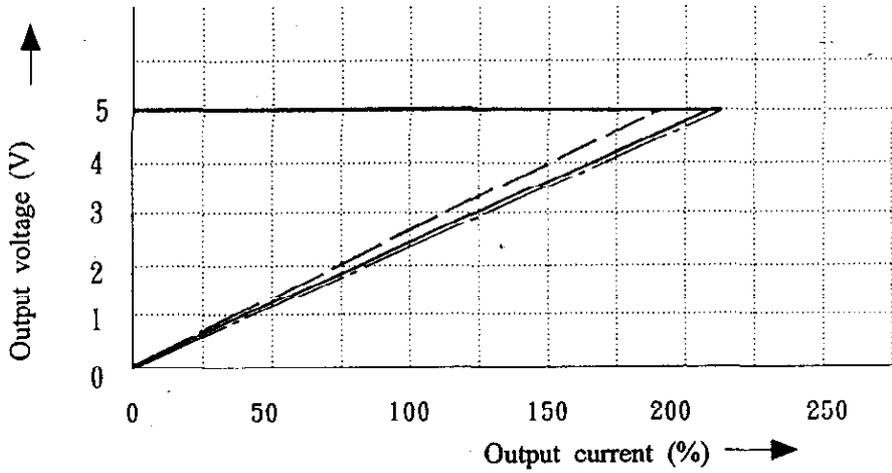
OCP CHARACTERISTICS v.s
INPUT VOLTAGE

SWT65 - 522

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} : 85\text{VAC}$ — — —
 100VAC — — —
 132VAC — — —

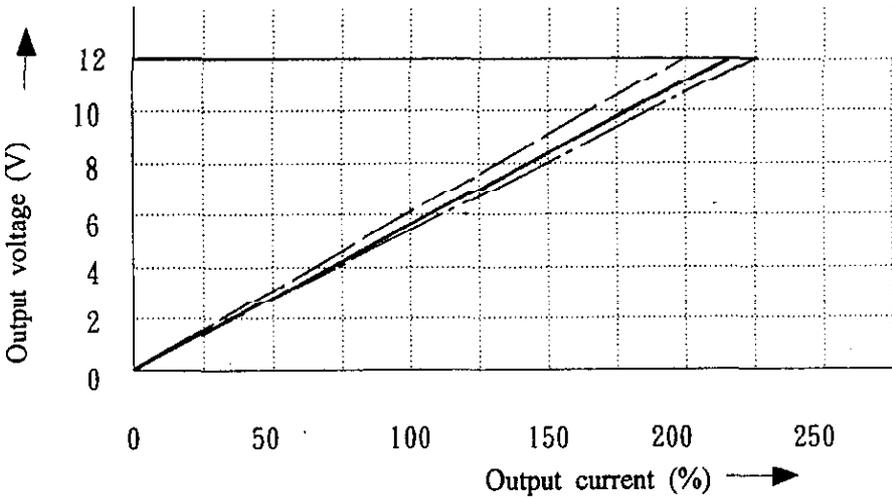
CH1

$I_{out} :$
CH2,3:100%



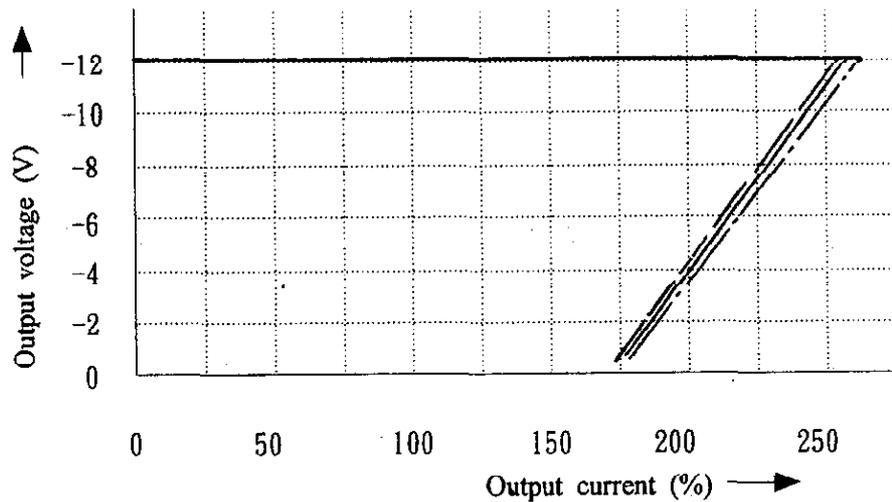
CH2

$I_{out} :$
CH1,3:100%



CH3

$I_{out} :$
CH1,2:100%



OCP CHARACTERISTICS v.s INPUT VOLTAGE

SWT65 - 522

Conditions

Ta = 25 °C

Vin :170VAC

200VAC

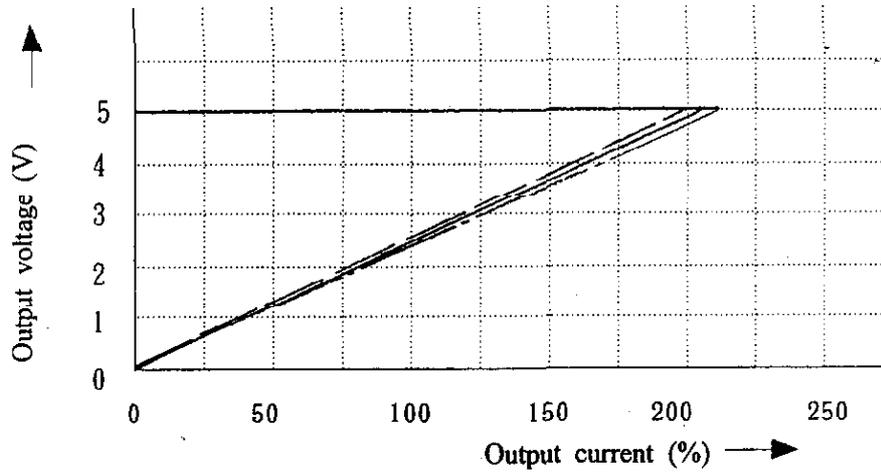
265VAC



CH1

Iout:

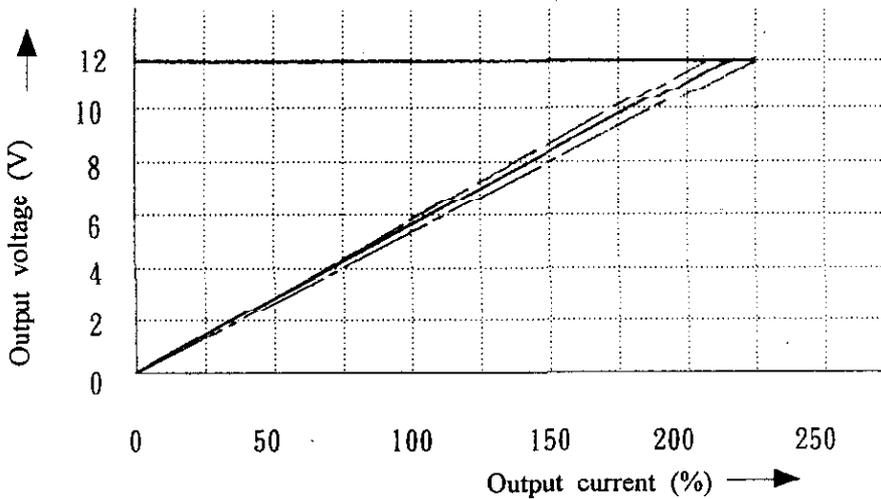
CH2,3:100%



CH2

Iout:

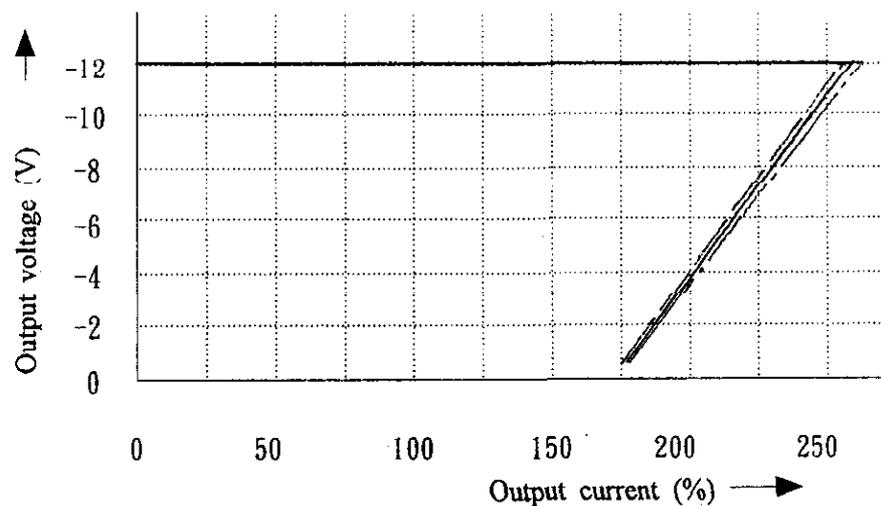
CH1,3:100%



CH3

Iout:

CH1,2:100%



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OCV CHARACTERISTICS v.s TEMP.

SWT65 - 522

Conditions

$V_{in} = 100VAC$

$T_a : 0\text{ }^{\circ}C$ — — —

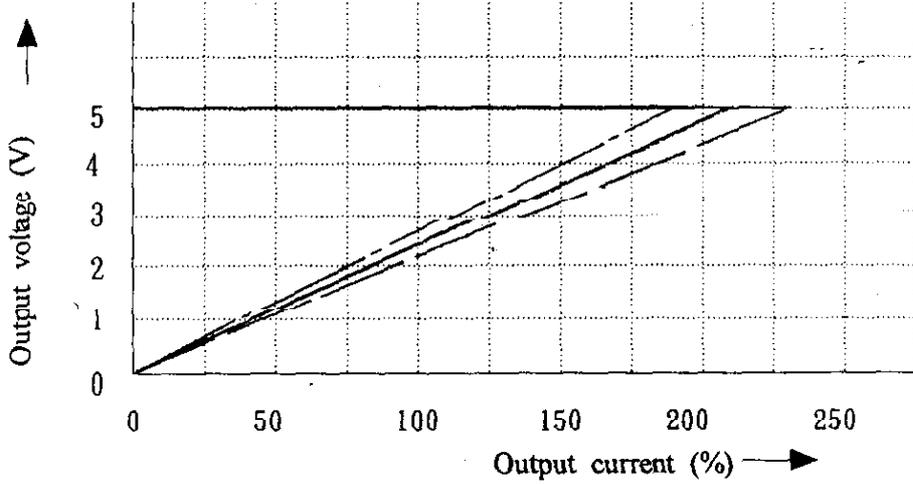
25 $^{\circ}C$ — — —

50 $^{\circ}C$ - - - -

CH1

Iout:

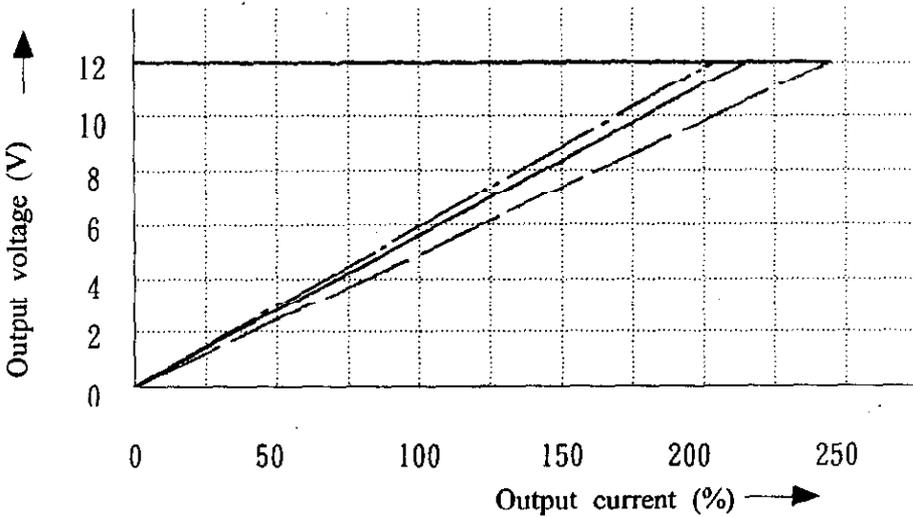
CH2,3:100%



CH2

Iout:

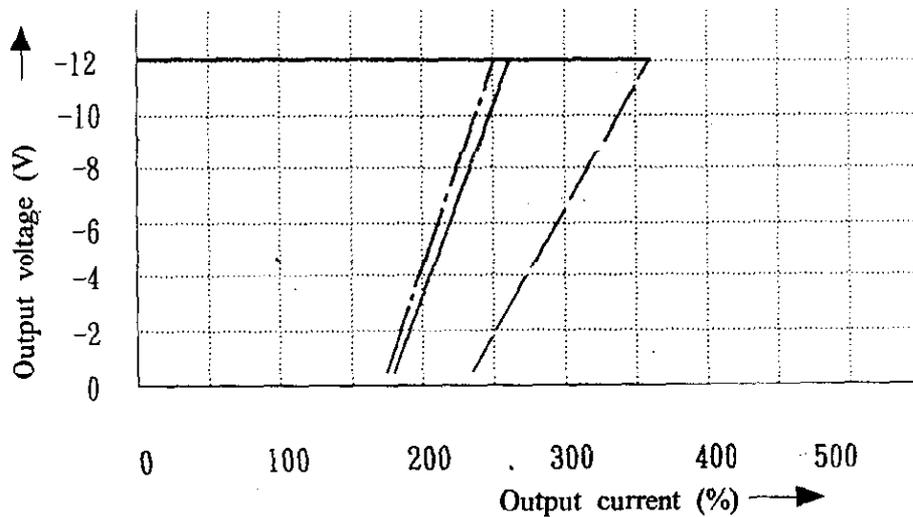
CH1,3:100%



CH3

Iout:

CH1,2:100%

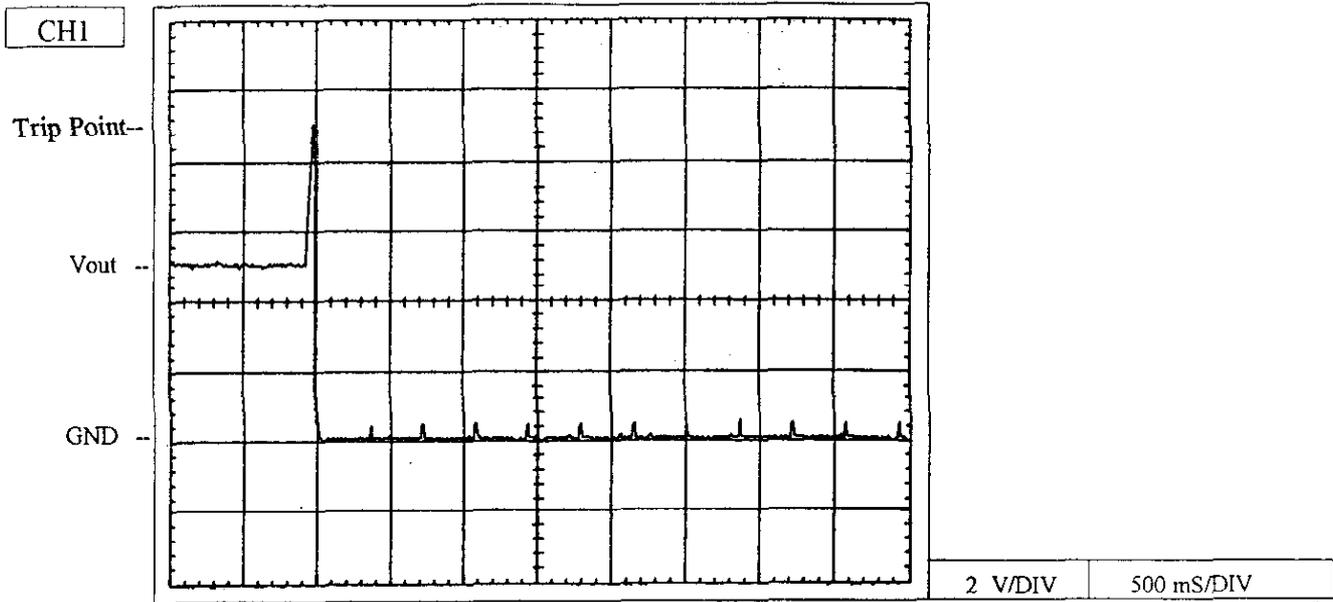


O.V.P CHARACTERISTICS

SWT65- *

Conditions

Vin = 100VAC
Iout = Min Load
Ta = 25 °C

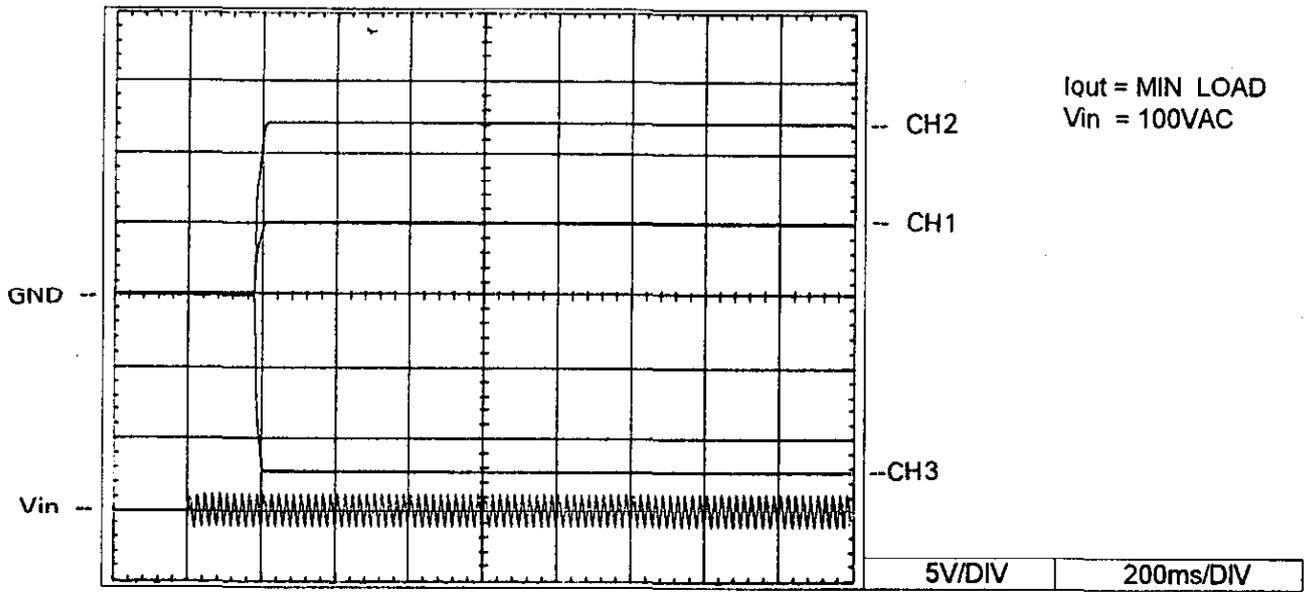
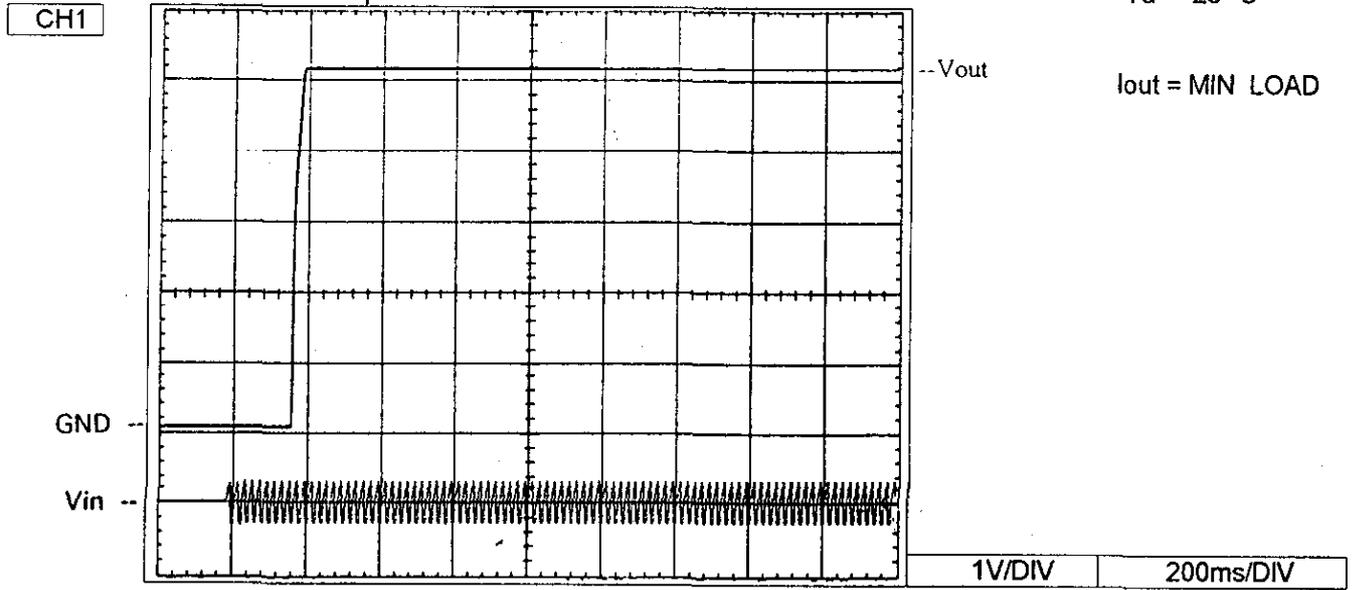


OUTPUT RISE TIME

Conditions

- (A) $V_{in} = 85VAC$
 - (B) $V_{in} = 100VAC$
 - (C) $V_{in} = 132VAC$
- $T_a = 25^\circ C$

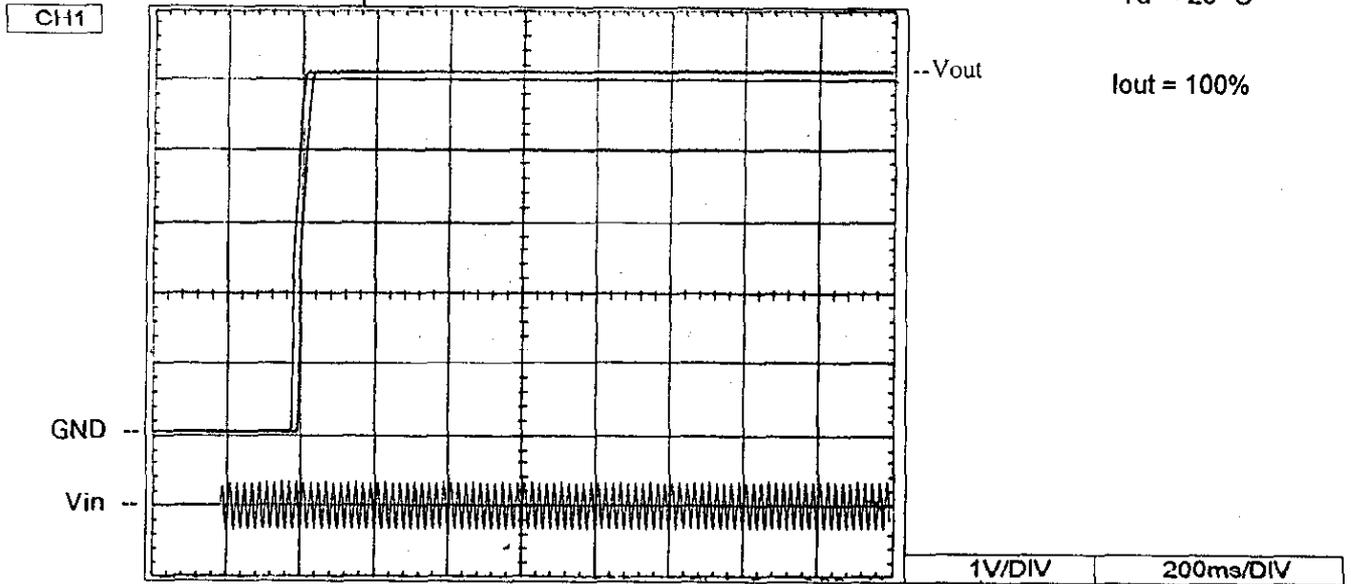
$I_{out} = MIN\ LOAD$



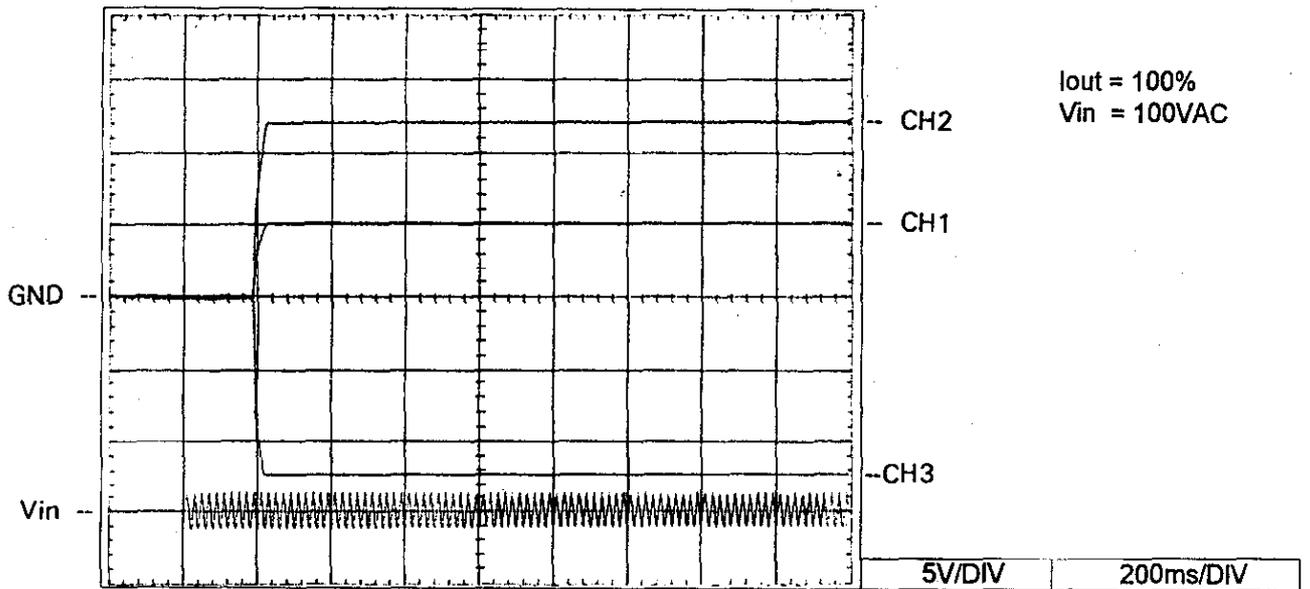
OUTPUT RISE TIME

Conditions

- (A) $V_{in} = 85VAC$
- (B) $V_{in} = 100VAC$
- (C) $V_{in} = 132VAC$
- $T_a = 25^\circ C$



$I_{out} = 100\%$



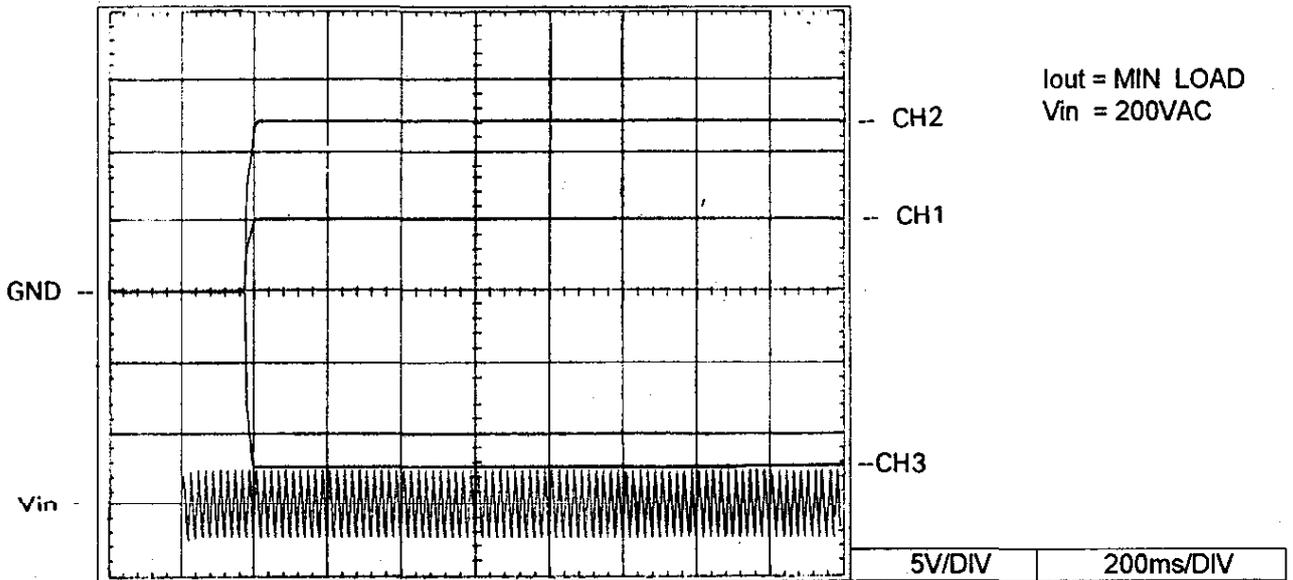
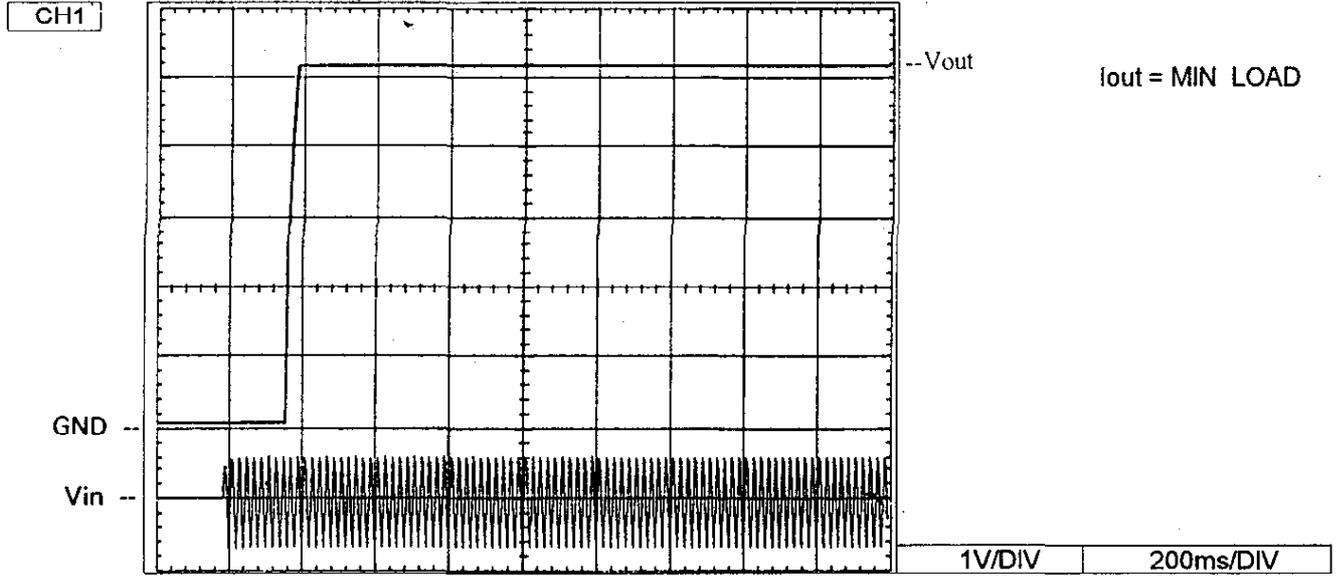
$I_{out} = 100\%$
 $V_{in} = 100VAC$

OUTPUT RISE TIME

Conditions

- (A) $V_{in} = 170VAC$
- (B) $V_{in} = 200VAC$
- (C) $V_{in} = 265VAC$
- $T_a = 25^\circ C$

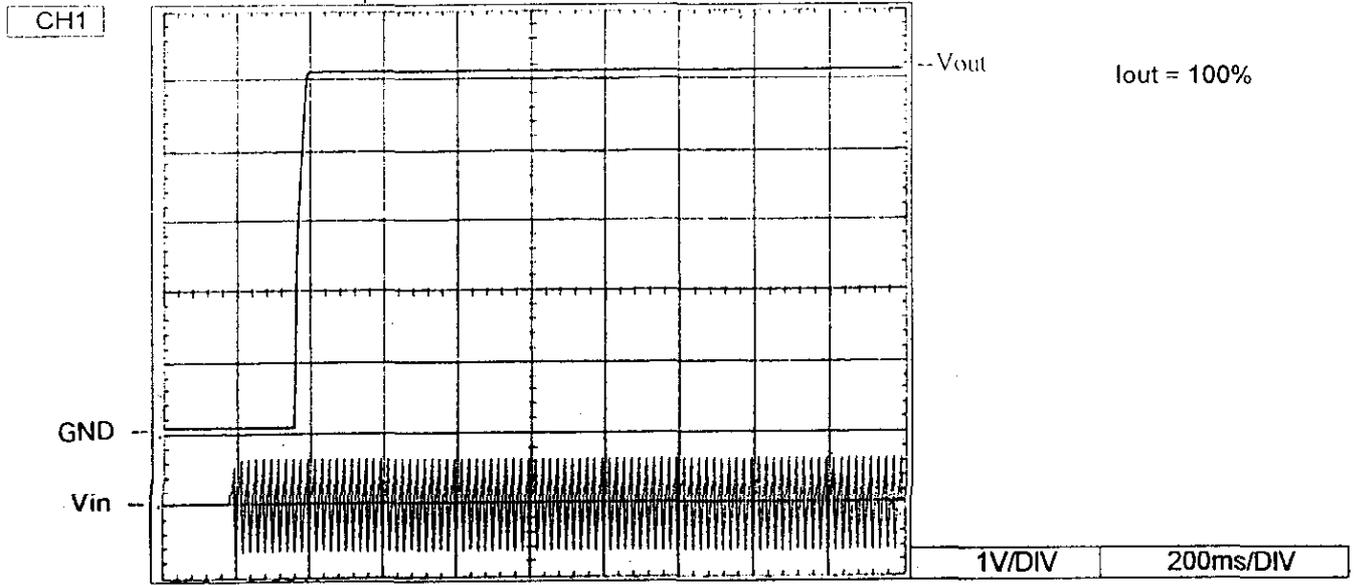
$I_{out} = MIN\ LOAD$



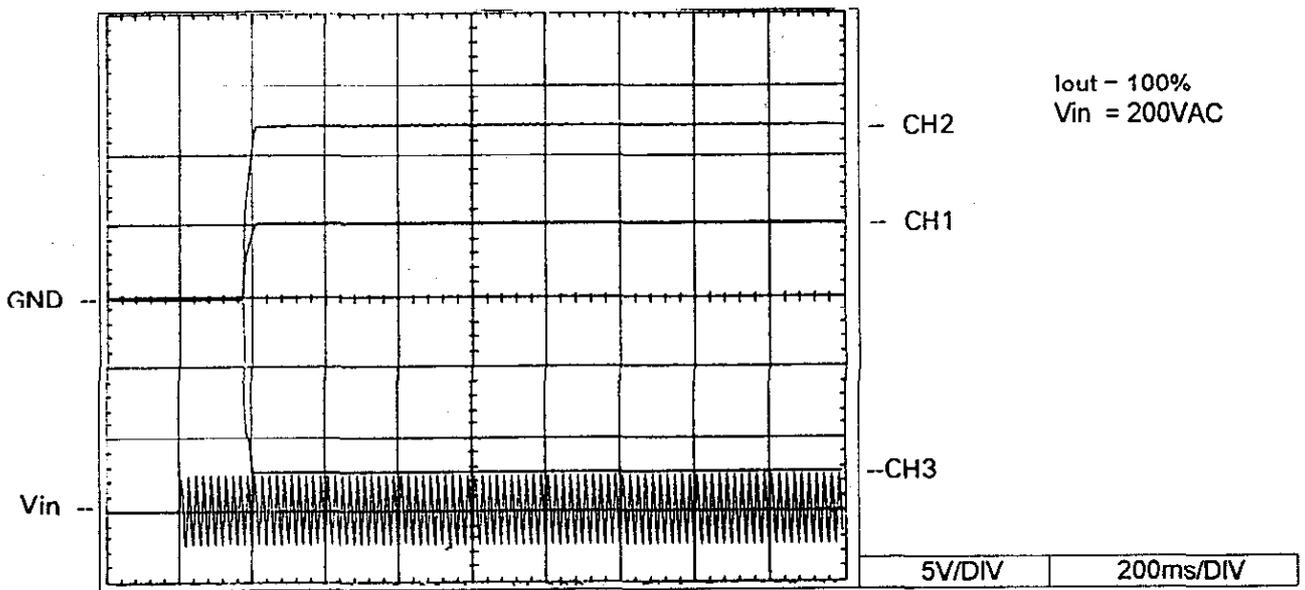
OUTPUT RISE TIME

Conditions

- (A) $V_{in} = 170VAC$
- (B) $V_{in} = 200VAC$
- (C) $V_{in} = 265VAC$
- $T_a = 25^\circ C$



$I_{out} = 100\%$

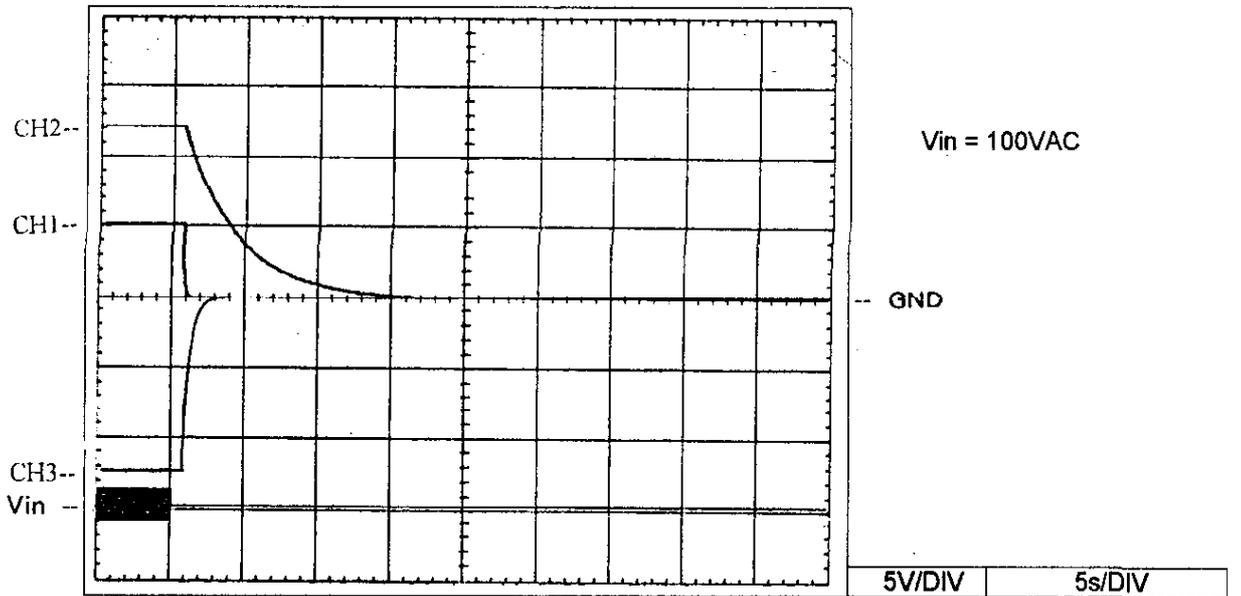
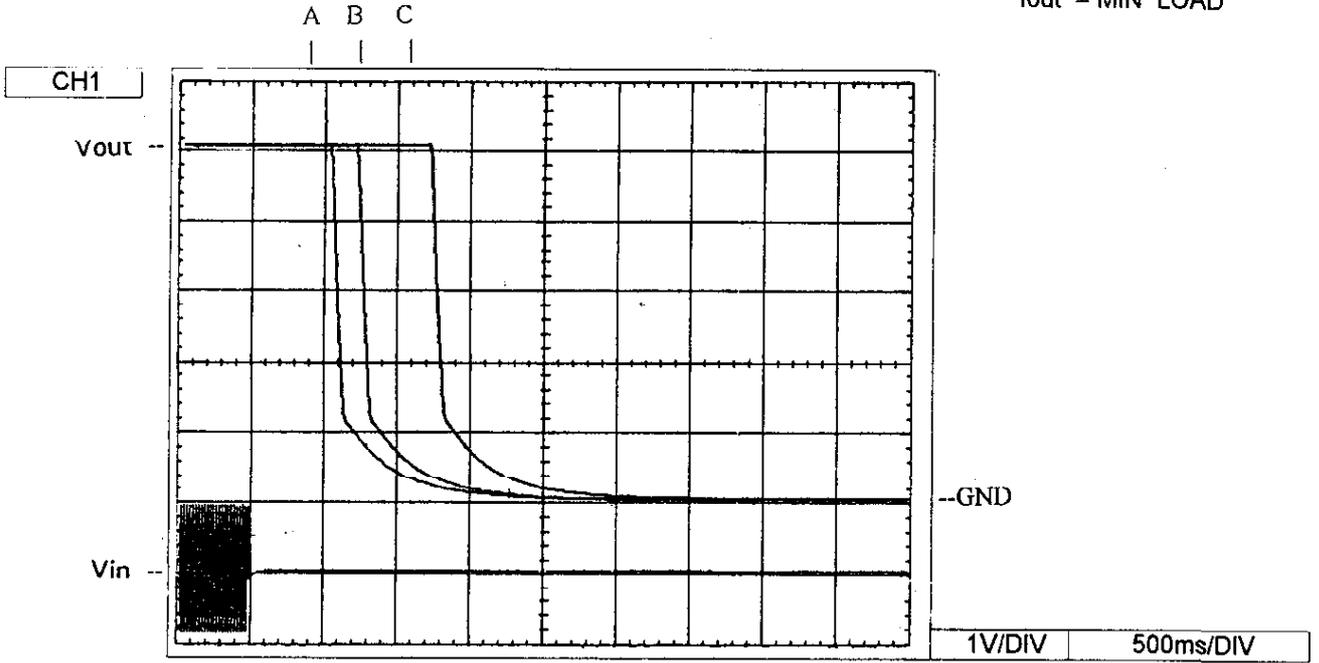


$I_{out} = 100\%$
 $V_{in} = 200VAC$

OUTPUT FALL TIME

Conditions

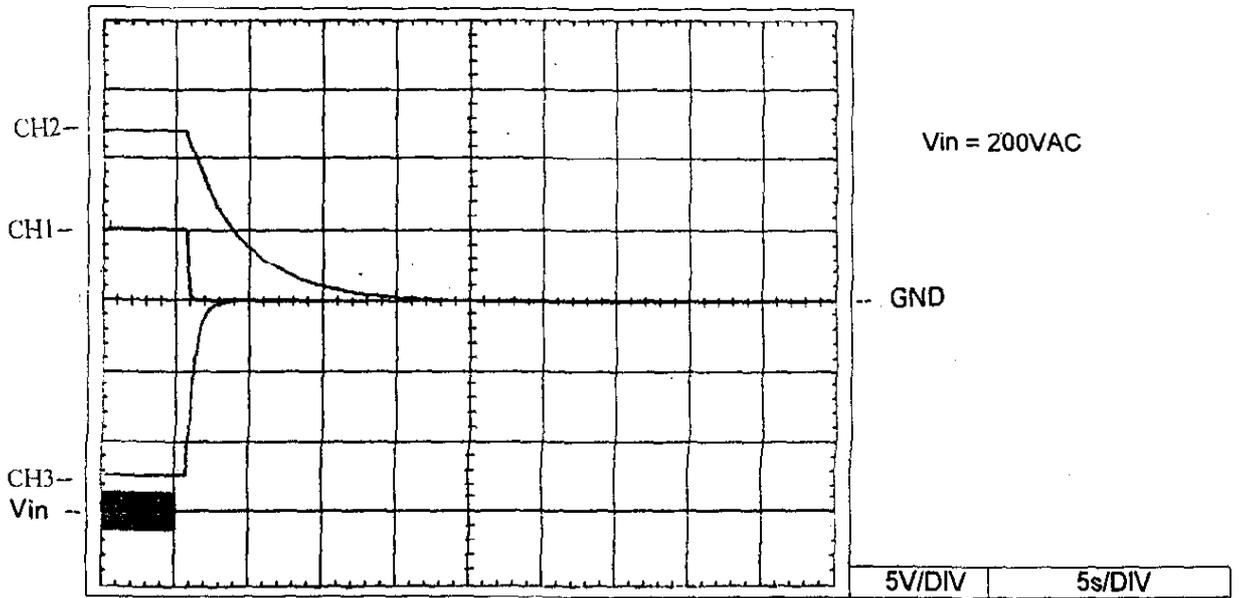
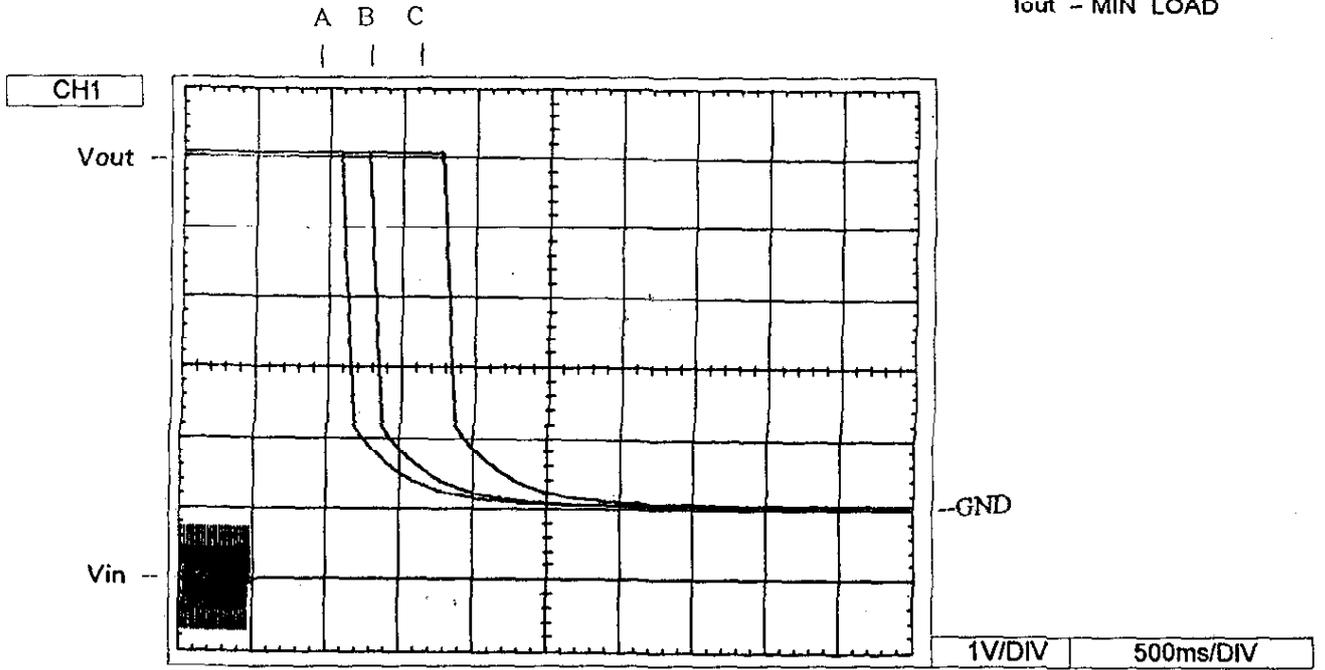
- (A) $V_{in} = 85VAC$
- (B) $V_{in} = 100VAC$
- (C) $V_{in} = 132VAC$
- $T_a = 25^{\circ}C$
- $I_{out} = MIN\ LOAD$



OUTPUT FALL TIME

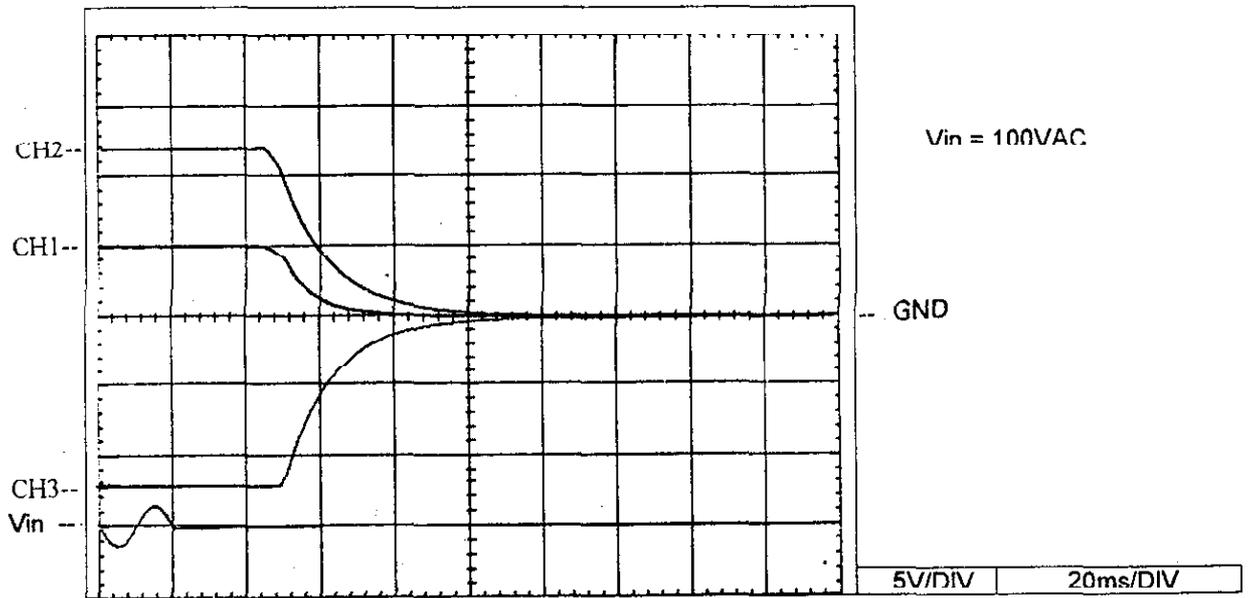
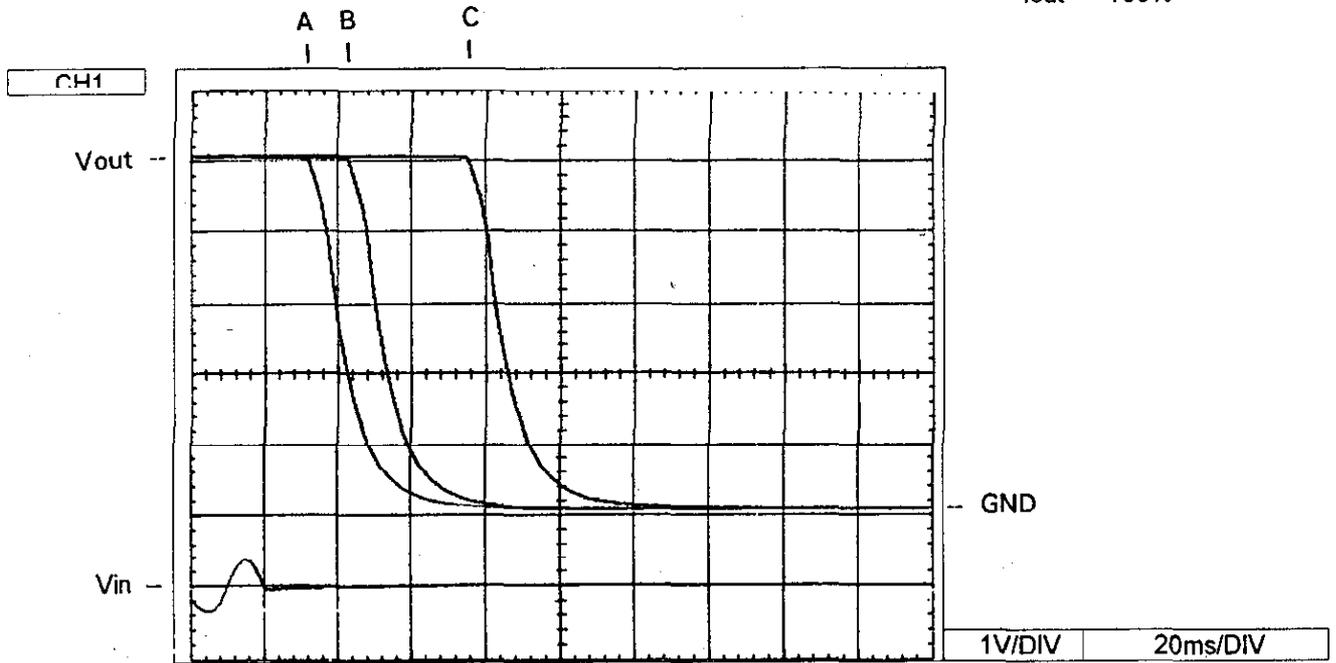
Conditions

- (A) $V_{in} = 170VAC$
- (B) $V_{in} = 200VAC$
- (C) $V_{in} = 265VAC$
- $T_a = 25^{\circ}C$
- $I_{out} = MIN\ LOAD$



OUTPUT FALL TIME

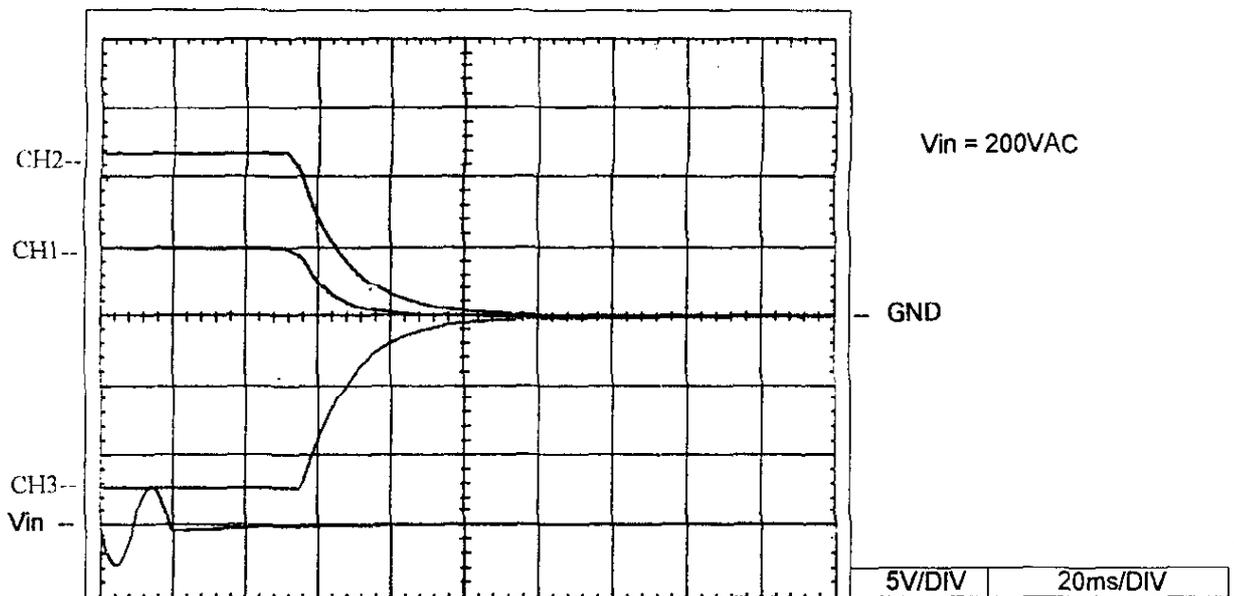
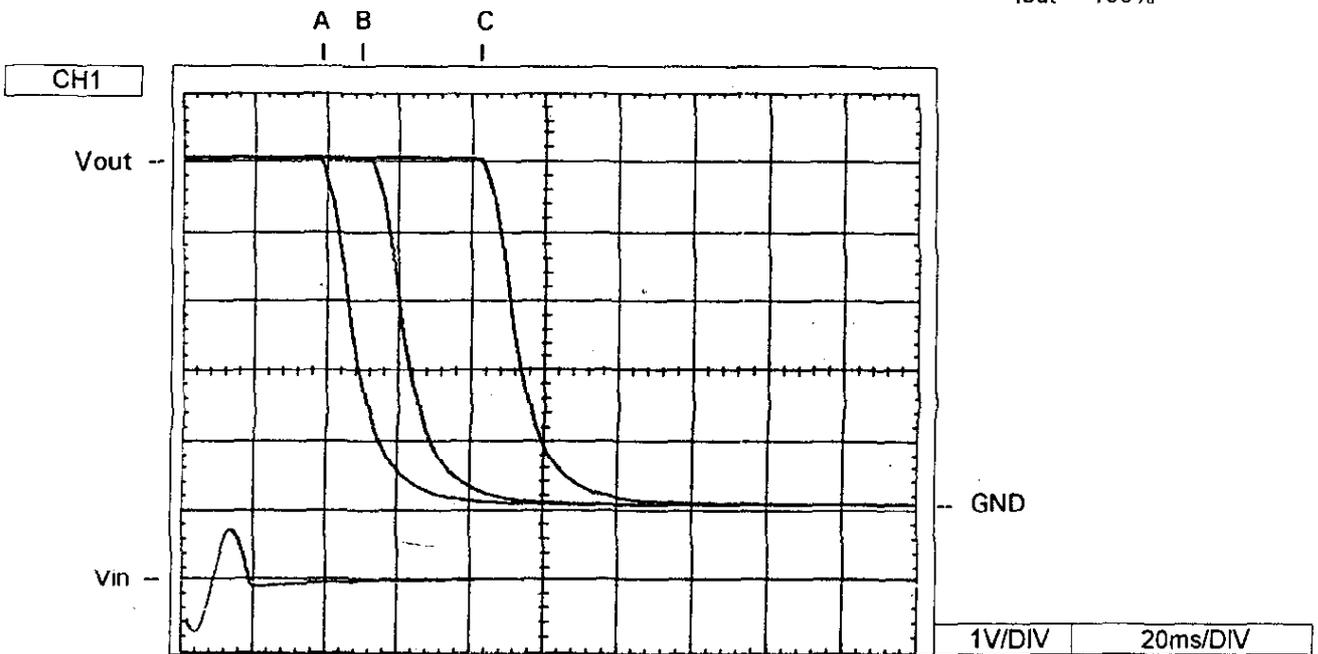
Conditions
 (A) $V_{in} = 85VAC$
 (B) $V_{in} = 100VAC$
 (C) $V_{in} = 132VAC$
 $T_a = 25^{\circ}C$
 $I_{out} = 100\%$



OUTPUT FALL TIME

Conditions

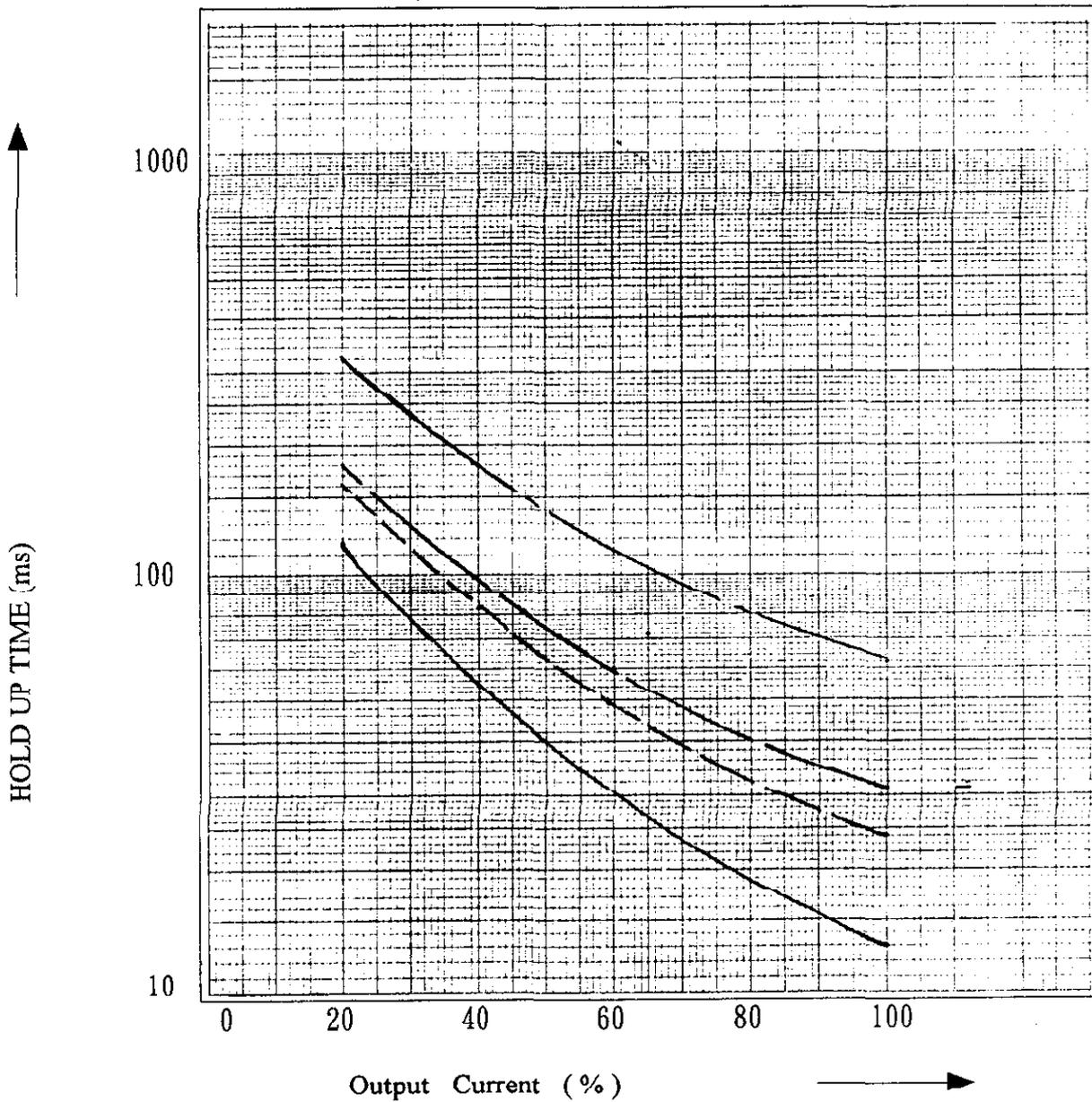
- (A) $V_{in} = 170VAC$
- (B) $V_{in} = 200VAC$
- (C) $V_{in} = 265VAC$
- $T_a = 25^{\circ}C$
- $I_{out} = 100\%$



HOLD UP TIME

Conditions

$V_{in} = 85VAC$ ———
 $100VAC$ - - - -
 $200VAC$ - - - -
 $265VAC$ - - - -
 $T_a = 25\text{ }^\circ C$



SHANGHAI NEMIC-LAMBDA

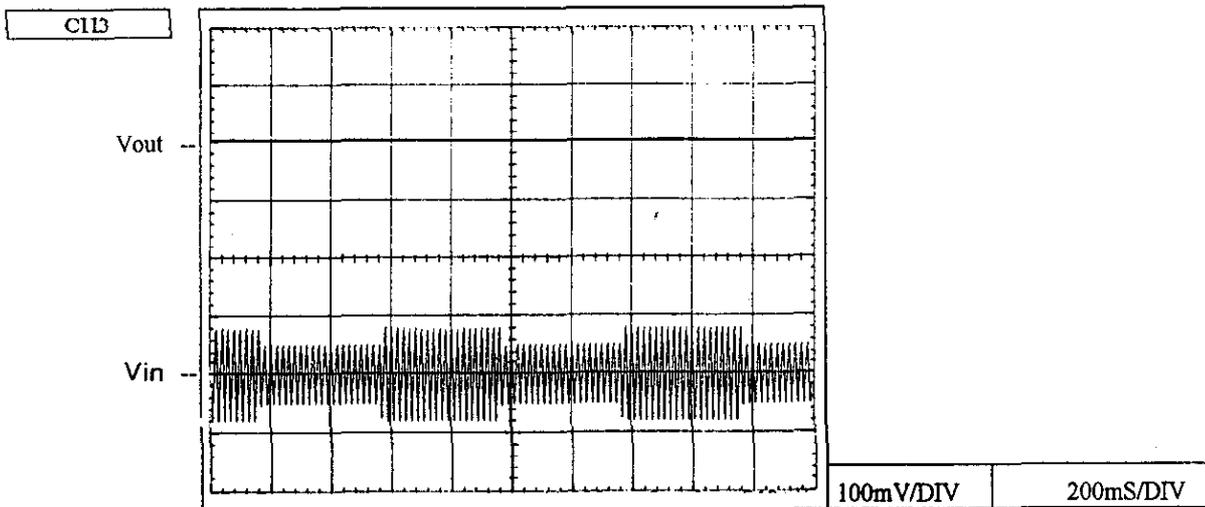
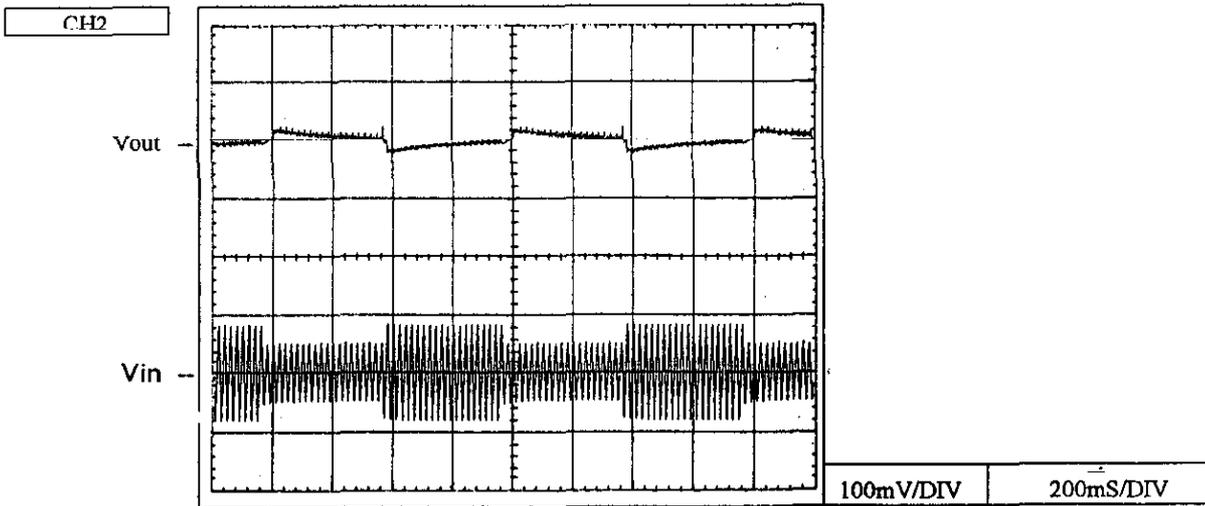
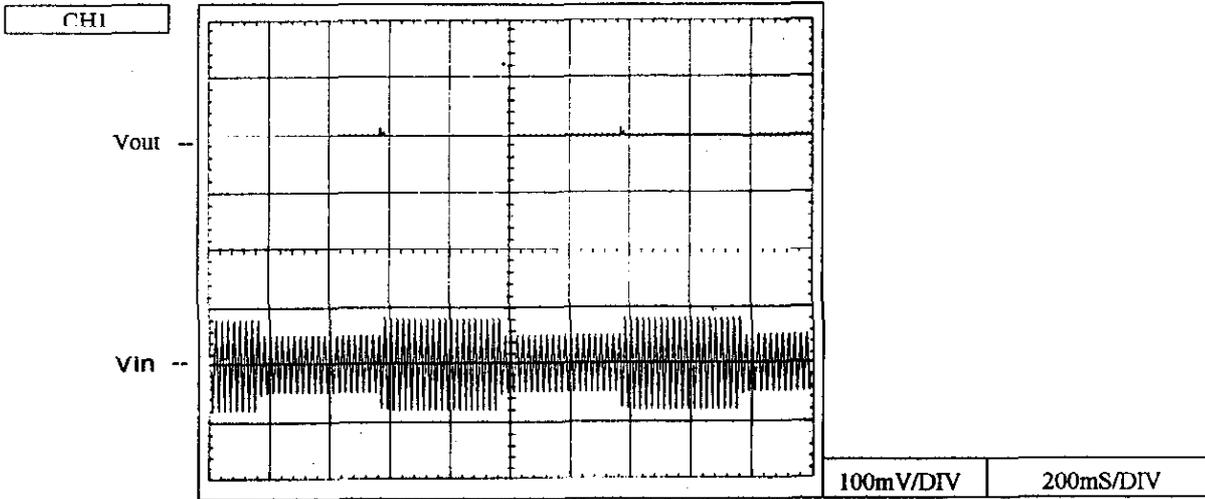
DYNAMIC LINE RESPONSE

SWT65-522

Conditions

I_{out} = 100%
T_a = 25 °C

V_{in} : 85VAC ←→ 132VAC



DYNAMIC LINE RESPONSE

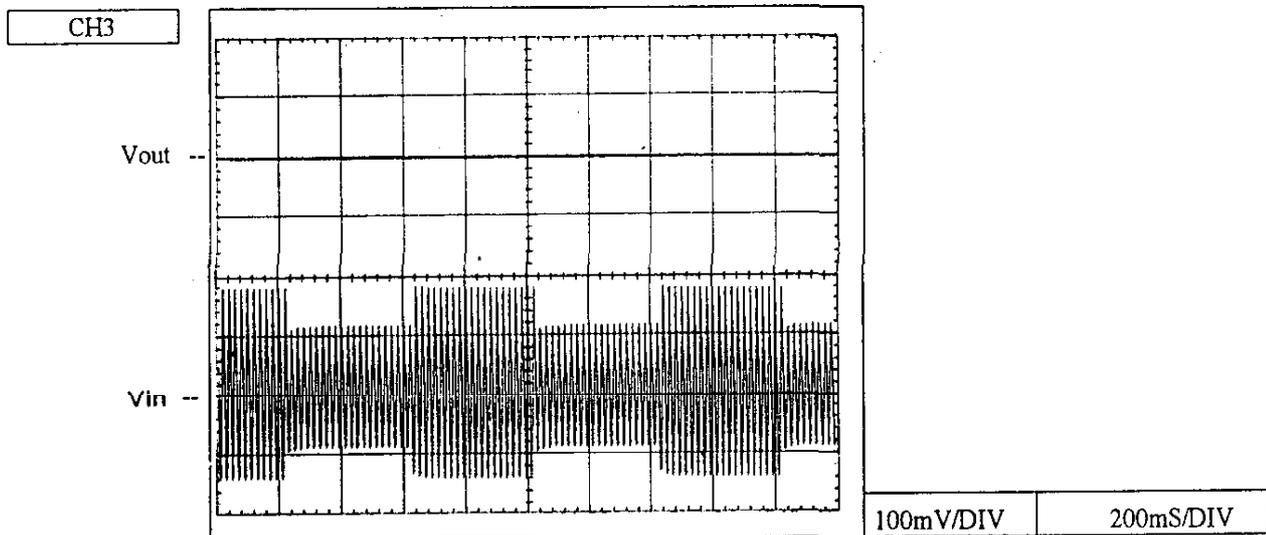
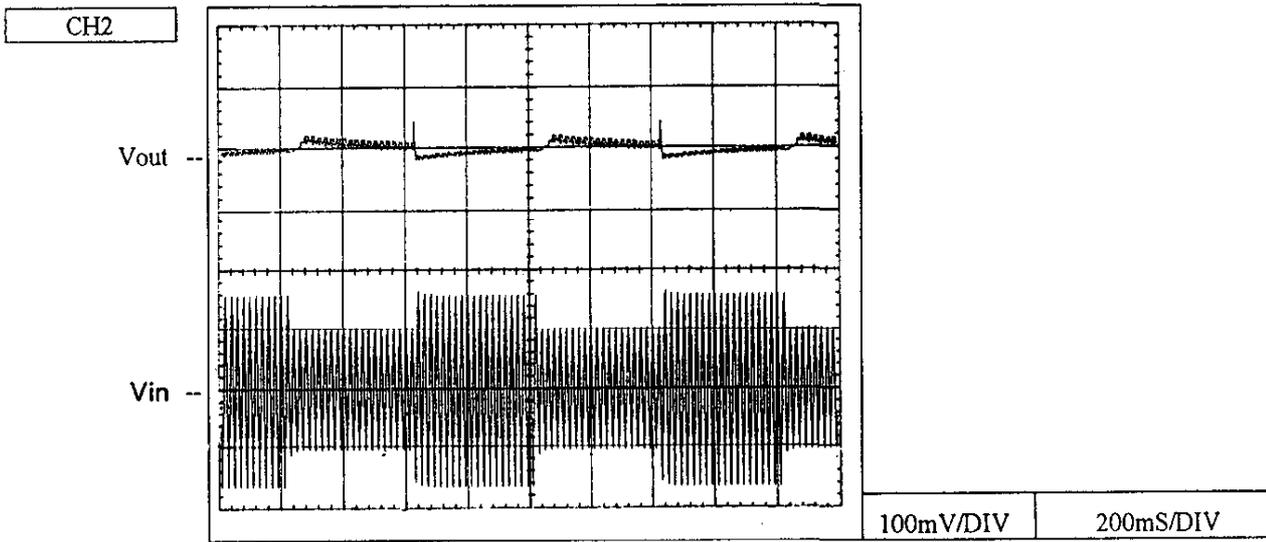
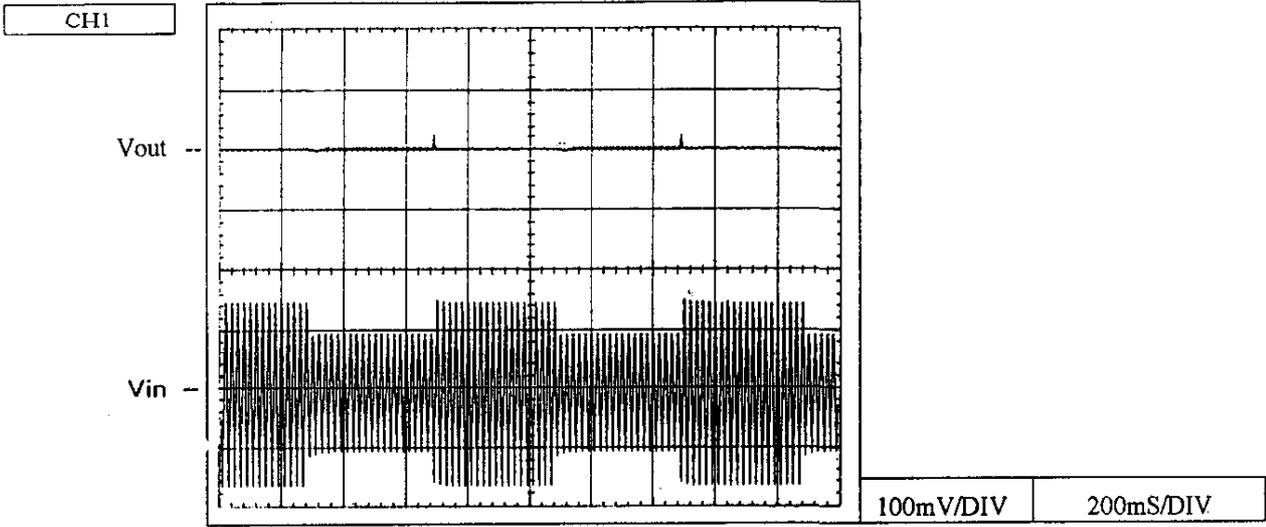
SWT65-522

Conditions

$I_{out} = 100\%$

$T_a = 25^\circ\text{C}$

$V_{in} : 170\text{VAC} \longleftrightarrow 265\text{VAC}$



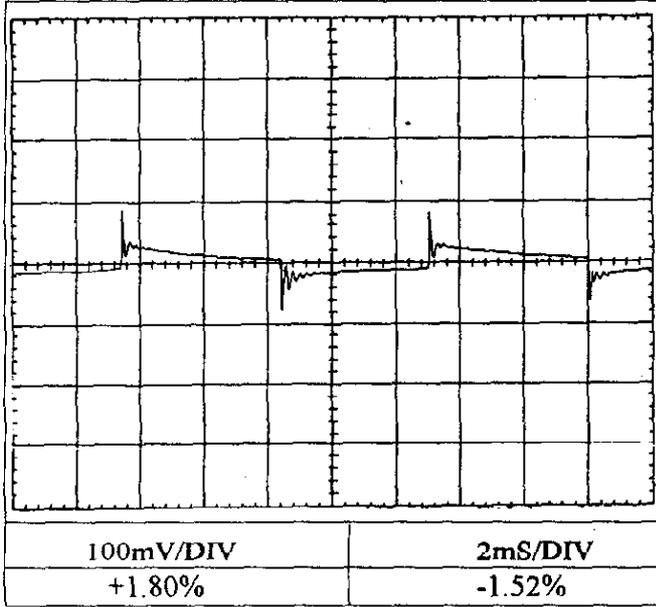
DYNAMIC LOAD RESPONSE

SWT65-522

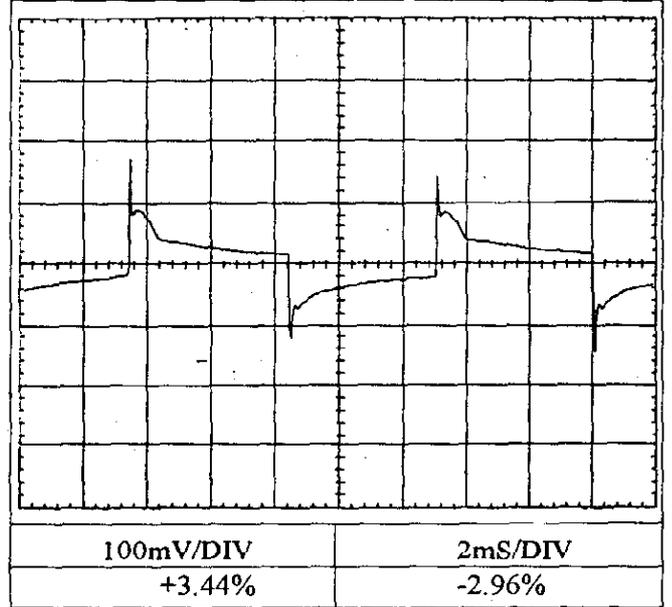
CH1

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} = 100\text{VAC}$
 CH2,CH3: $I_{out} = 100\%$

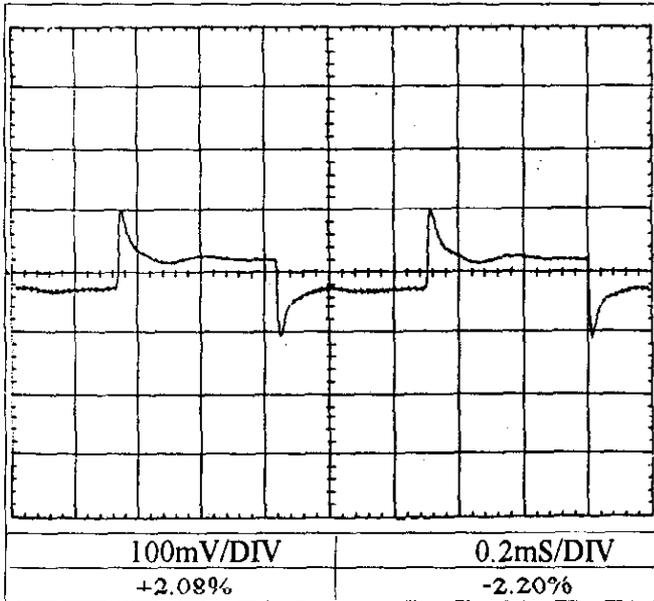
$I_{out} 50\%$ \longleftrightarrow $100\% f = 100\text{Hz}$



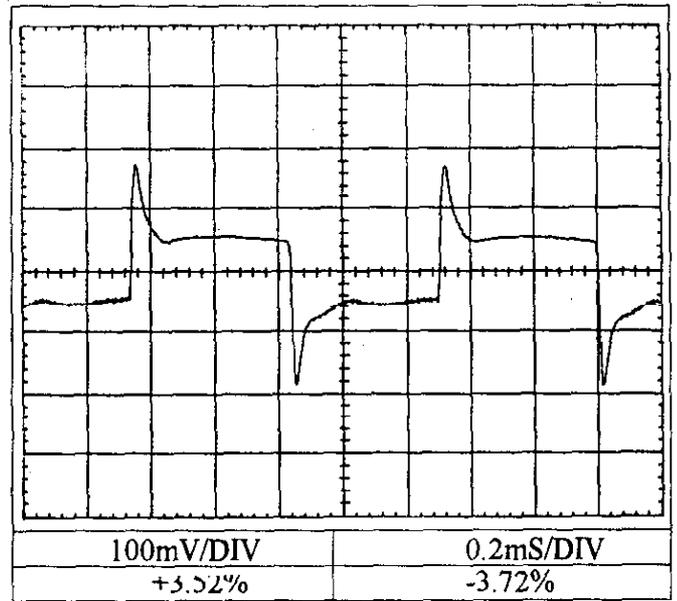
$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 100\text{Hz}$



$I_{out} 50\%$ \longleftrightarrow $100\% f = 1\text{kHz}$



$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 1\text{kHz}$



SHANGHAI NEMIC-LAMBDA

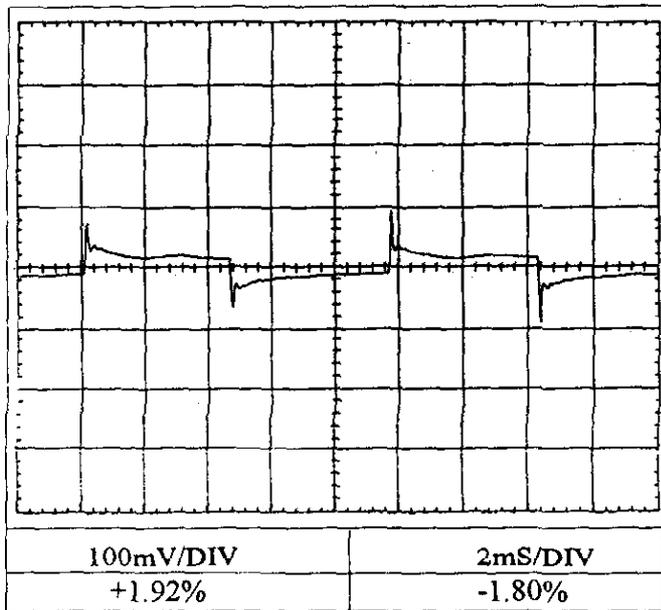
DYNAMIC LOAD RESPONSE

SWT65-522

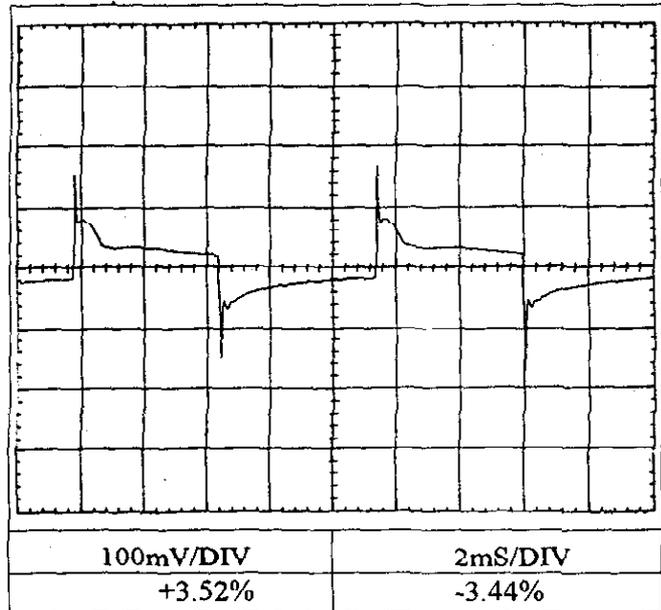
CIII

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} = 200\text{VAC}$
 CH2,CH3: $I_{out} = 100\%$

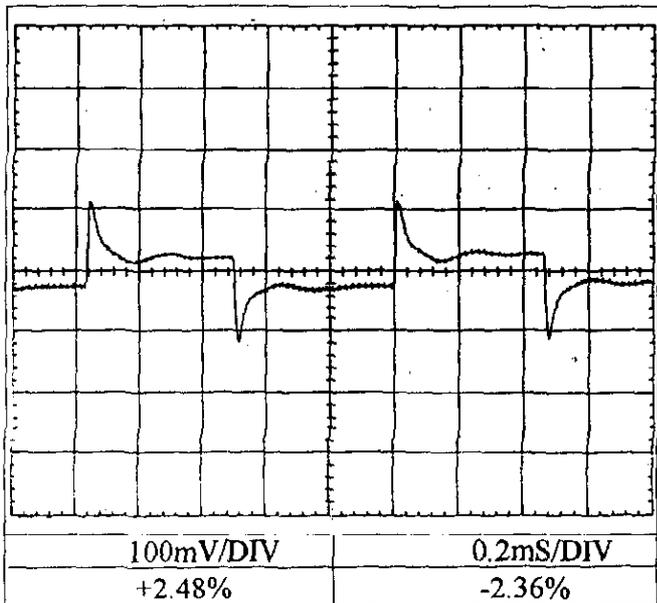
$I_{out} 50\%$ \longleftrightarrow $100\% f = 100\text{Hz}$



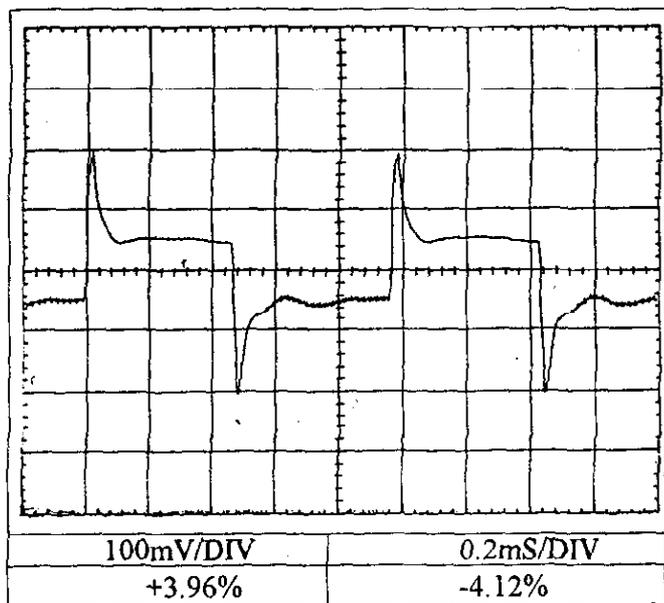
$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 100\text{Hz}$



$I_{out} 50\%$ \longleftrightarrow $100\% f = 1\text{kHz}$



$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 1\text{kHz}$



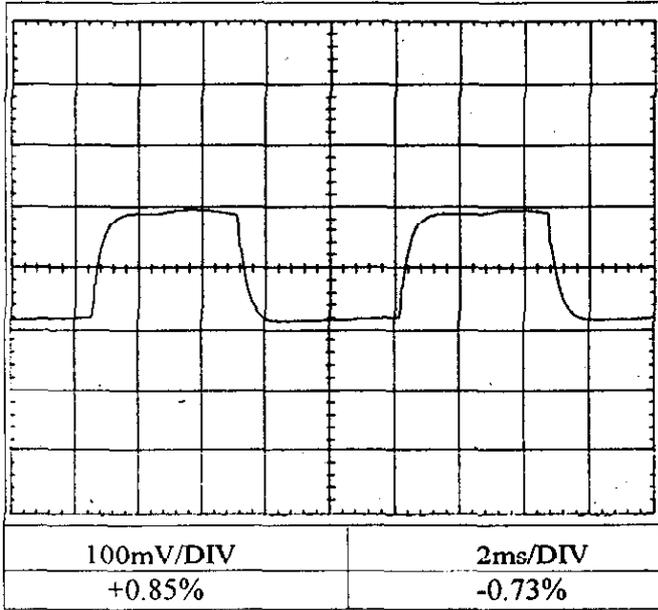
DYNAMIC LOAD RESPONSE

SWT65-522

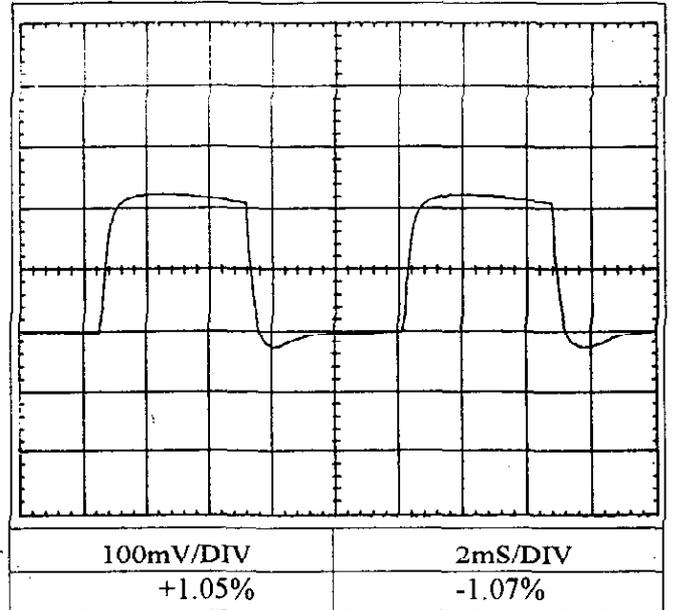
CH2.

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} = 100\text{VAC}$
 CH1,CH3: $I_{out} = 100\%$

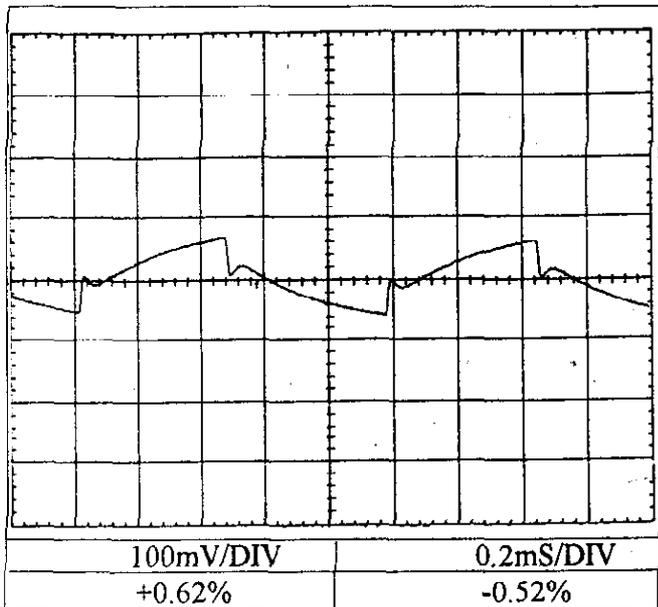
$I_{out} 50\%$ \longleftrightarrow $100\% f = 100\text{Hz}$



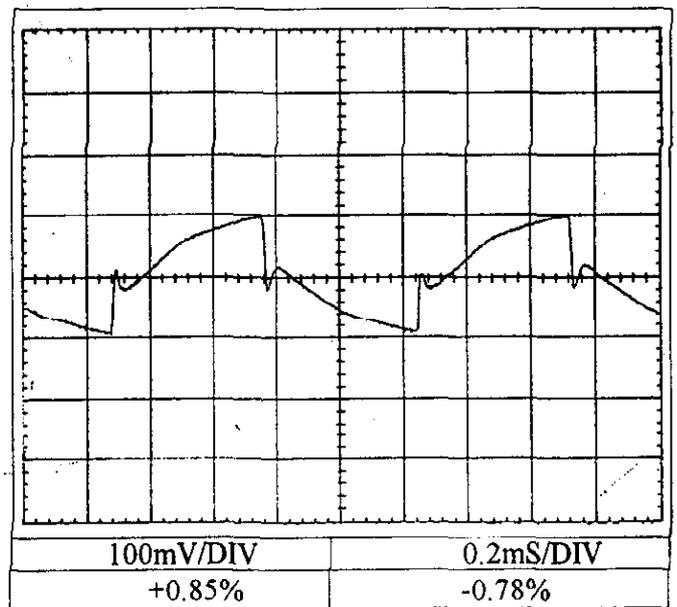
$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 100\text{Hz}$



$I_{out} 50\%$ \longleftrightarrow $100\% f = 1\text{kHz}$



$I_{out} \text{Min}$ \longleftrightarrow $100\% f = 1\text{kHz}$



SHANGHAI NEMIC-LAMBDA

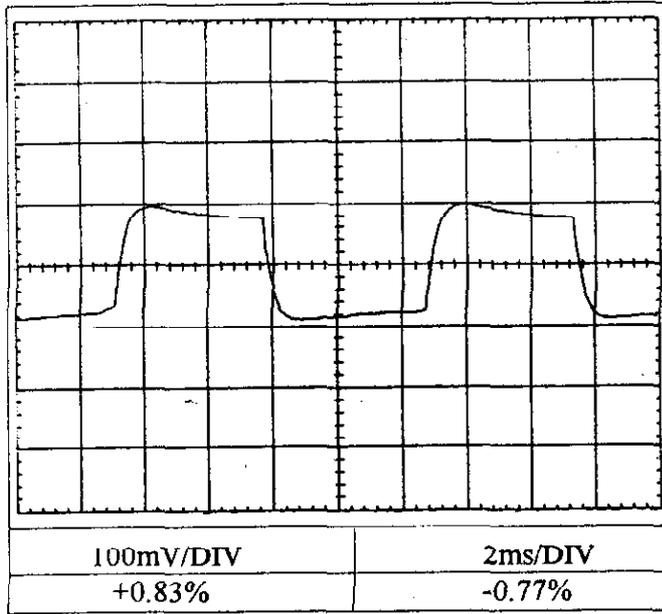
DYNAMIC LOAD RESPONSE

SWT65-522

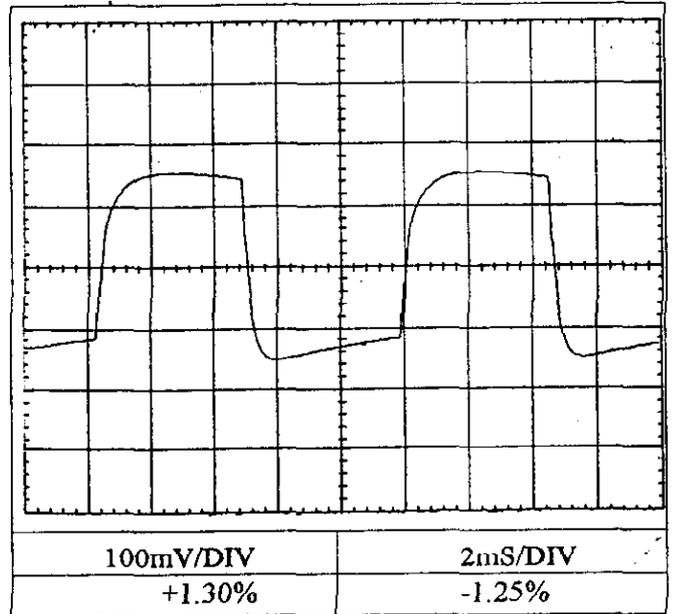
CH2

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} = 200\text{VAC}$
 CH1,CH3: $I_{out} = 100\%$

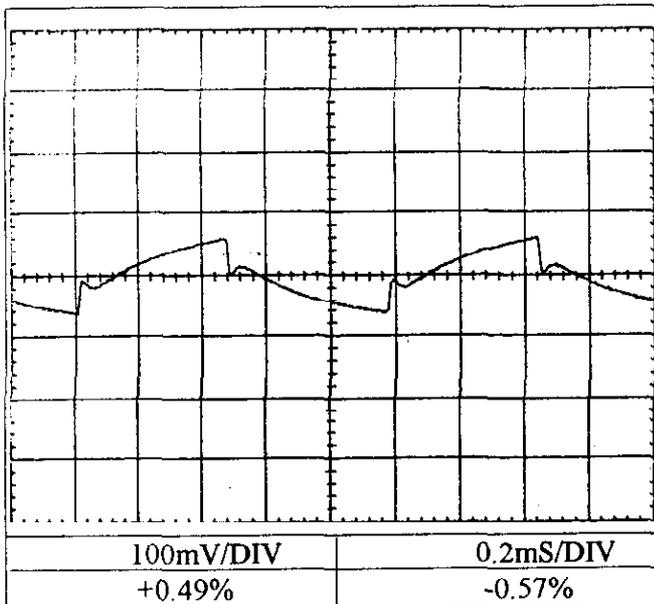
$I_{out} 50\%$ \longleftrightarrow $100\% f = 100\text{Hz}$



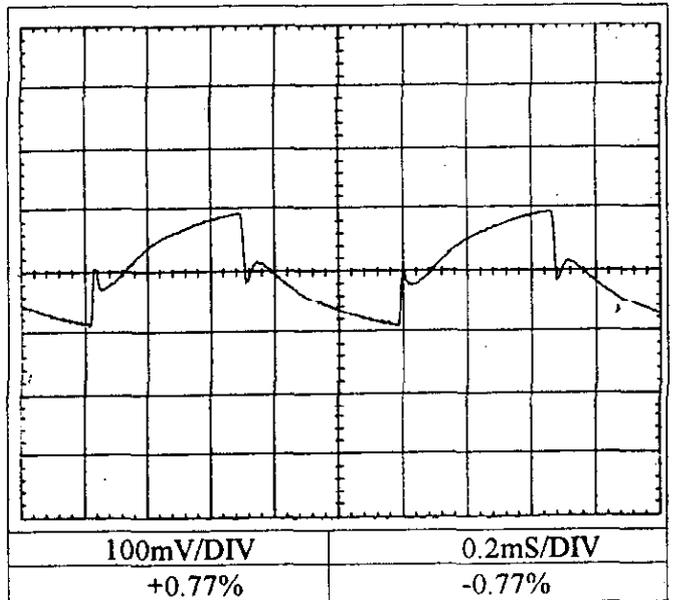
$I_{out} \text{Min}$ \longleftrightarrow $100\% f=100\text{Hz}$



$I_{out} 50\%$ \longleftrightarrow $100\% f = 1\text{kHz}$



$I_{out} \text{Min}$ \longleftrightarrow $100\% f=1\text{kHz}$



SHANGHAI NEMIC-LAMBDA

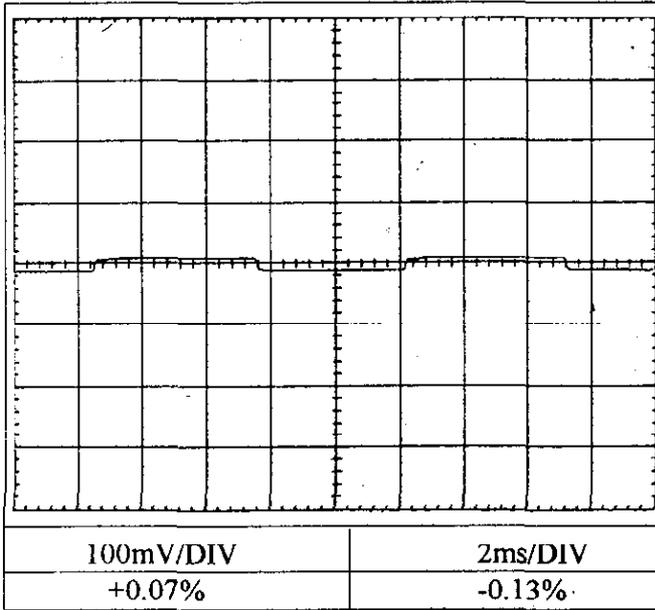
DYNAMIC LOAD RESPONSE

SWT65-522

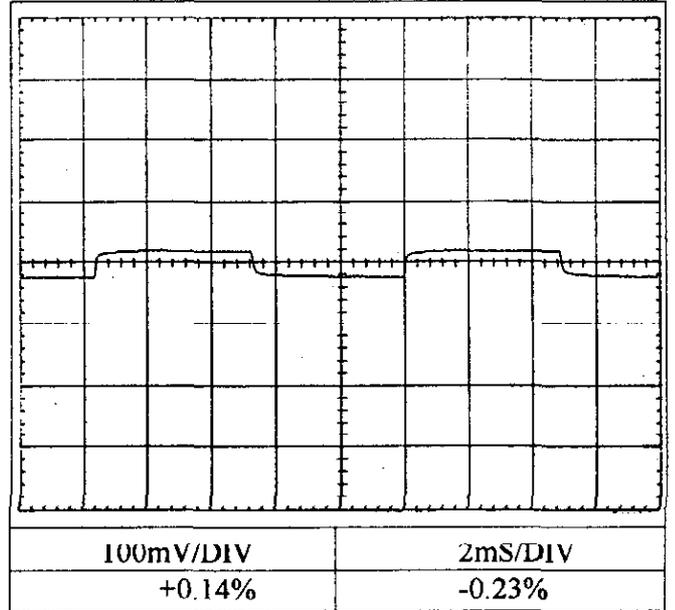
CH3

Conditions $T_a = 25\text{ }^\circ\text{C}$
 $V_{in} = 100\text{VAC}$
 CH1,CH2: $I_{out} = 100\%$

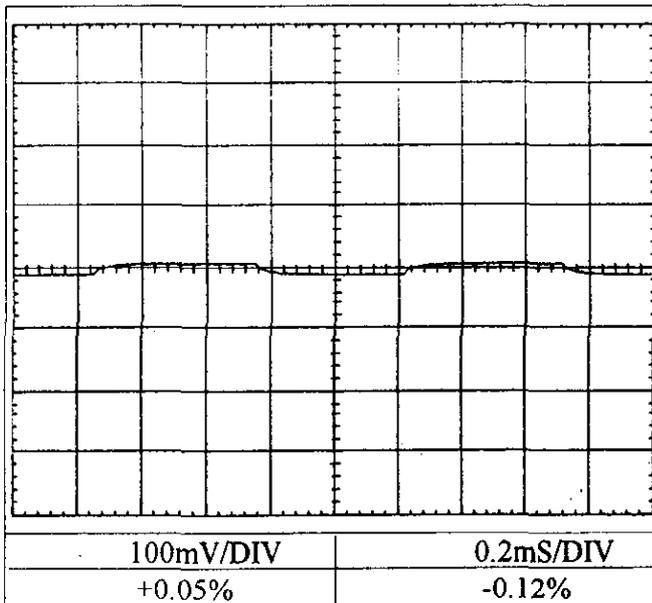
$I_{out} 50\%$ ← → $100\% f = 100\text{Hz}$



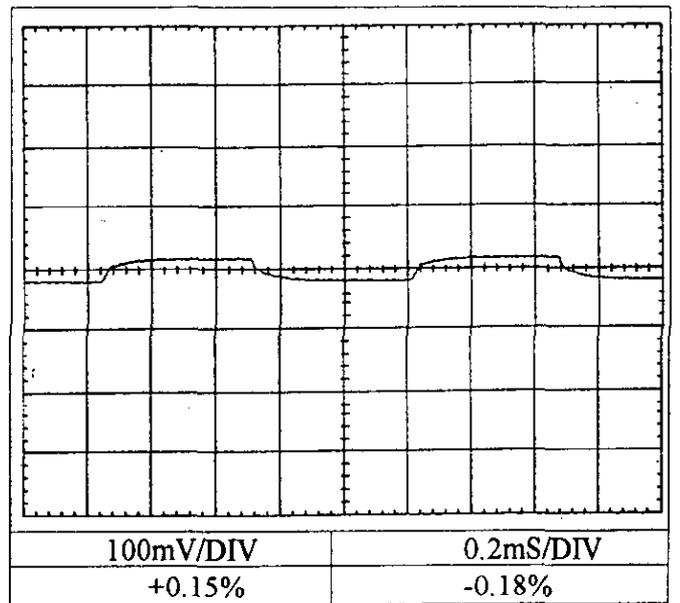
$I_{out} \text{Min}$ ← → $100\% f = 100\text{Hz}$



$I_{out} 50\%$ ← → $100\% f = 1\text{kHz}$



$I_{out} \text{Min}$ ← → $100\% f = 1\text{kHz}$



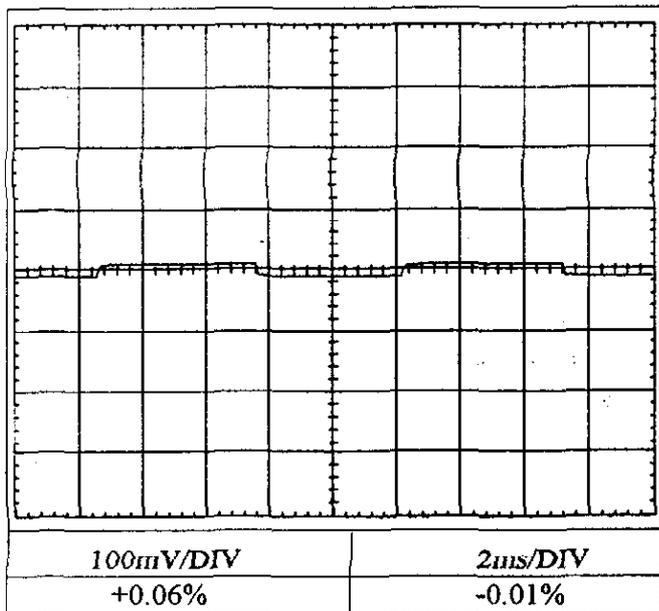
DYNAMIC LOAD RESPONSE

SWT65-522

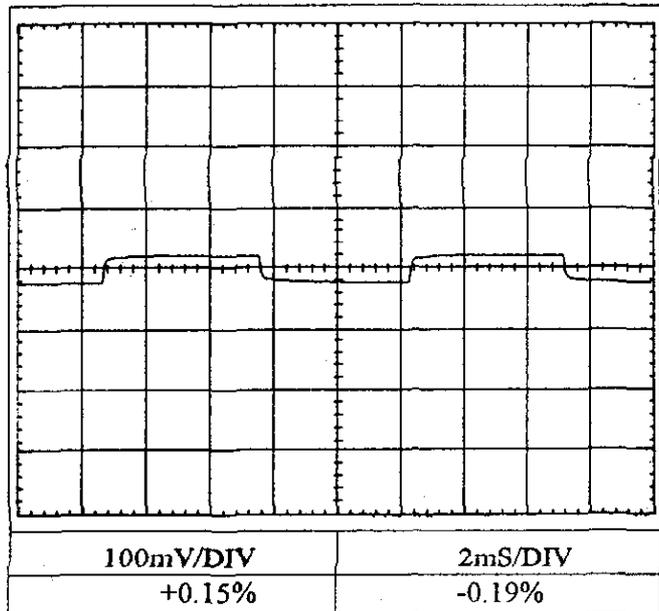
CH3

Conditions Ta = 25 °C
 Vin = 200VAC
 CH1,CH2: Iout = 100%

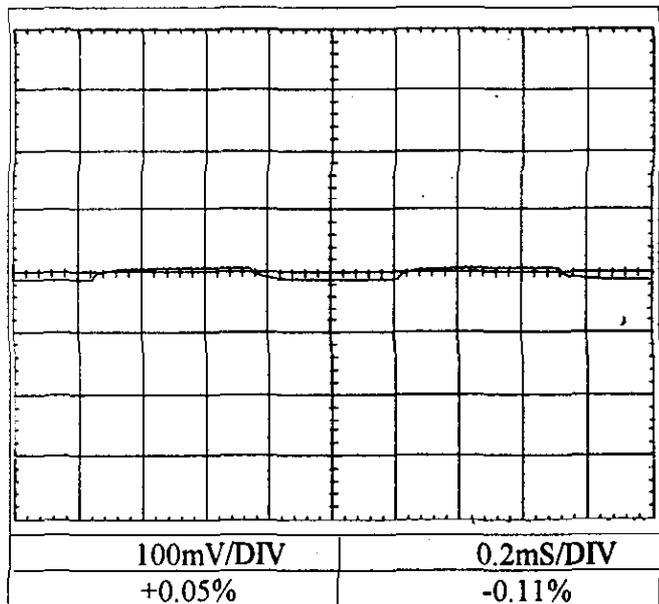
Iout 50% ←→ 100% f = 100Hz



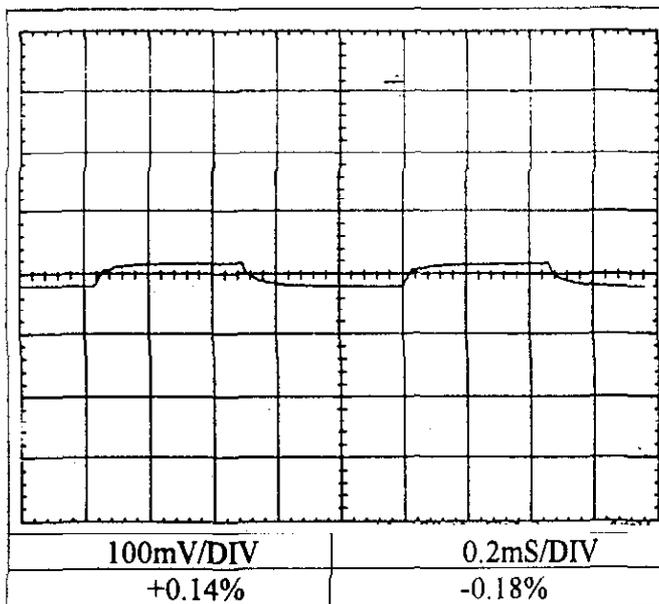
Iout Min ←→ 100% f=100Hz



Iout 50% ←→ 100% f = 1kHz



Iout Min ←→ 100% f=1kHz

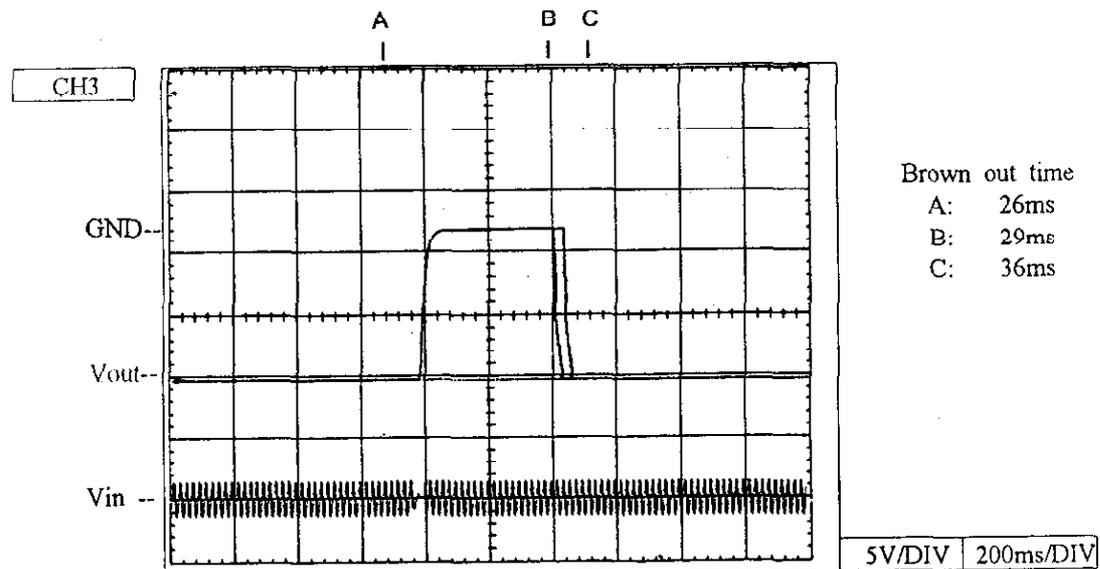
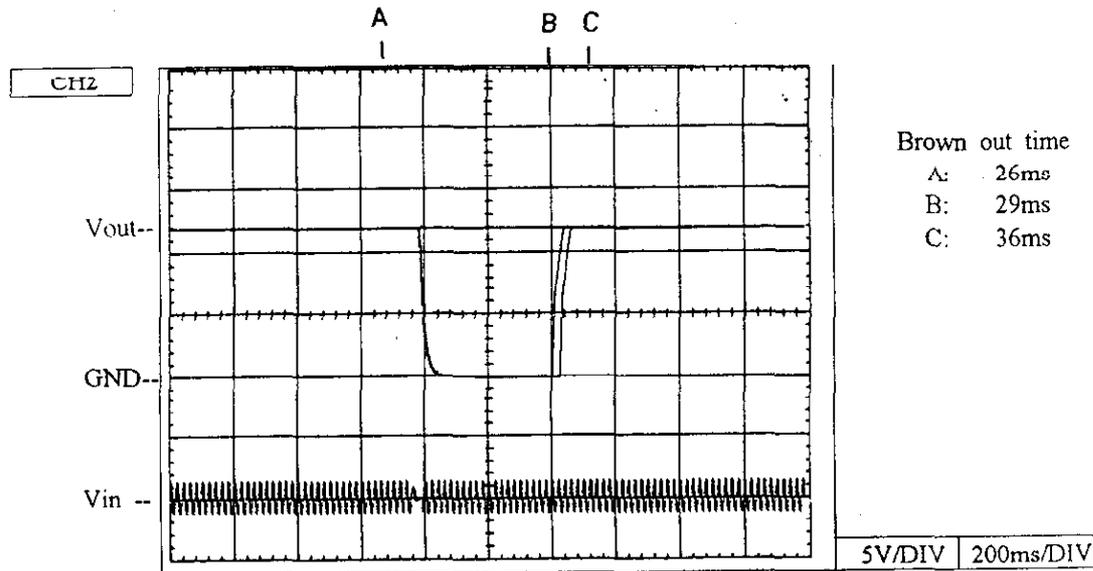
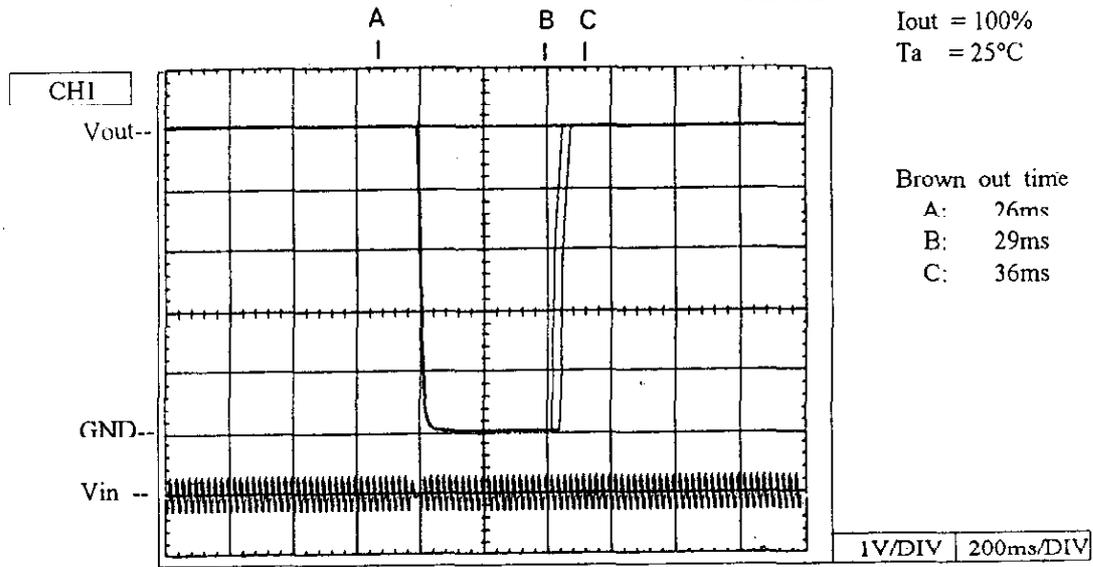


SHANGHAI NEMIC-LAMBDA

RESPONSE TO BROWN OUT

Conditions

$V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25^{\circ}C$

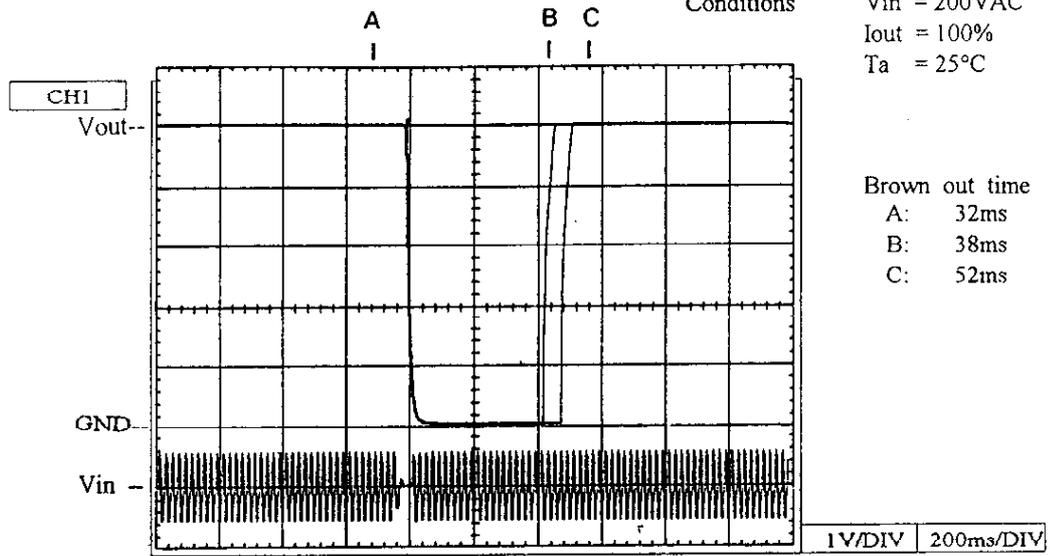


SHANGHAI NEMIC - LAMBDA

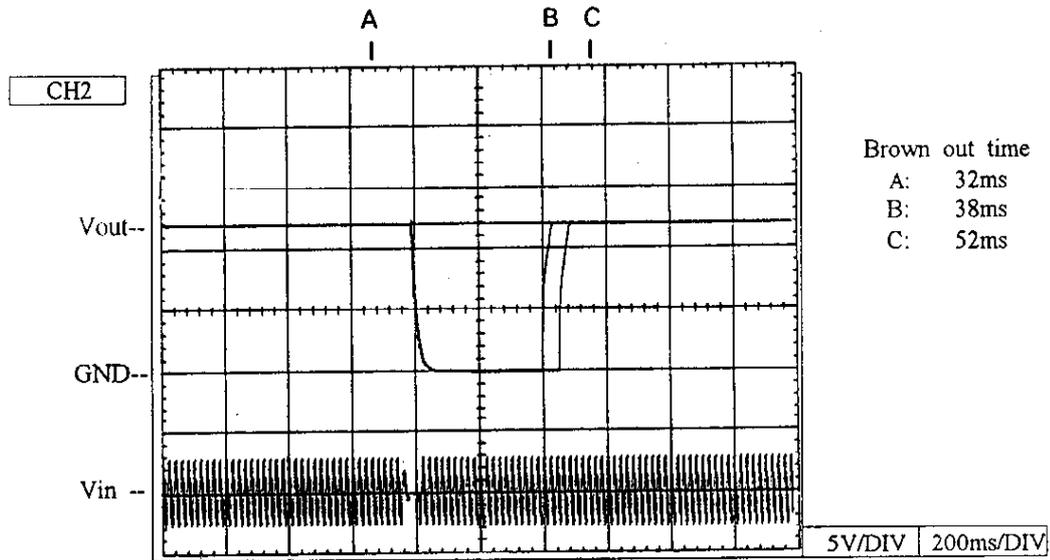
RESPONSE TO BROWN OUT

Conditions

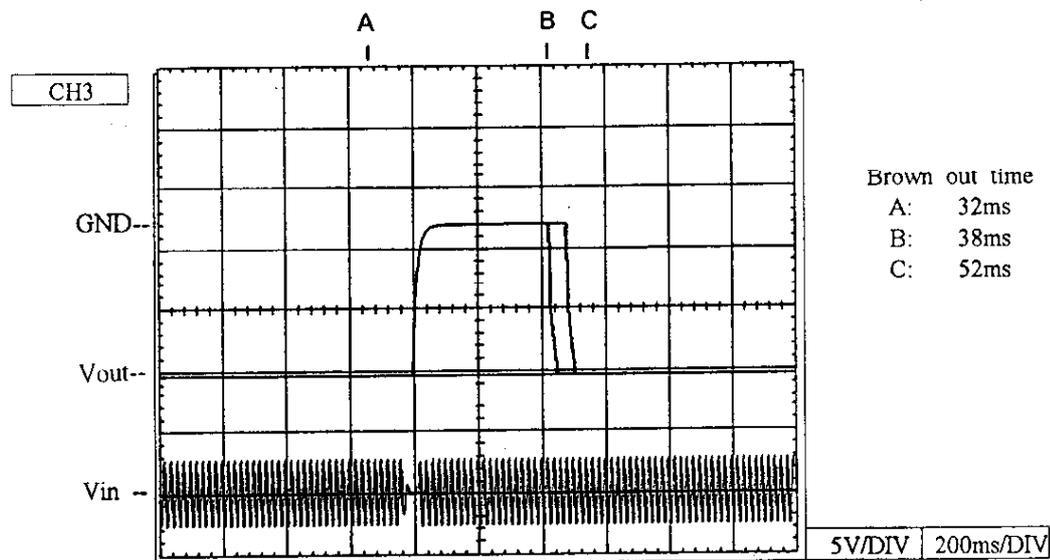
Vin = 200VAC
Iout = 100%
Ta = 25°C



Brown out time
A: 32ms
B: 38ms
C: 52ms



Brown out time
A: 32ms
B: 38ms
C: 52ms



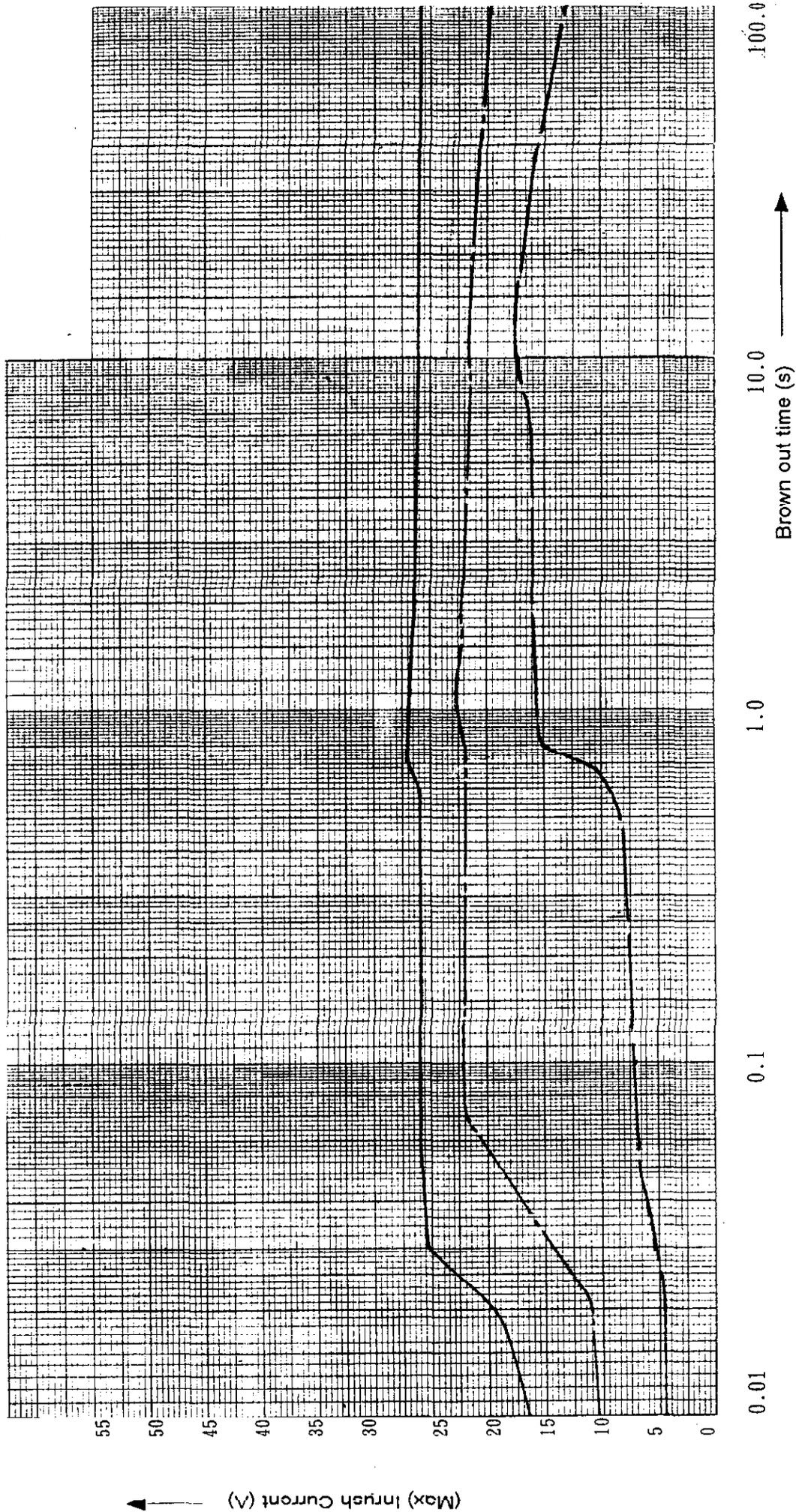
Brown out time
A: 32ms
B: 38ms
C: 52ms

INRUSH v.s BROWN OUT TIME

SWT65 - *

Conditions

Vin = 100VAC
 Iout : Min Load
 50%
 100%
 Ta = 25 °C



INRUSH v.s BROWN OUT TIME

SWT65 - *

Conditions

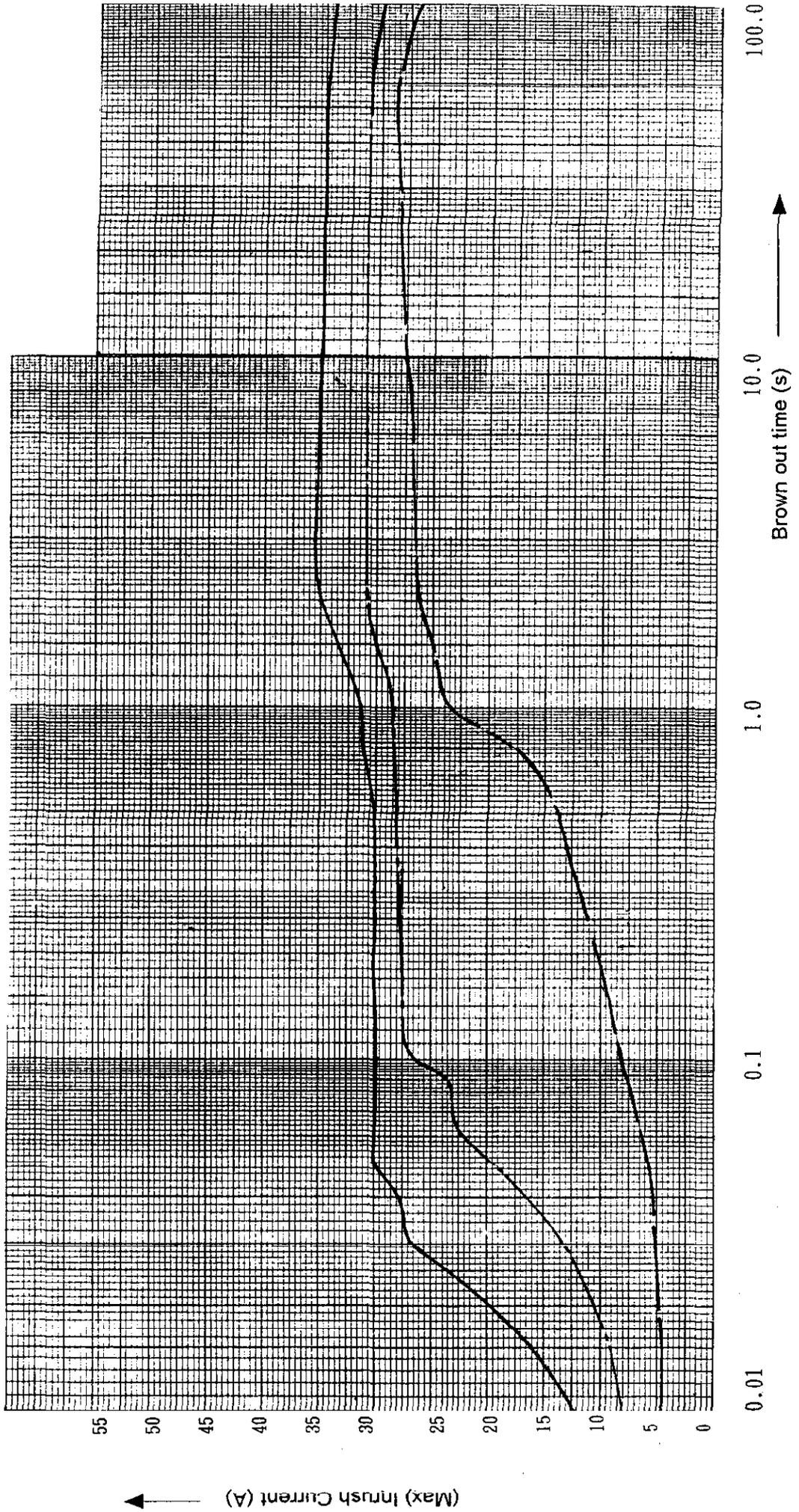
V_{in} = 220VAC

I_{out} : Min Load

50%

100%

T_a = 25 °C



INRUSH CURRENT WAVEFORM

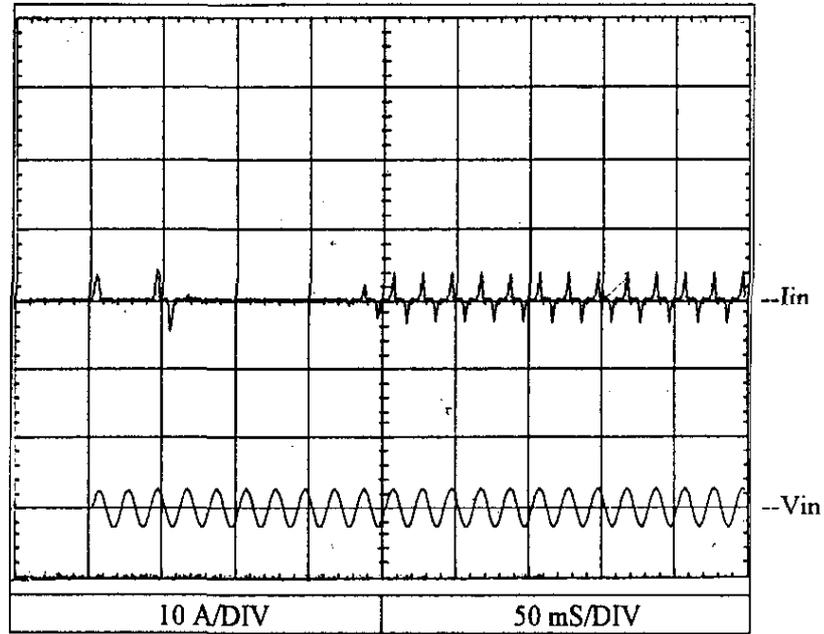
SWT65- *

Conditions

Ta = 25 °C
Vin = 100VAC
Iout = 100%

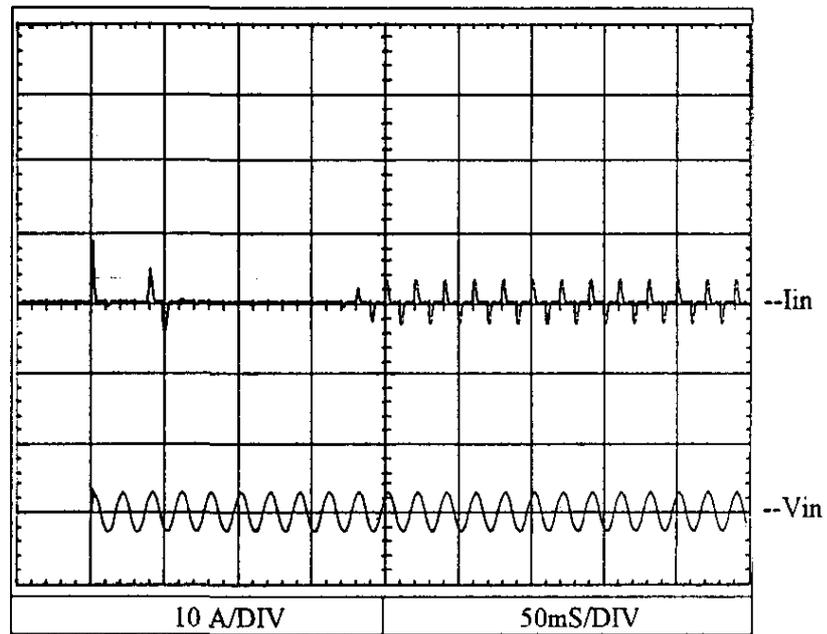
Switch on phase angle
of input AC voltage

$$\phi = 0^\circ$$



Switch on phase angle
of input AC voltage

$$\phi = 90^\circ$$



SHANGHAI NEMIC-LAMBDA

INRUSH CURRENT WAVEFORM

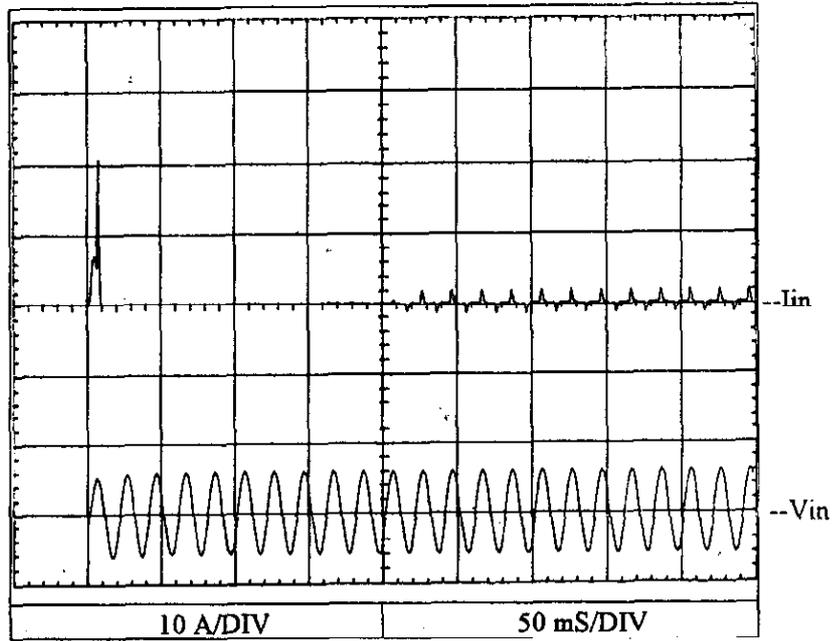
SWT65- *

Conditions

Ta = 25 °C
Vin = 220VAC
Iout = 100%

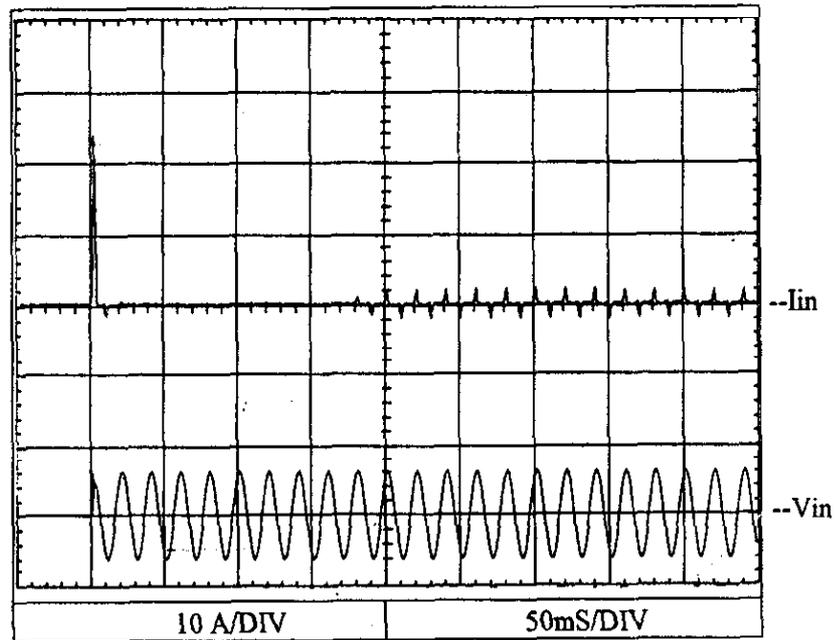
Switch on phase angle
of input AC voltage

$$\phi = 0^\circ$$



Switch on phase angle
of input AC voltage

$$\phi = 90^\circ$$

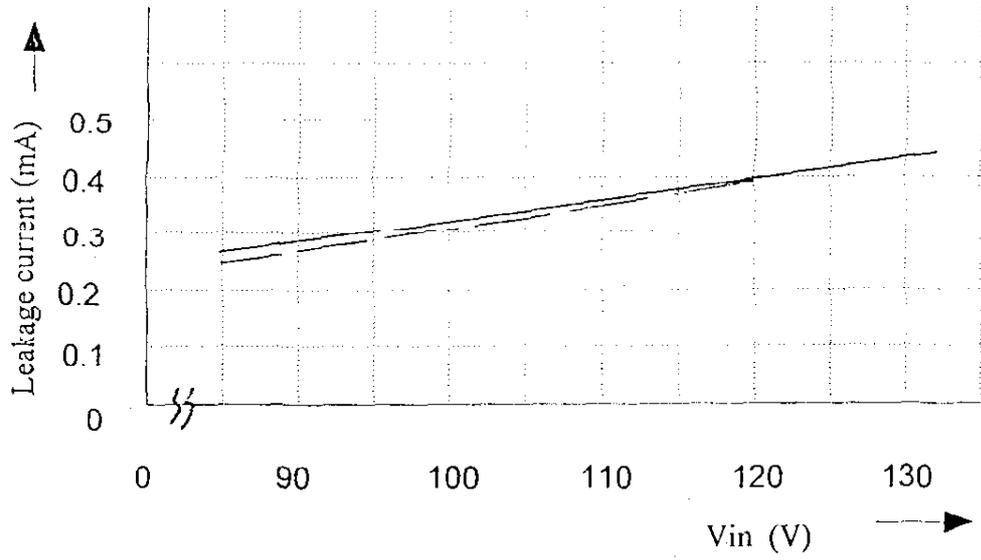


LEAKAGE CURRENT

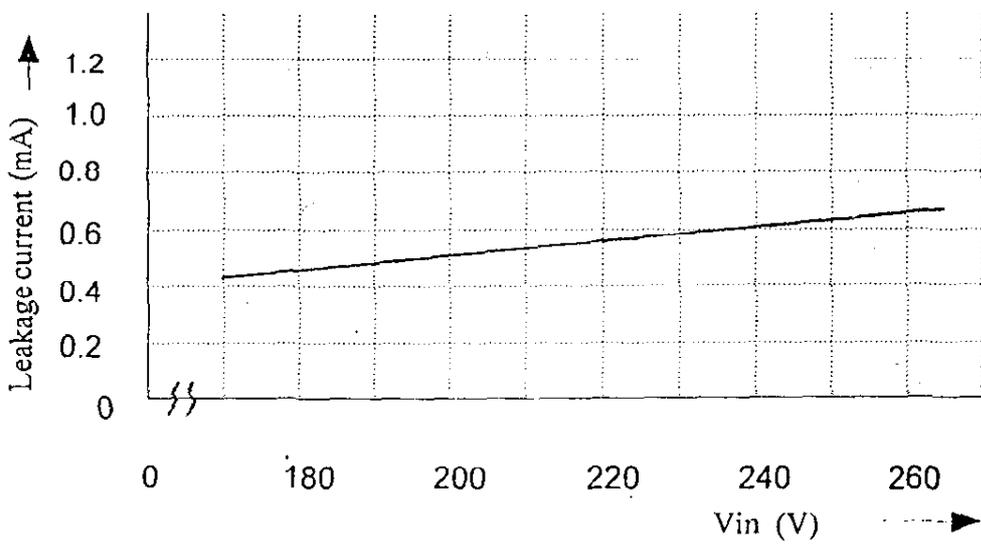
SWT65 - *

Conditions $T_a = 25^\circ\text{C}$
 I_{out} : MIN LOAD
100%
: 50Hz

AC100V



AC200V



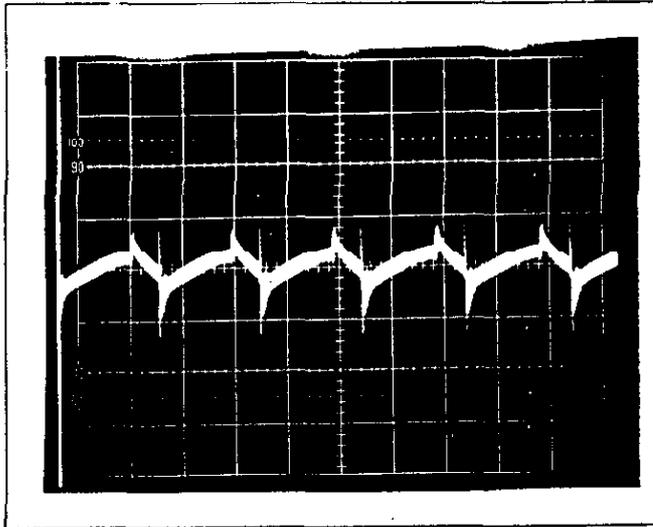
SHANGHAI NEMIC-LAMBDA

OUTPUT-RIPPLE, NOISE

SWT65 - 522
Conditions $V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25\text{ }^\circ C$

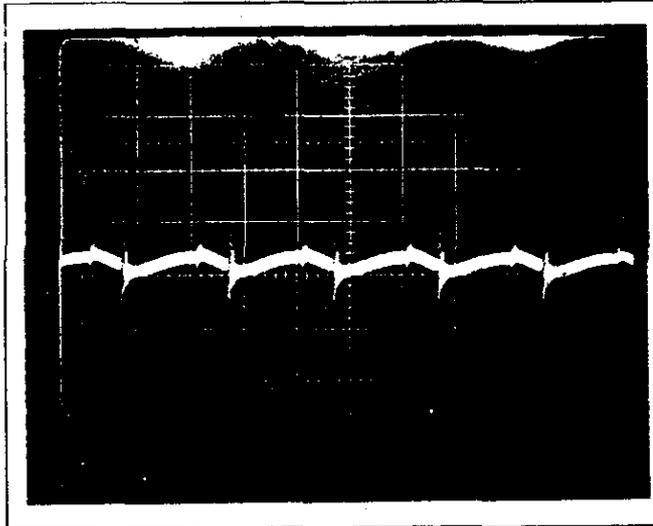
NORMAL MODE

CH1



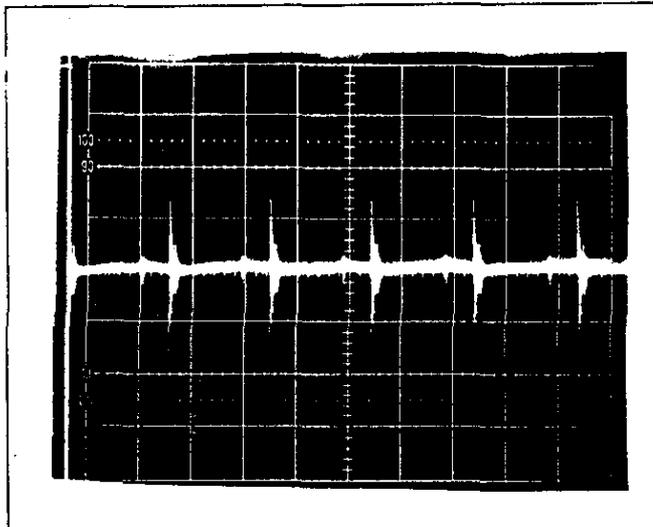
20mV/DIV 5uS/DIV

CH2



20mV/DIV 5uS/DIV

CH3



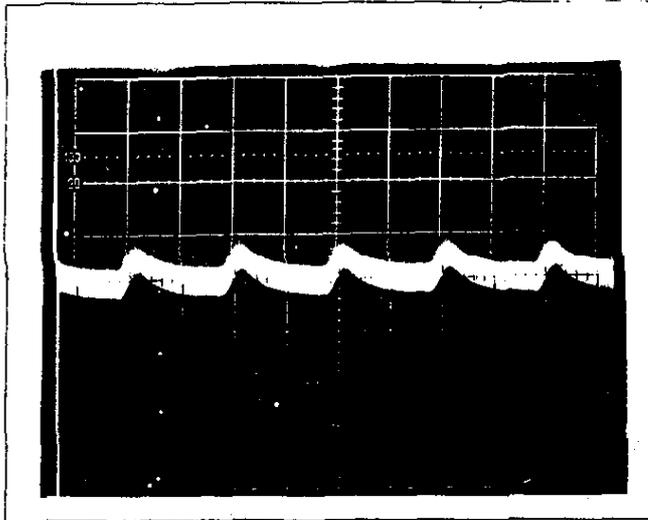
20mV/DIV 5uS/DIV

OUTPUT-RIPPLE, NOISE

SWT65 - 522
Conditions $V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25\text{ }^{\circ}C$

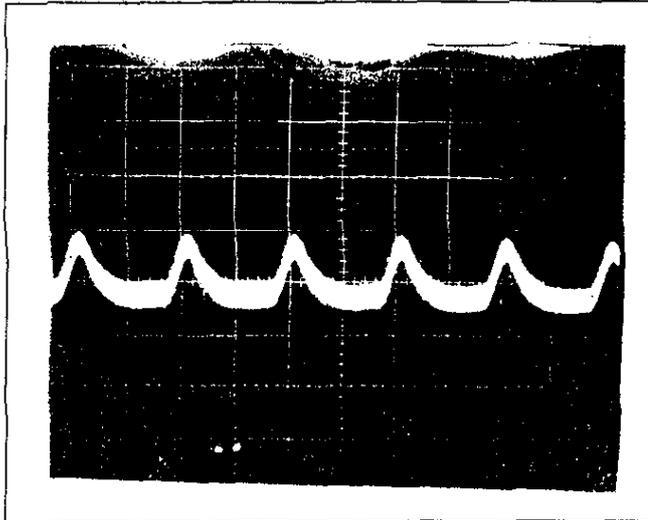
NORMAL MODE

CH1



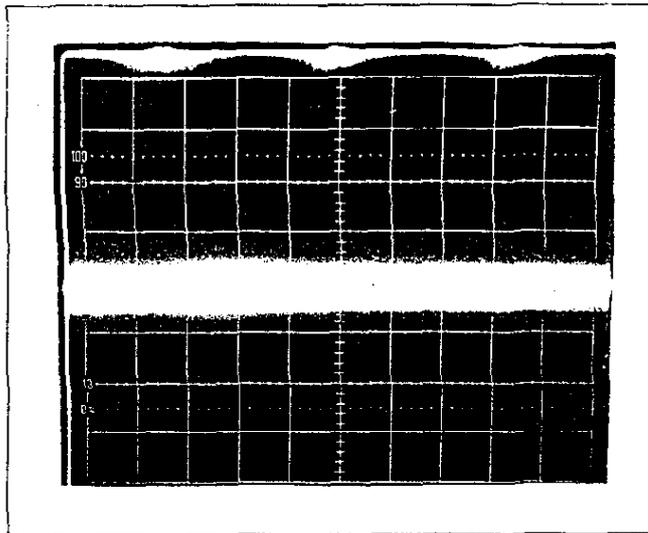
20mV/DIV 5mS/DIV

CH2



20mV/DIV 5mS/DIV

CH3



20mV/DIV 5mS/DIV

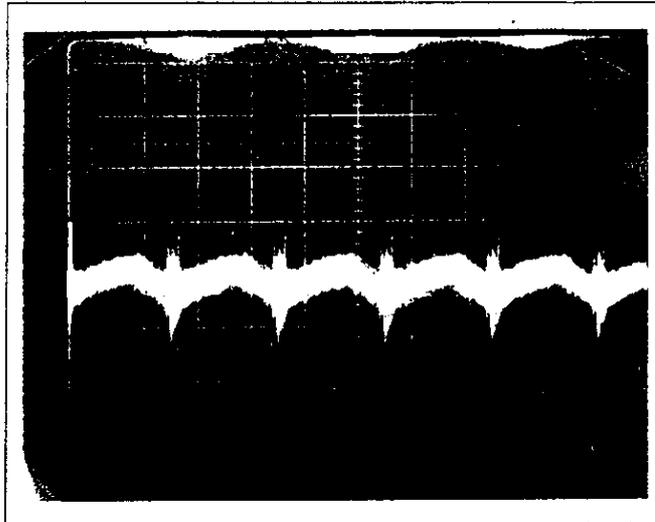
OUTPUT-RIPPLE, NOISE

SWT65 - 522

Conditions $V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25\text{ }^{\circ}C$

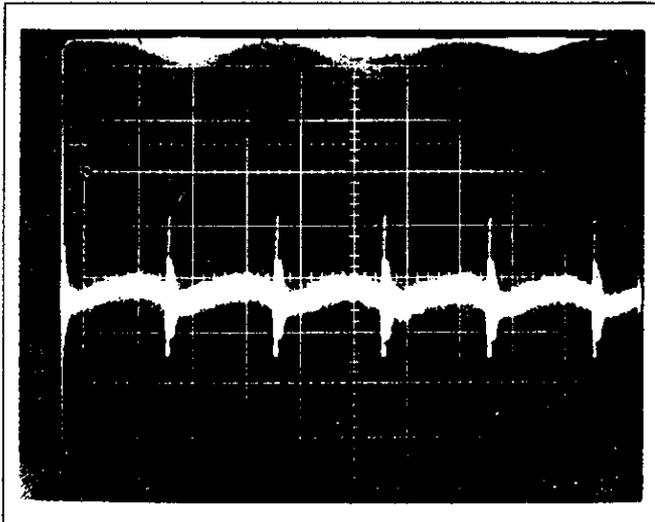
COMMON + NORMAL

CH1



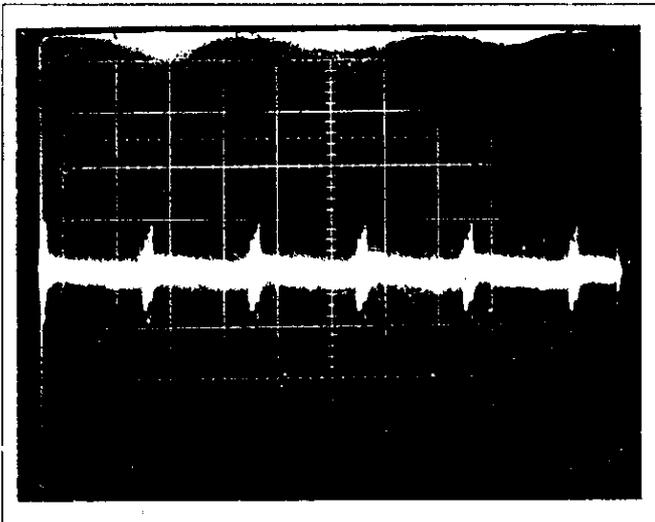
20mV/DIV 5uS/DIV

CH2



20mV/DIV 5uS/DIV

CH3



20mV/DIV 5uS/DIV

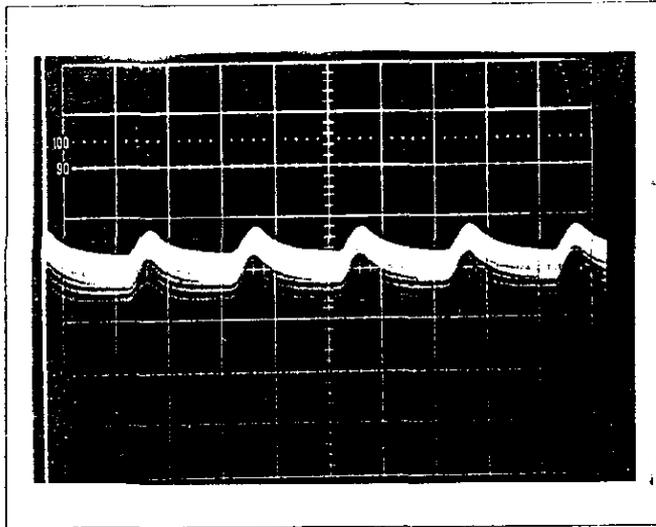
OUTPUT-RIPPLE, NOISE

SW16S - 522

Conditions $V_{in} = 100VAC$
 $I_{out} = 100\%$
 $T_a = 25\text{ }^\circ C$

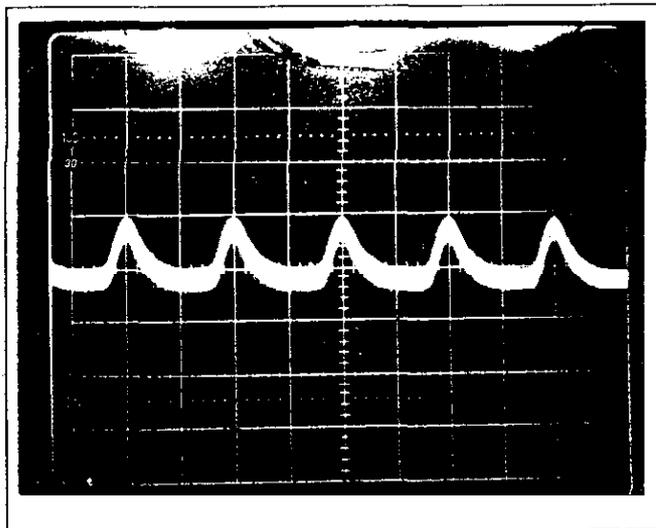
COMMON + NORMAL

CH1



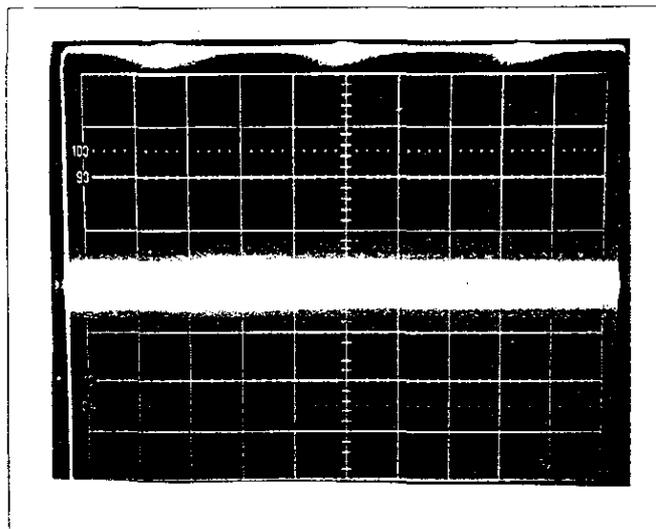
20mV/DIV 5mS/DIV

CH2



20mV/DIV 5mS/DIV

CH3



20mV/DIV 5mS/DIV