

QUALITY

TEST DATA

SWT65 -- *

----- INDEX -----

1. Specifications	1
2. Evaluation Method	
2 - 1 Circuits used for determination	2 - 4
(1) Steady state data	
(2) Warm up voltage drift	
(3) Over current protection (O.C.P.) characteristics	
(4) Over voltage protection (O.V.P.) characteristics	
(5) Output rise characteristics	
(6) Output fall characteristics	
(7) Dynamic line - response	
(8) Dynamic load - response	
(9) Inrush current characteristics	
(10) Leakage current	
(11) Output ripple, noise	
2 - 2 List of equipments	5
3. Characteristics	
3 - 1 Steady state data	6 - 10
(1) Regulation - line and load, temp. drift	
(2) Output voltage and ripple voltage v.s. input voltage	
(3) Efficiency and input current v.s. output current	
3 - 2 Warm up voltage drift	11
3 - 3 O.C.P. characteristics	12 - 14
3 - 4 O.V.P. characteristics	15

3 - 5	Output rise time	16 - 19
3 - 6	Output fall time	20 - 23
3 - 7	Output rise time with ON/OFF CONTROL	NA
3 - 8	Output fall time with ON/OFF CONTROL	NA
3 - 9	Hold up time	24
3 - 10	Dynamic line response	25 - 26
3 - 11	Dynamic load response	27 - 32
3 - 12	Response to brown out	33 - 34
3 - 13	Inrush current characteristics	35 - 36
3 - 14	Inrush current waveform	37 - 38
3 - 15	Leakage current	39
3 - 16	Output - ripple , noise	40 - 43

Terminology

Definition

Vin	-----	Input voltage
Vout	-----	Output voltage
Iin	-----	Input current
Iout	-----	Output current
Ta	-----	Ambient temperature

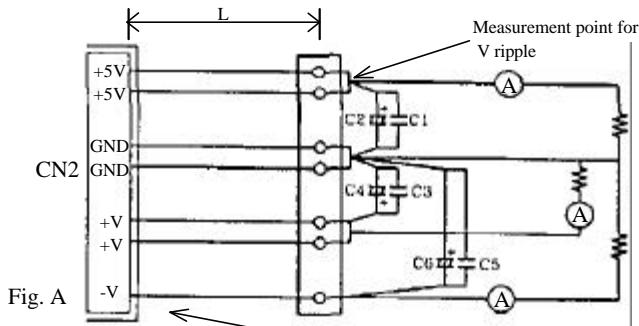
SWT65 SPECIFICATION

CA703-01-01D

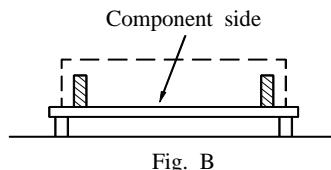
ITEMS	MODEL	SWT65-522			SWT65-525			SWT65-5FF			
		CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3	
1	NOMINAL OUTPUT	V	+5	+12	-12	+5	+12	-5	+5	+15	-15
2	MIN. OUTPUT CURRENT	A	0.3	0	0	0.3	0	0	0.3	0	0
3	MAX. OUTPUT CURRENT	A	6	2.5	0.5	6	2.5	0.5	6	1.8	0.5
4	PEAK OUTPUT CURRENT	A	-	-	-	-	-	-	-	-	-
5	MAX. OUTPUT POWER	W		66			62.5			64.5	
6	EFFICIENCY (TYP) (*1)	(* 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

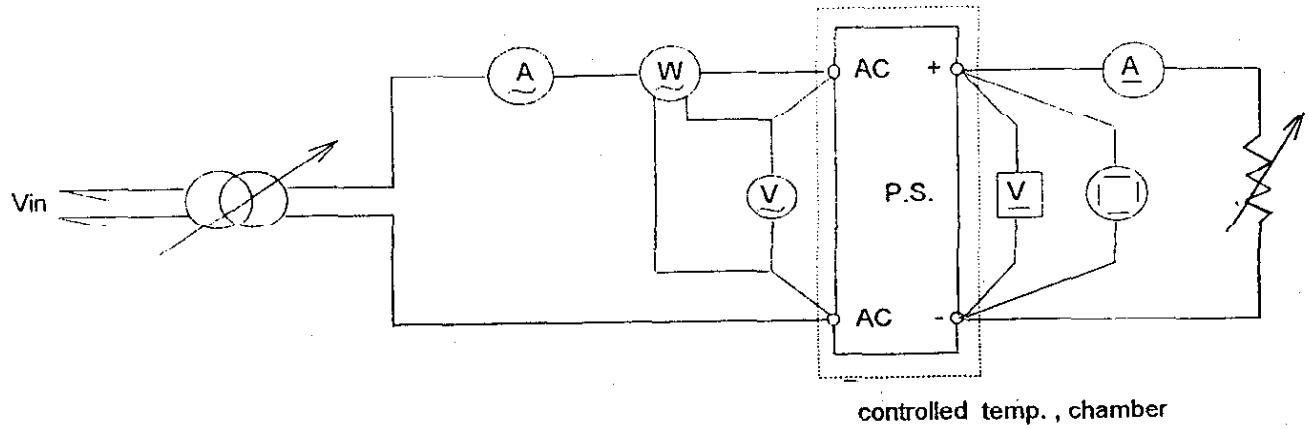


2. EVALUATION METHOD

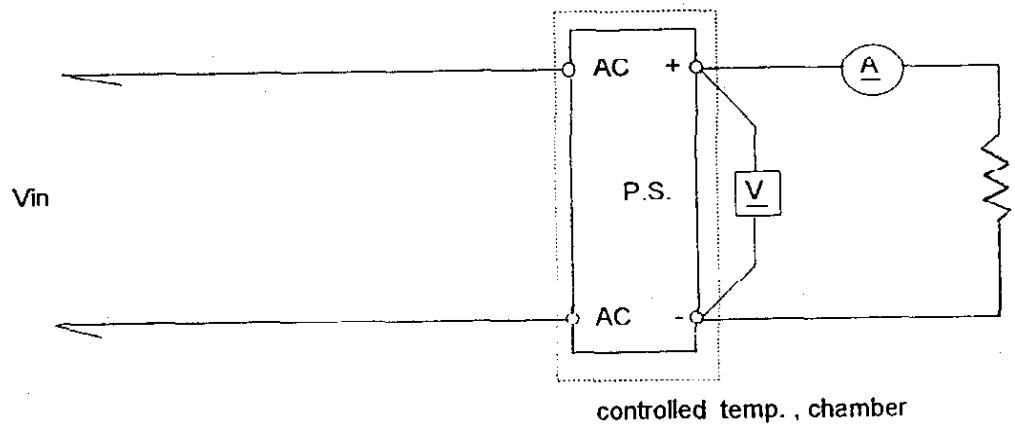
SWT65 - *

2-1 Circuits used for determination

(1) Steady state data

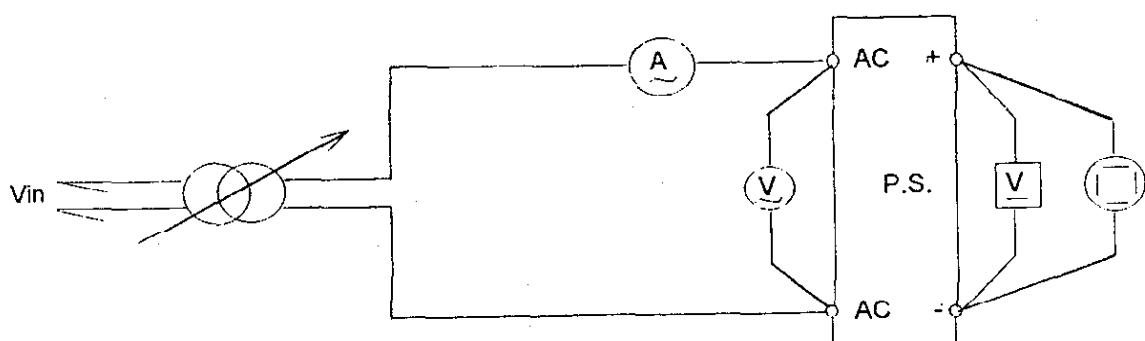


(2) Warm up voltage drift characteristics

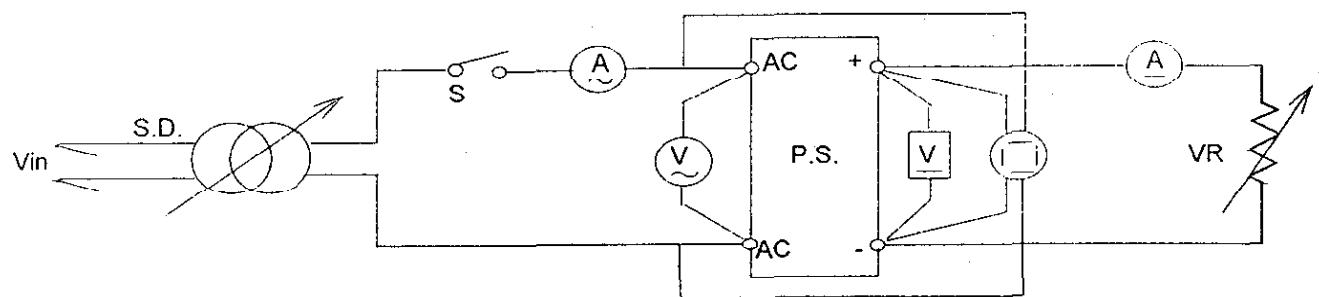


(3) Over current protection (OCP) characteristics Same as steady state data

(4) Over voltage protection (OVP) characteristics

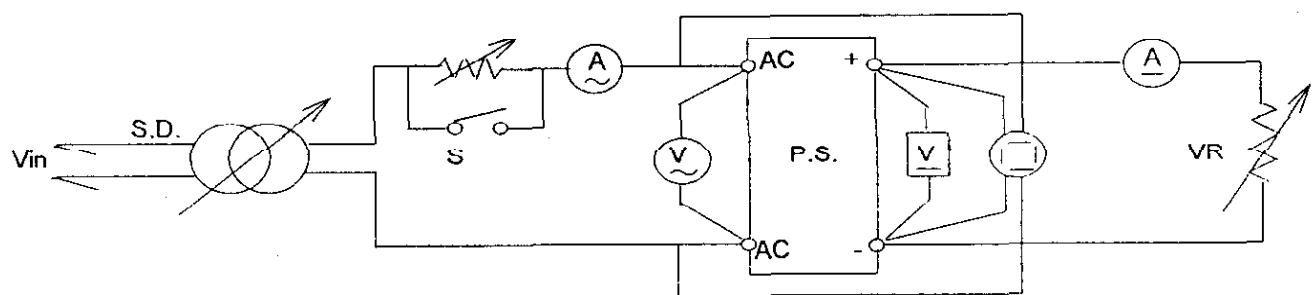


(5) Output rise characteristics

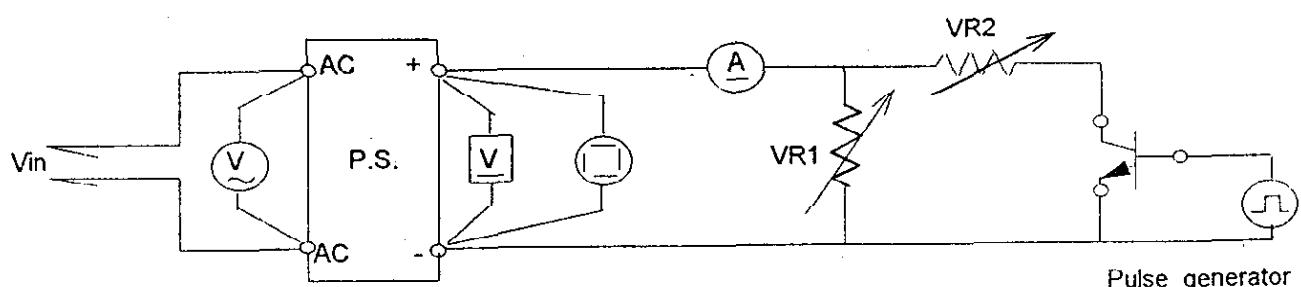


(6) Output fall characteristics same as output rise characteristics

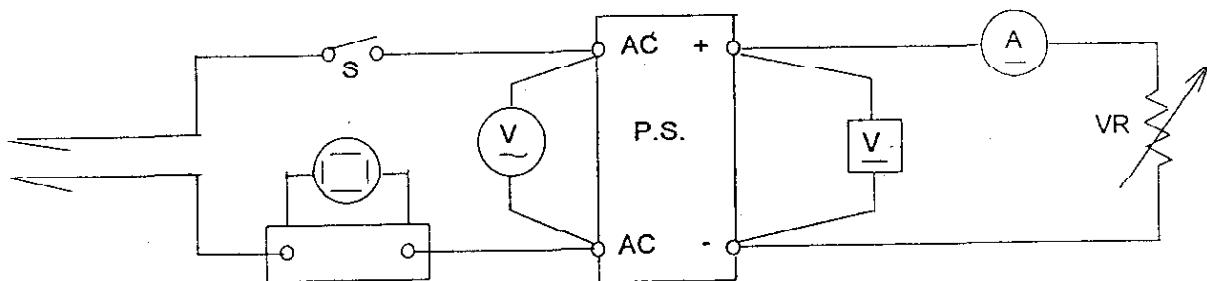
(7) Dynamic line response characteristics



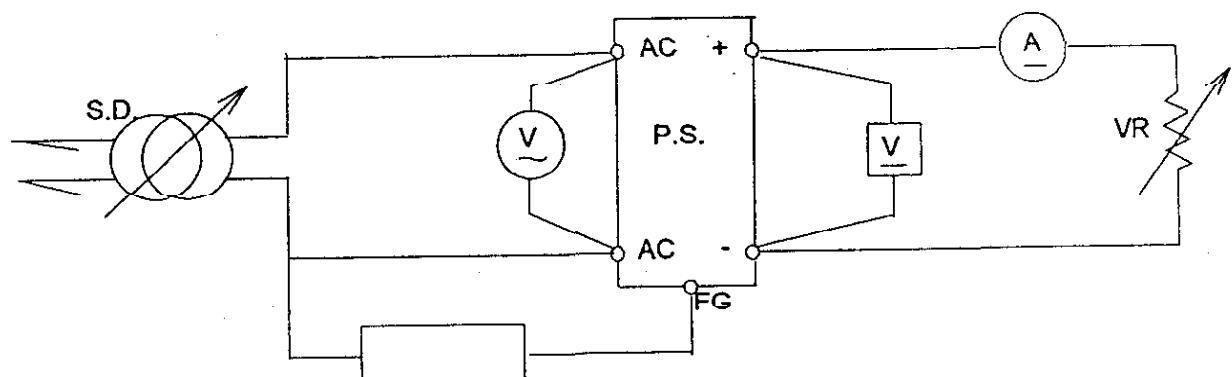
(8) Dynamic load response characteristics



(9) Inrush current characteristics



(10) Leakage current characteristics

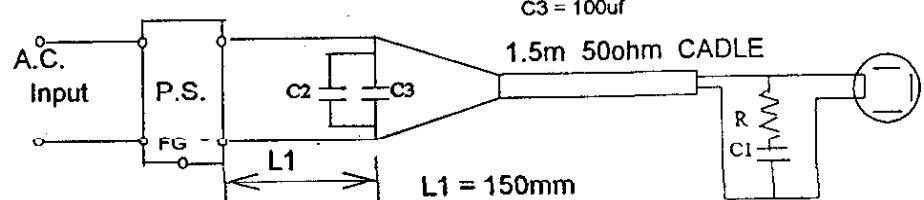


Leakage current meter

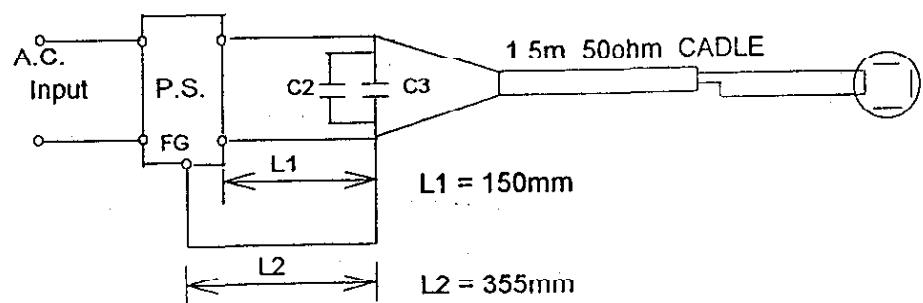
Note: Leakage current measured through a 1Kohm · resistor
Range wed: AC + DC

(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%

SHANGHAI NEMIC-LAMBDA

REGULATION - Line & Load,Temp. Drift

SWT65-522

CH1**1. Regulation - Line & Load**Conditions
CH2,CH3:
 $T_a = 25^\circ C$
 $I_{out} = 100\%$

I_{out} / V_{in}	AC 170V	AC 200V	AC 265V	Line Regulation	
Min Load	5.084V	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

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

T_a (°C)	0	25	50	Temp. Stability	
V_{out}	5.094V	5.085V	5.084V	0.010V	0.20%

CH2**1. Regulation - Line & Load**Conditions
CH1,CH3:
 $T_a = 25^\circ C$
 $I_{out} = 100\%$

I_{out} / V_{in}	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

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

T_a (°C)	0	25	50	Temp. Stability	
V_{out}	12.196V	12.173V	12.172V	0.024V	0.20%

CH3**1. Regulation - Line & Load**Conditions
CH1,CH2:
 $T_a = 25^\circ C$
 $I_{out} = 100\%$

I_{out} / V_{in}	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

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

T_a (°C)	0	25	50	Temp. Stability	
V_{out}	-12.025V	-12.013V	-12.003V	0.022V	0.18%

SHANGHAI NEMIC-LAMBDA

**OUTPUT VOLTAGE AND RIPPLE v.s
INPUT VOLTAGE**

SWT65 - 522

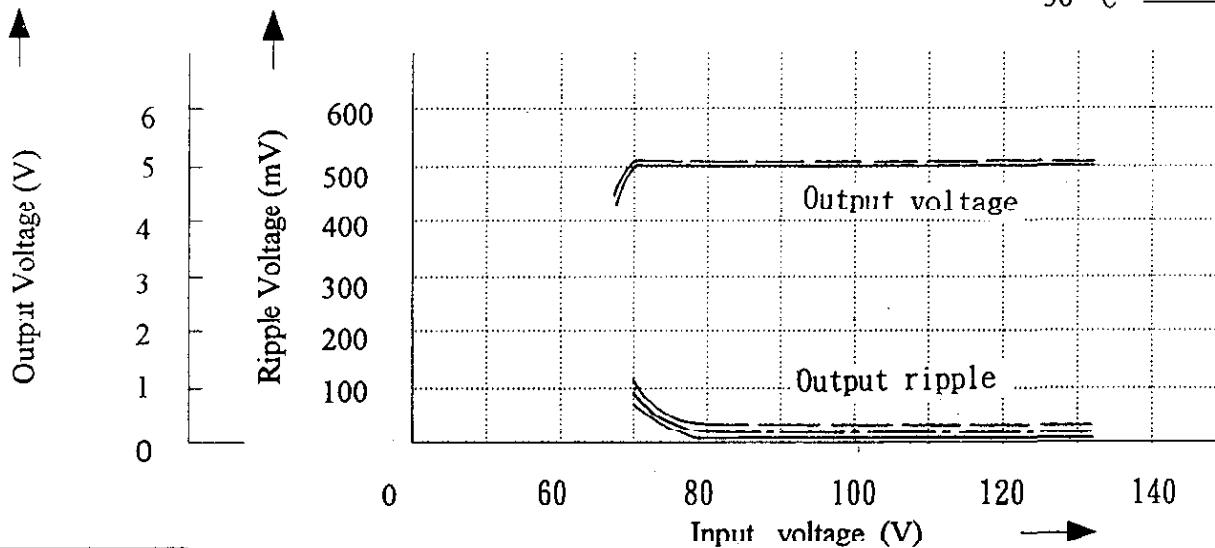
Conditions Iout = 100%

Ta : 0 °C

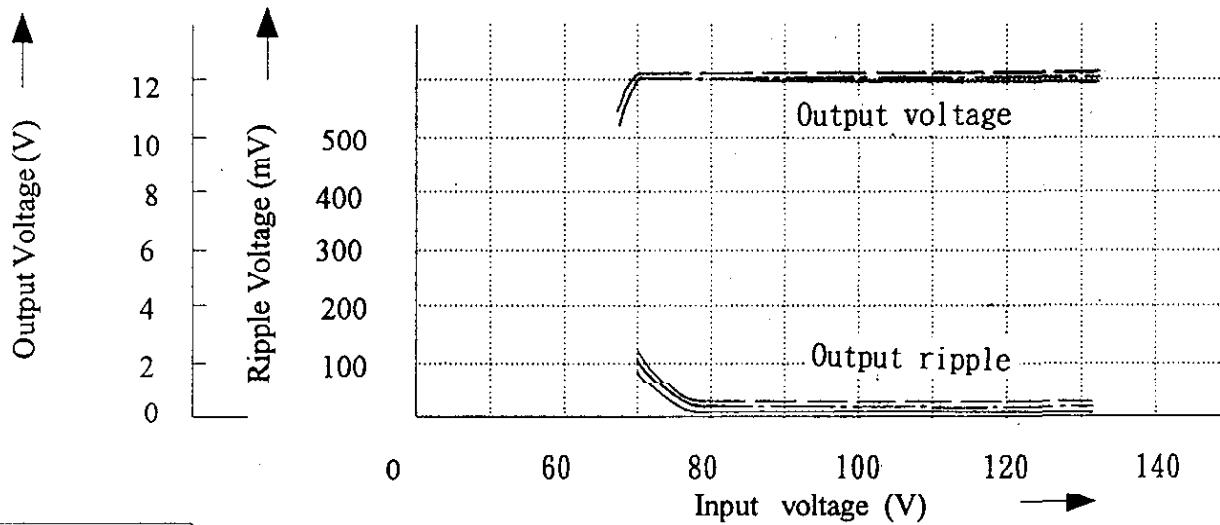
25 °C

50 °C

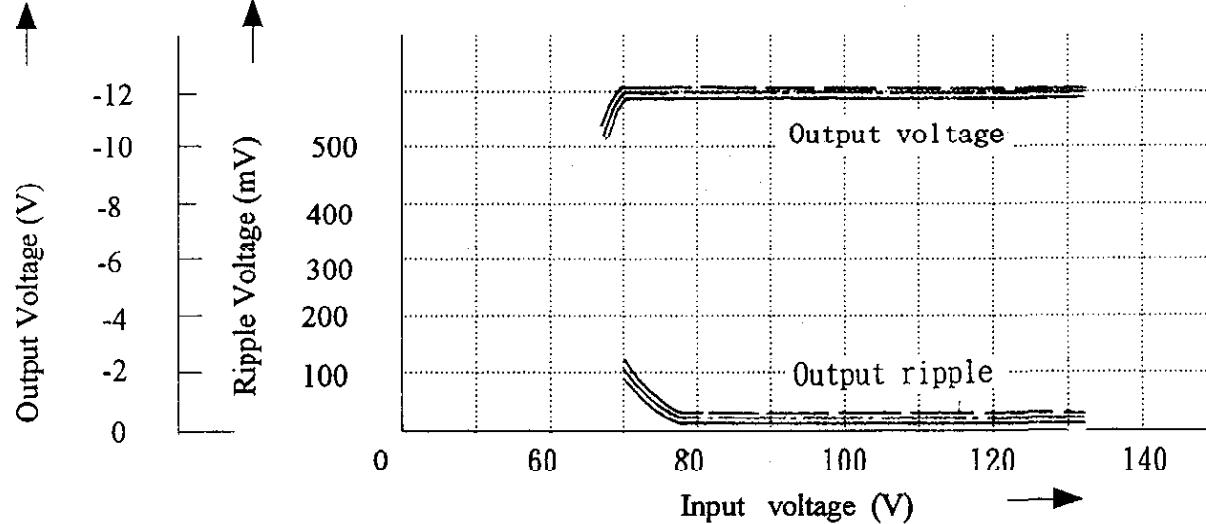
CH1



CH2



CH3



OUTPUT VOLTAGE AND RIPPLE v.s

SWT65 - 522

INPUT VOLTAGE

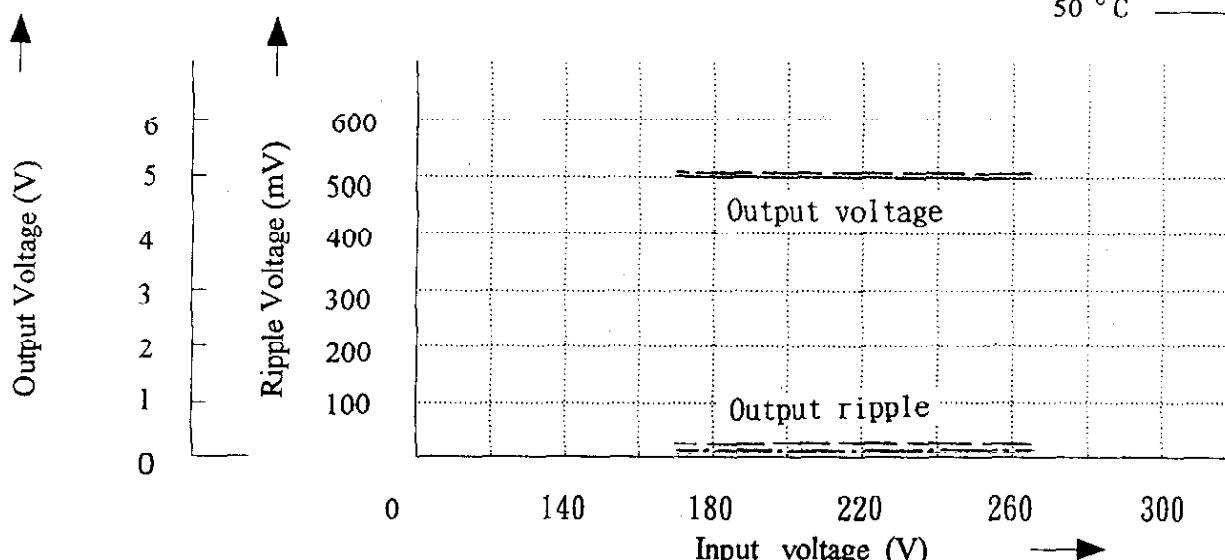
Conditions Iout = 100%

Ta : 0 °C

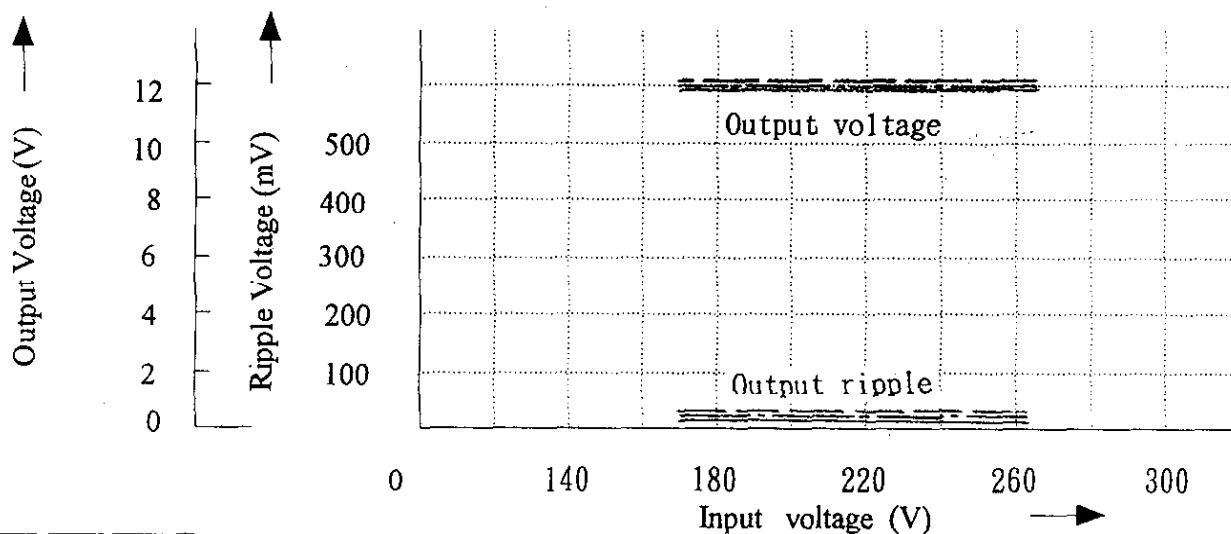
25 °C

50 °C

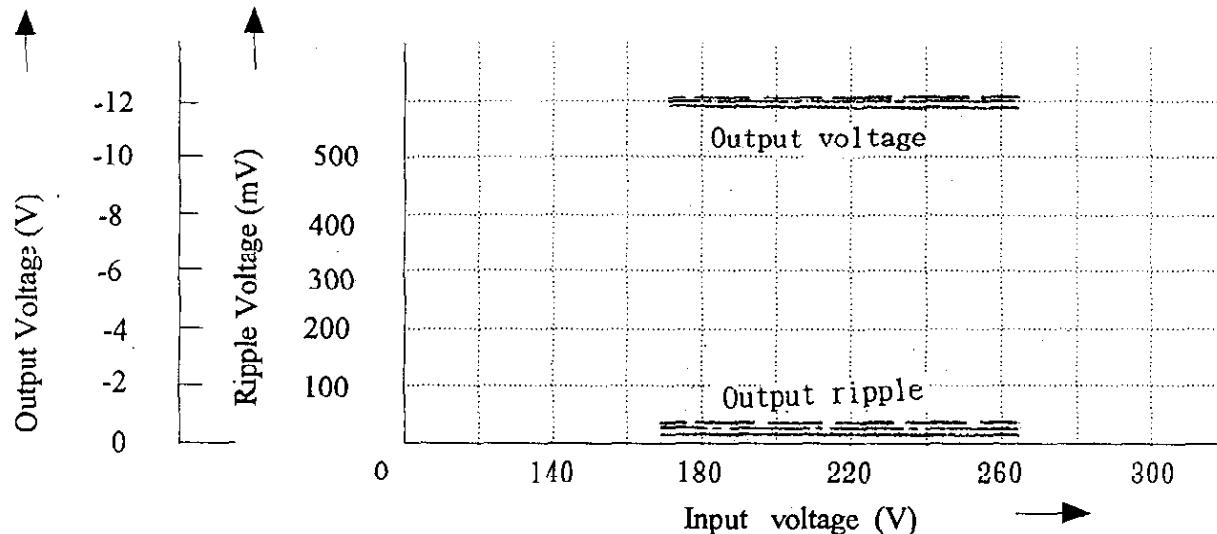
CH1



CH2



CH3



EFFICIENCY AND INPUT CURRENT v.s

SWT65 - *

OUTPUT CURRENT

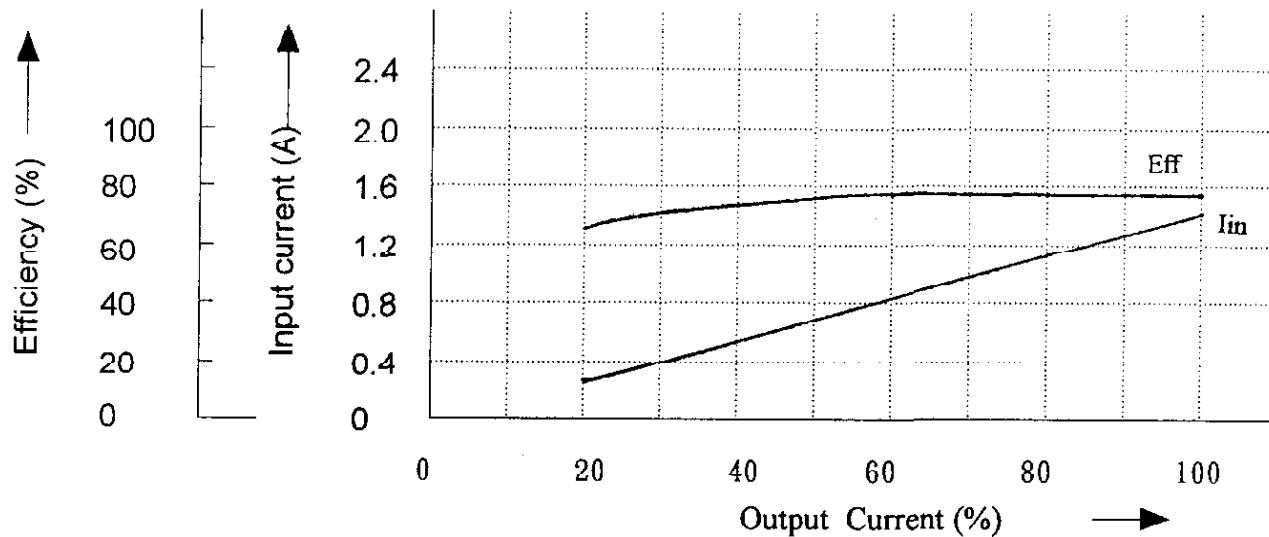
Conditions

V_{inA} = 100VAC

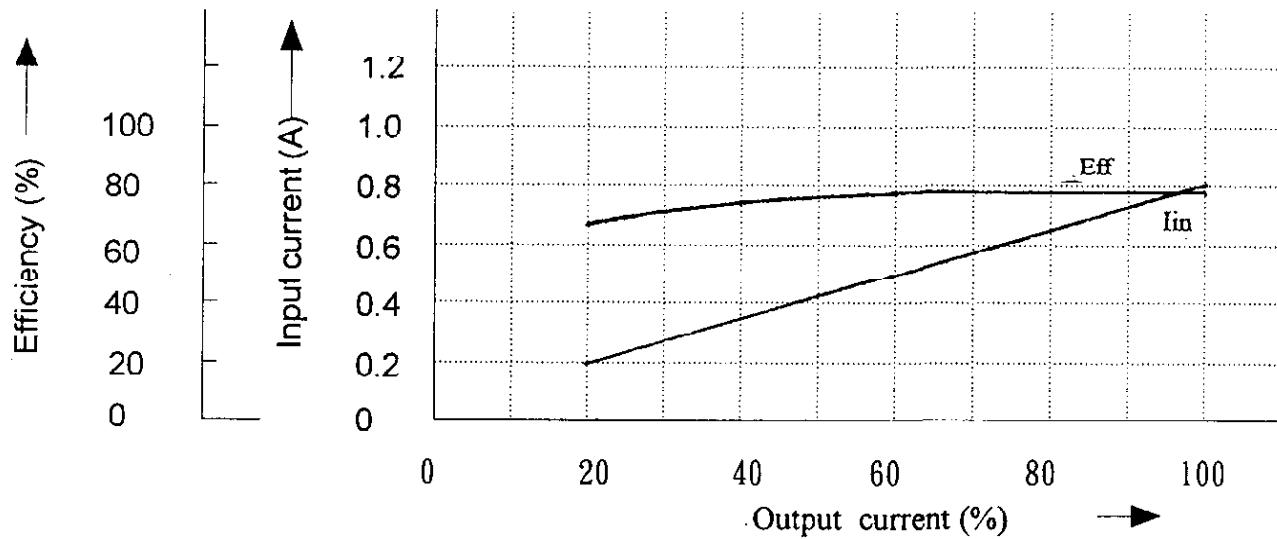
V_{inB} = 200VAC

T_a = 25 °C

A: 100VAC



B: 200VAC

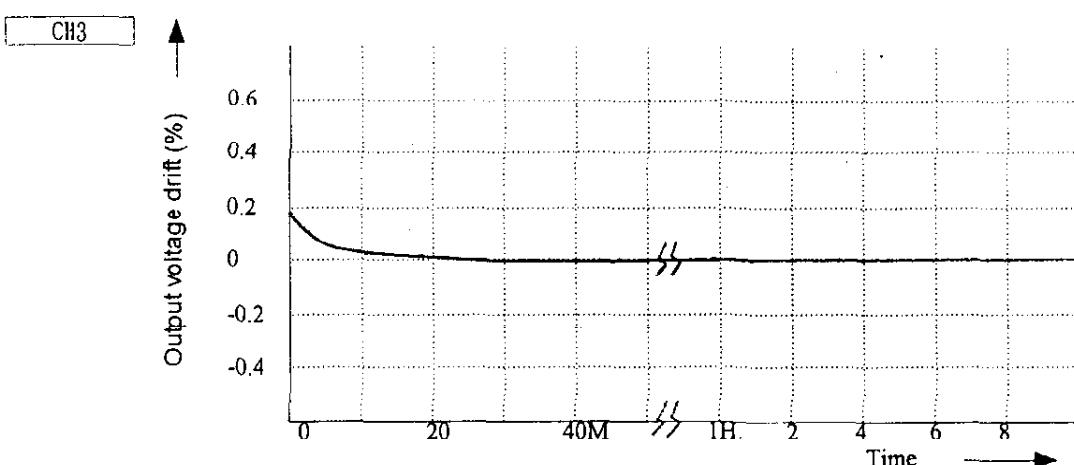
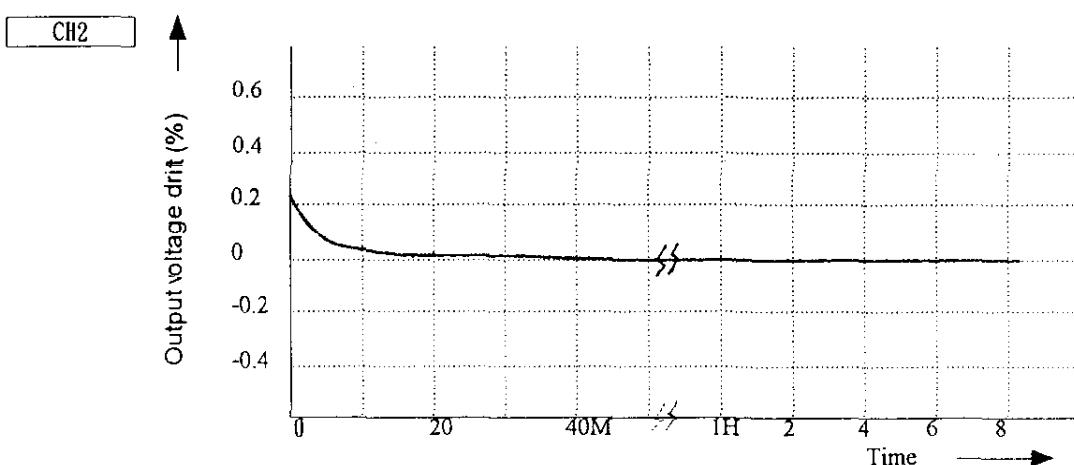
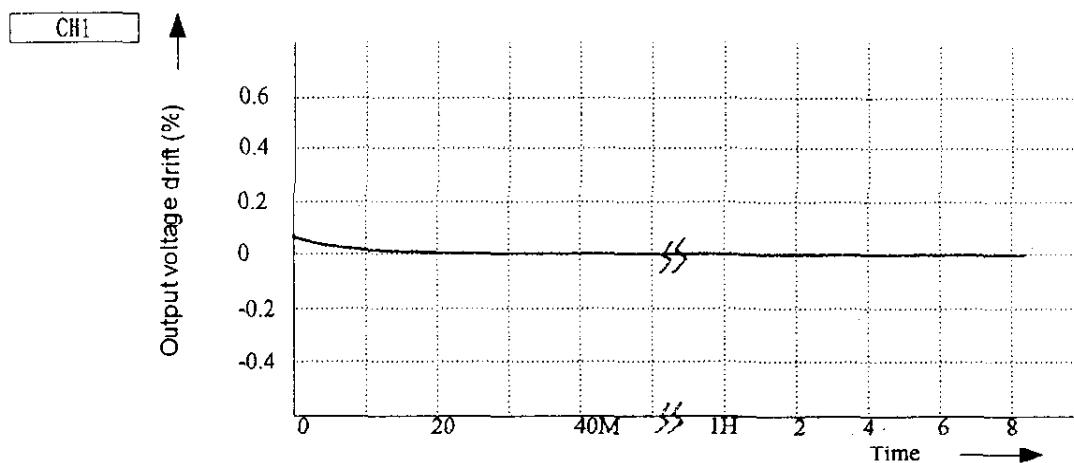


WARM UP DRIFT

SWT65 - 522

Conditions

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



OCP CHARACTERISTICS v.s

SWT65 - 522

INPUT VOLTAGE

Conditions

T_a = 25 °C

V_{in} : 85VAC

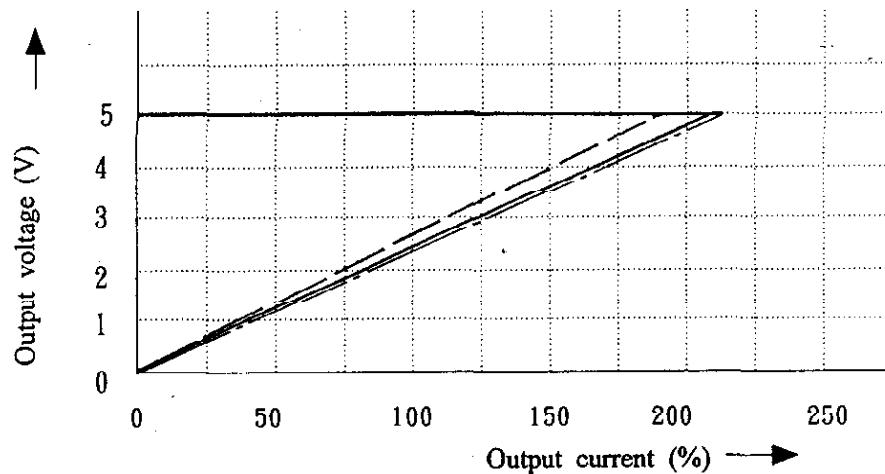
100VAC

132VAC

CH1

I_{out}:

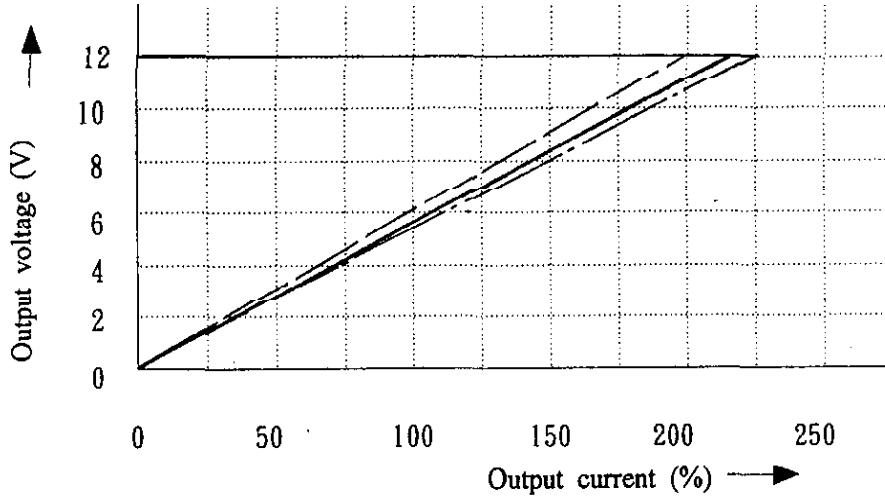
CH2,3:100%



CH2

I_{out}:

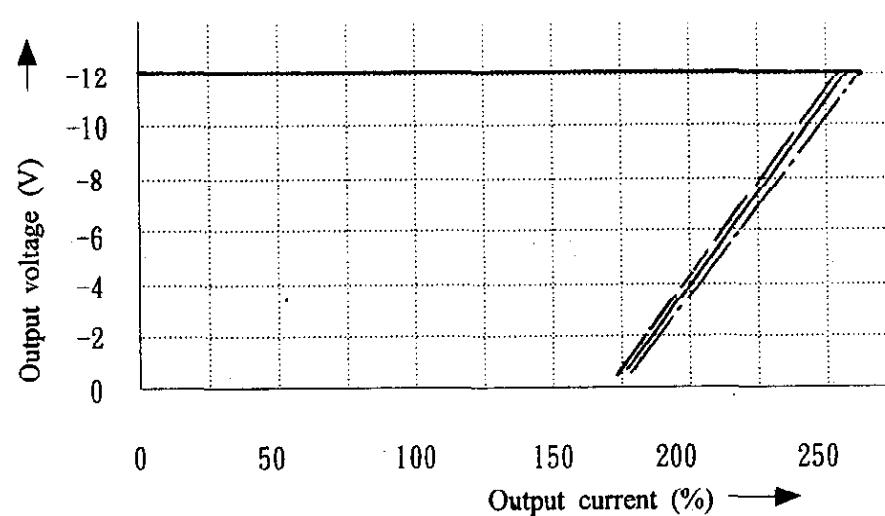
CH1,3:100%



CH3

I_{out}:

CH1,2:100%



OCP CHARACTERISTICS v.s

SWT65 - 522

INPUT VOLTAGE

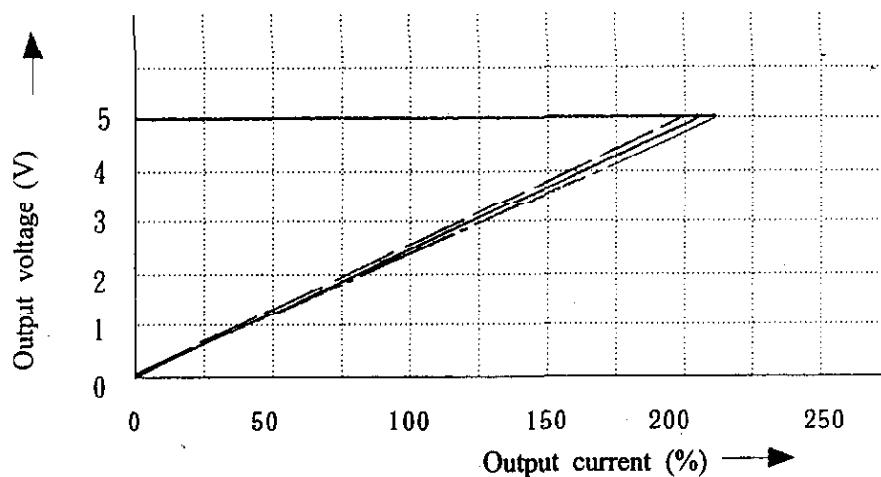
Conditions $T_a = 25^\circ C$

Vin : 170VAC ——
200VAC ———
265VAC —— · —

CH1

Iout:

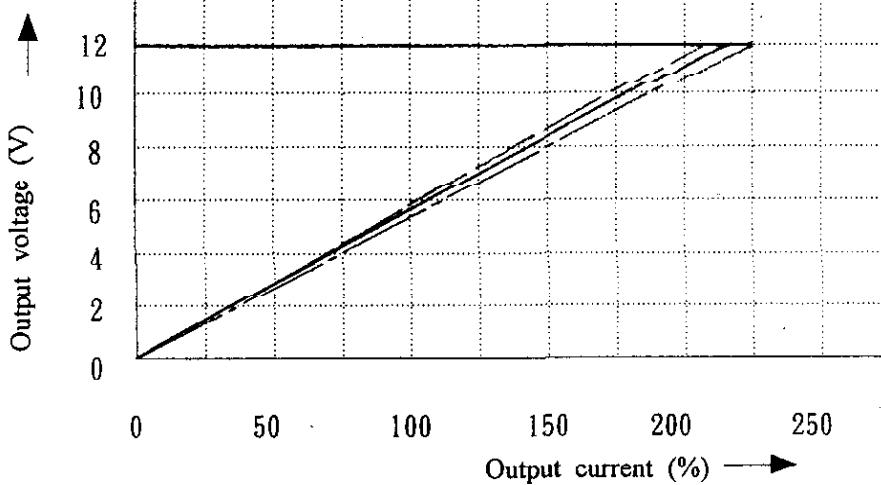
CH2,3:100%



CH2

Iout:

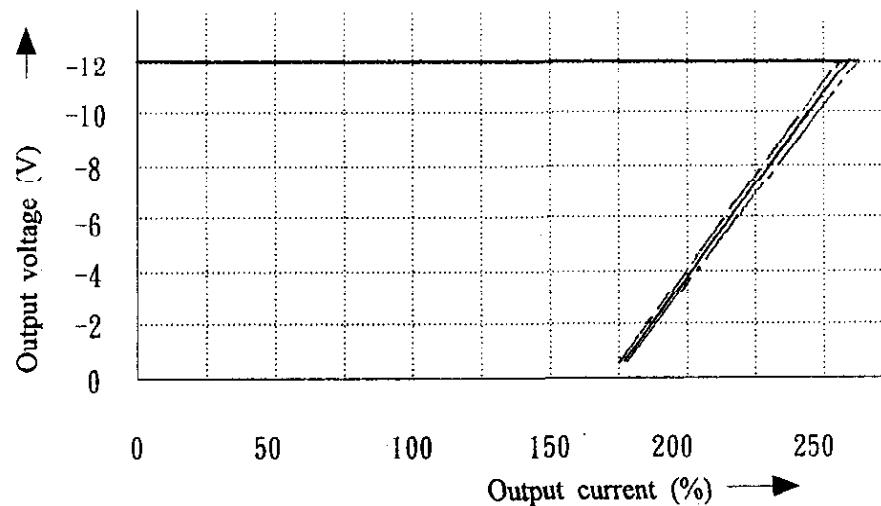
CH1,3:100%



CH3

Iout:

CH1,2:100%



OCP CHARACTERISTICS v.s TEMP.

SWT65 - 522

Conditions

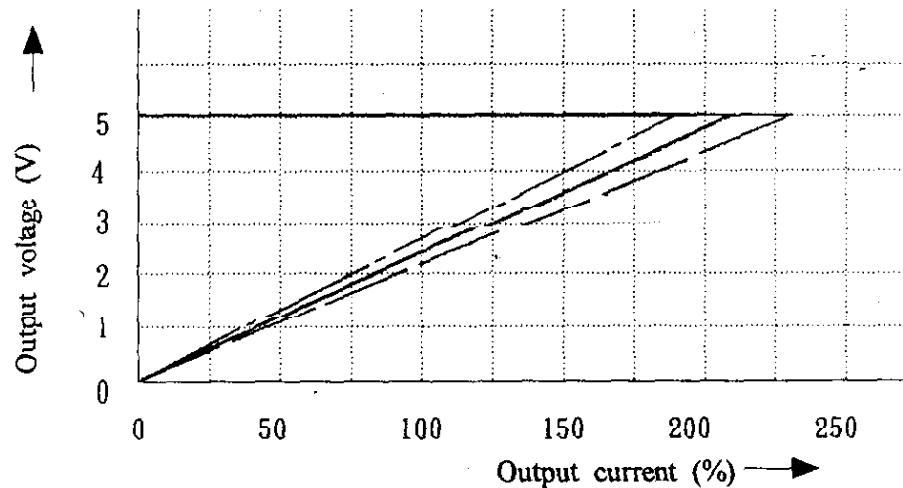
Vin = 100VAC

Ta : 0 °C ——
25 °C ———
50 °C ——

CH1

Iout:

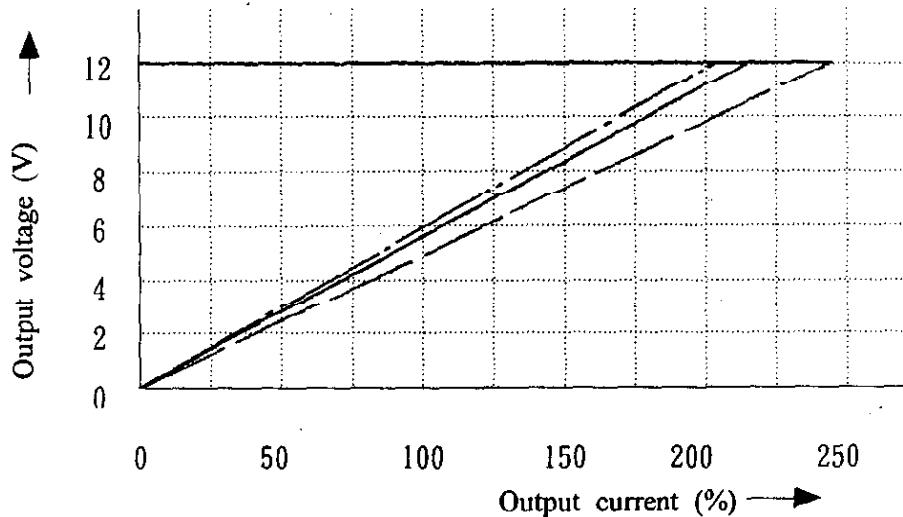
CH2,3:100%



CH2

Iout:

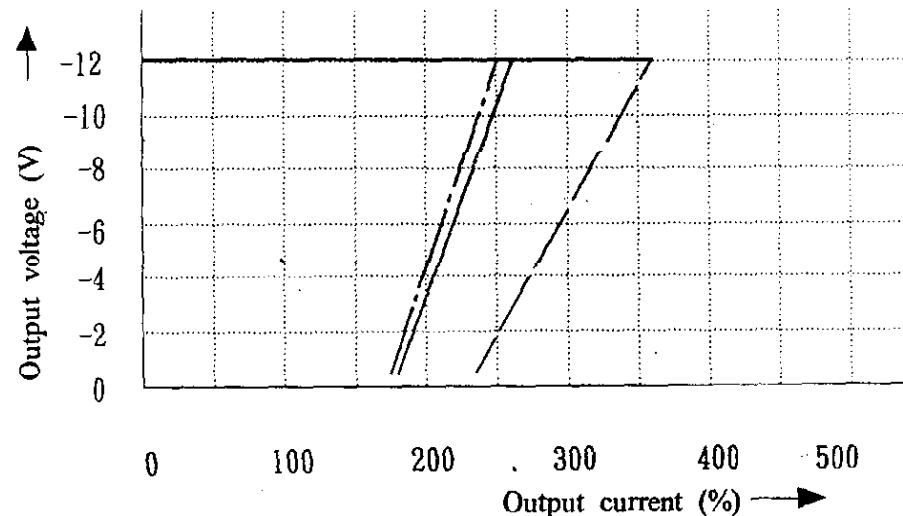
CH1,3:100%



CH3

Iout:

CH1,2:100%



O.V.P CHARACTERISTICS

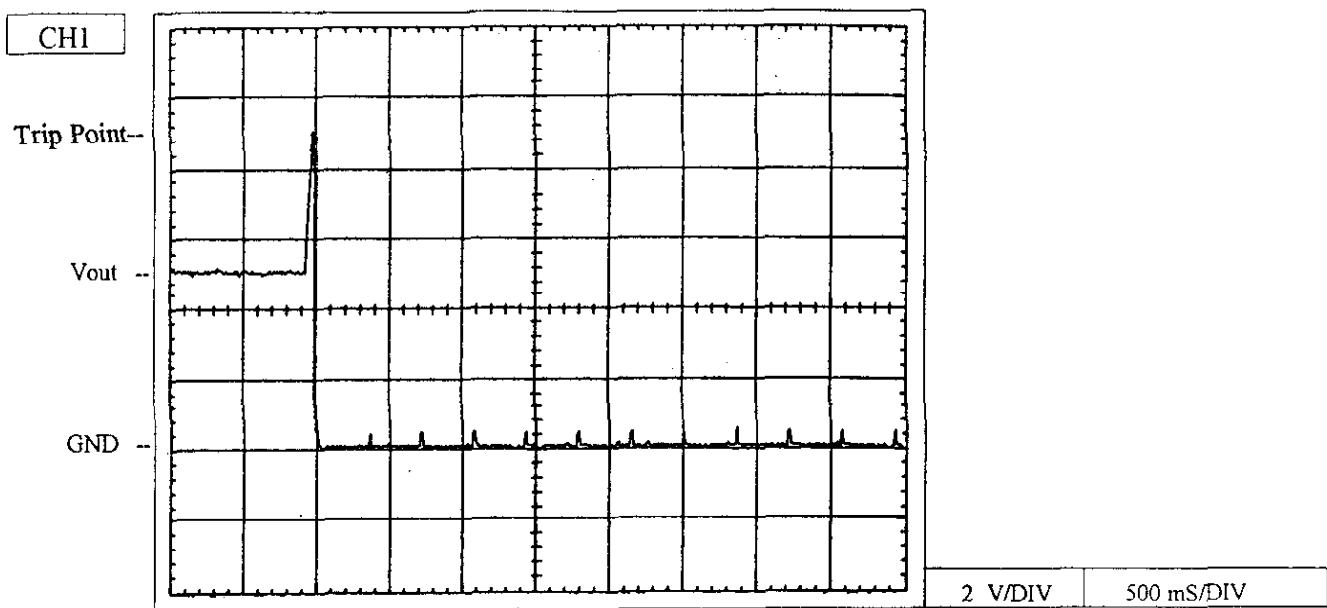
Conditions

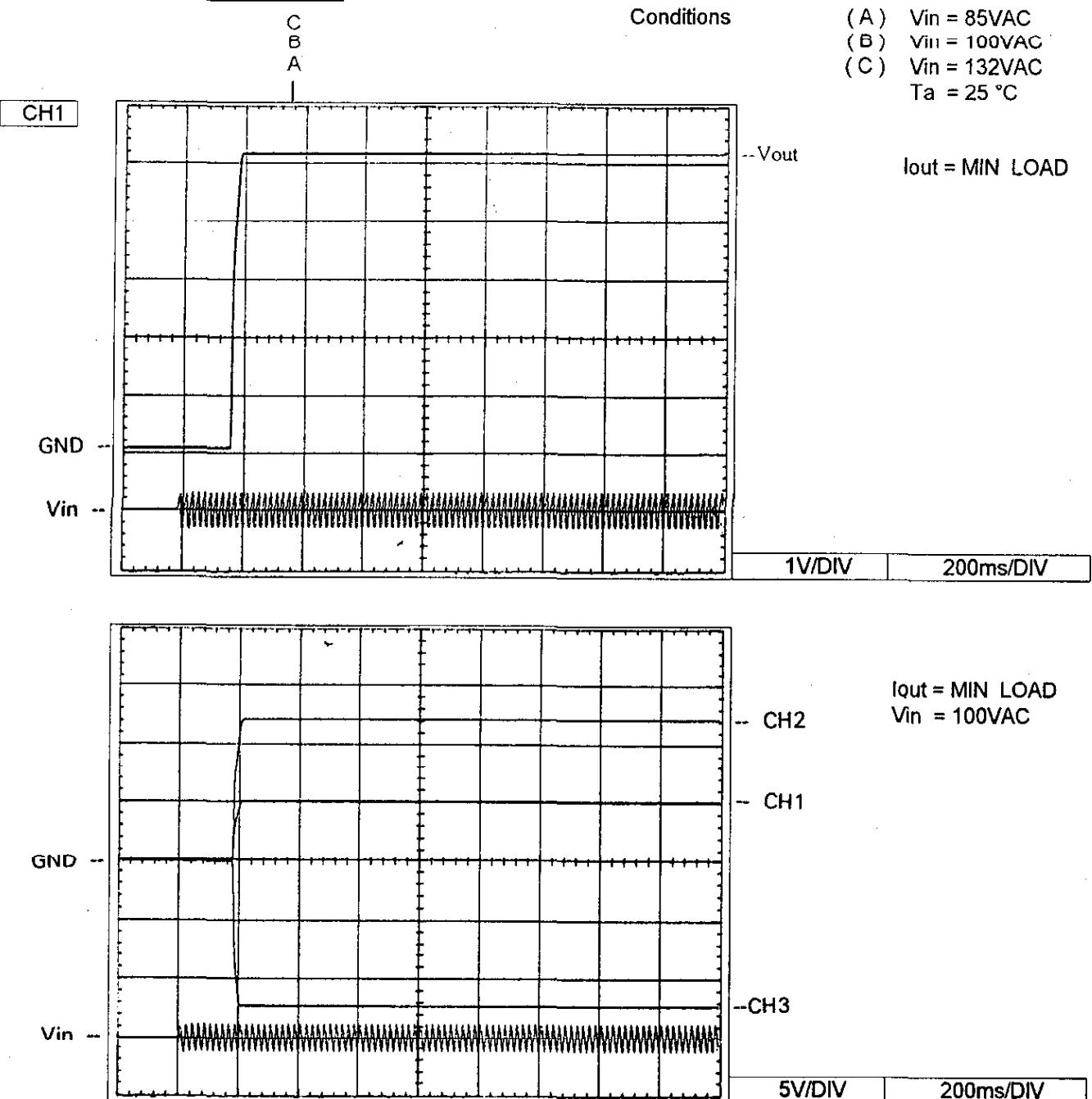
SWT65- *

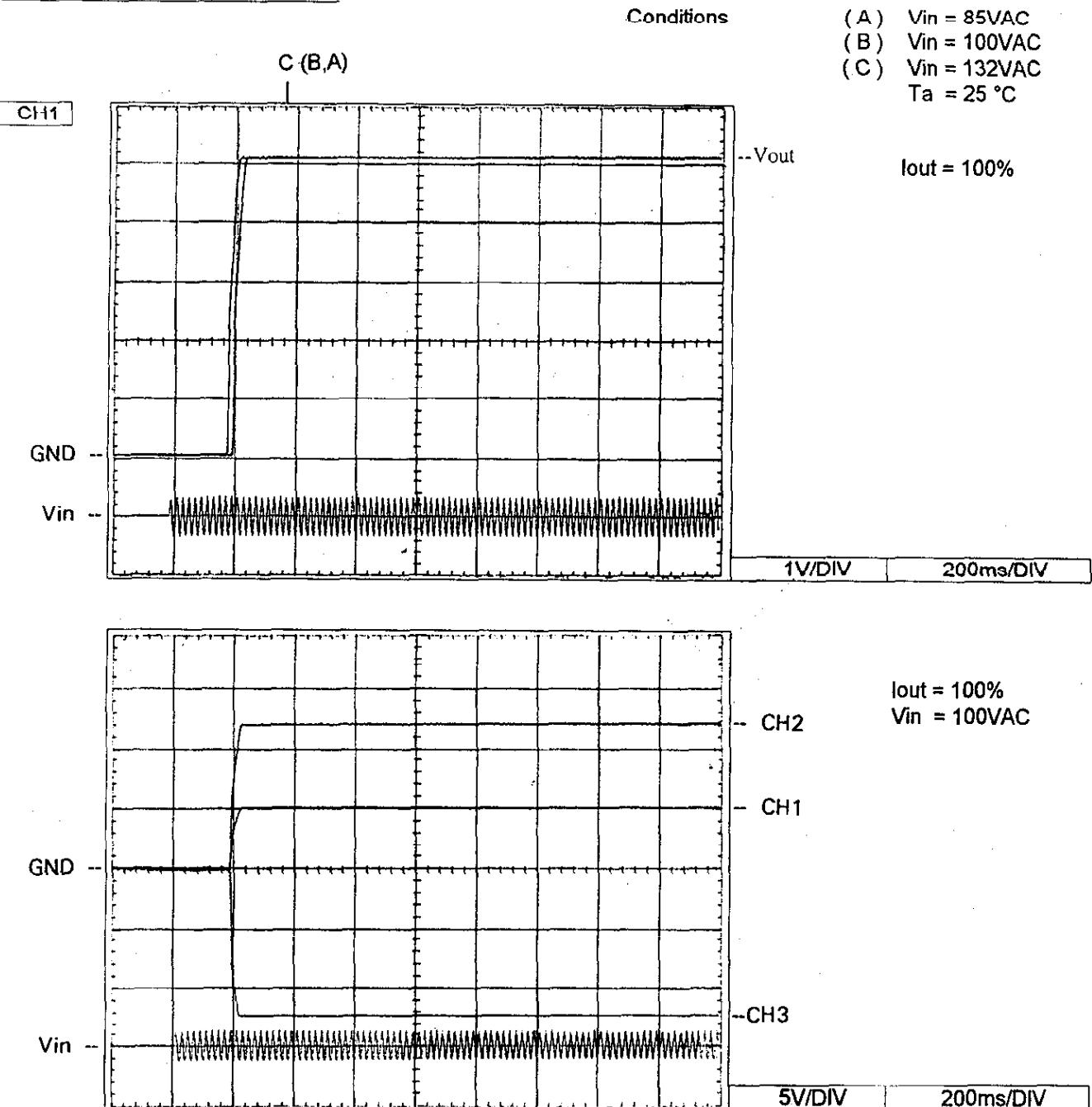
Vin = 100VAC

Iout = Min Load

Ta = 25 °C



OUTPUT RISE TIME

OUTPUT RISE TIME

OUTPUT RISE TIMEC
B
A

CH1

GND

Vin

Conditions

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

--Vout

Iout = MIN LOAD

1V/DIV 200ms/DIV

-- CH2

-- CH1

-- CH3

Iout = MIN LOAD
 $V_{in} = 200\text{VAC}$

GND

Vin

5V/DIV 200ms/DIV

OUTPUT RISE TIMEC
B
A

Conditions

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

CH1

GND

Vin

-- Vout

Iout = 100%

1V/DIV

200ms/DIV

-- CH2

-- CH1

-- CH3

Iout = 100%
 $V_{in} = 200\text{VAC}$

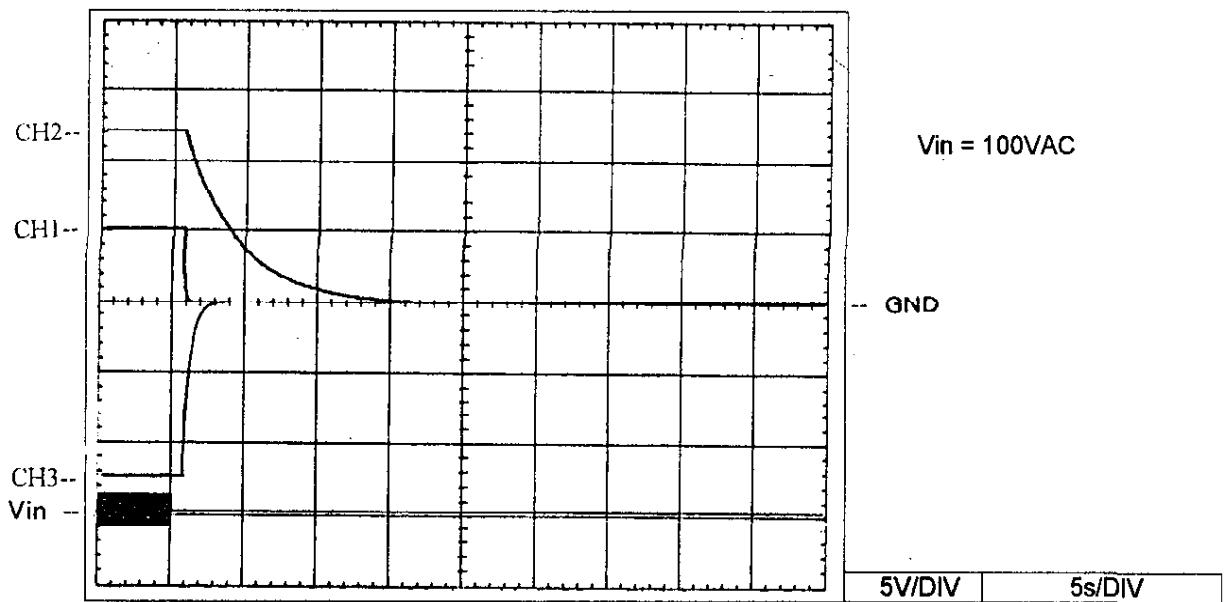
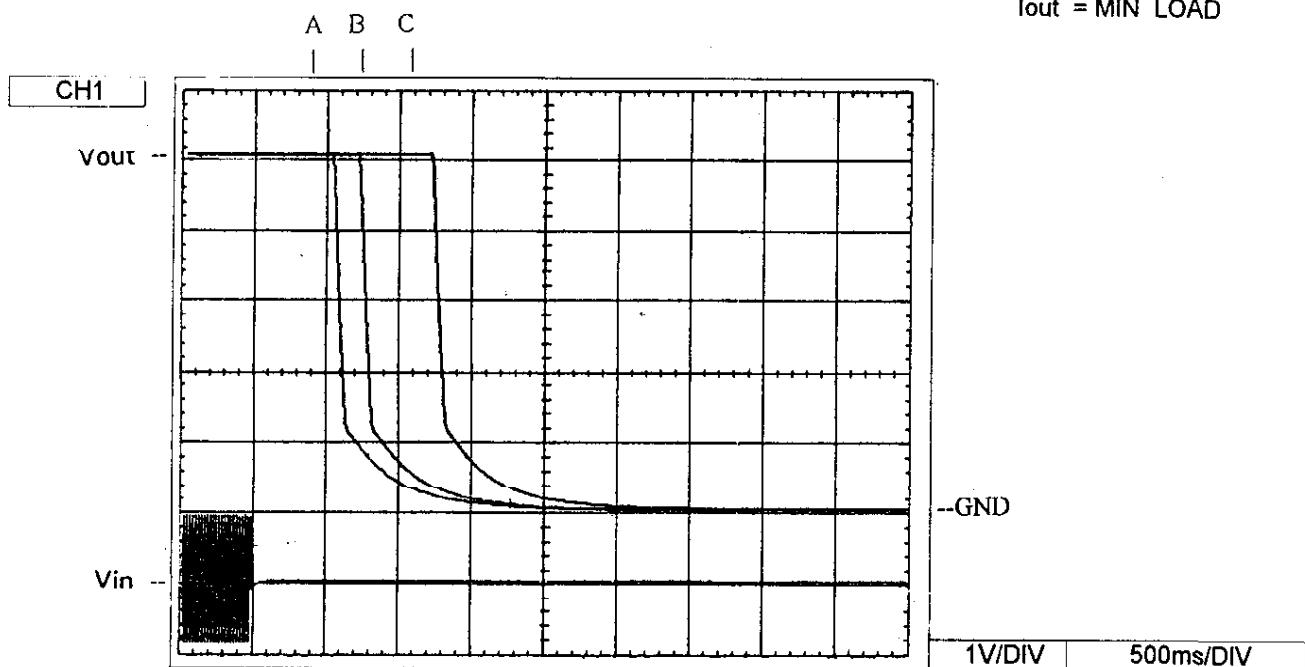
5V/DIV

200ms/DIV

OUTPUT FALL TIME

Conditions

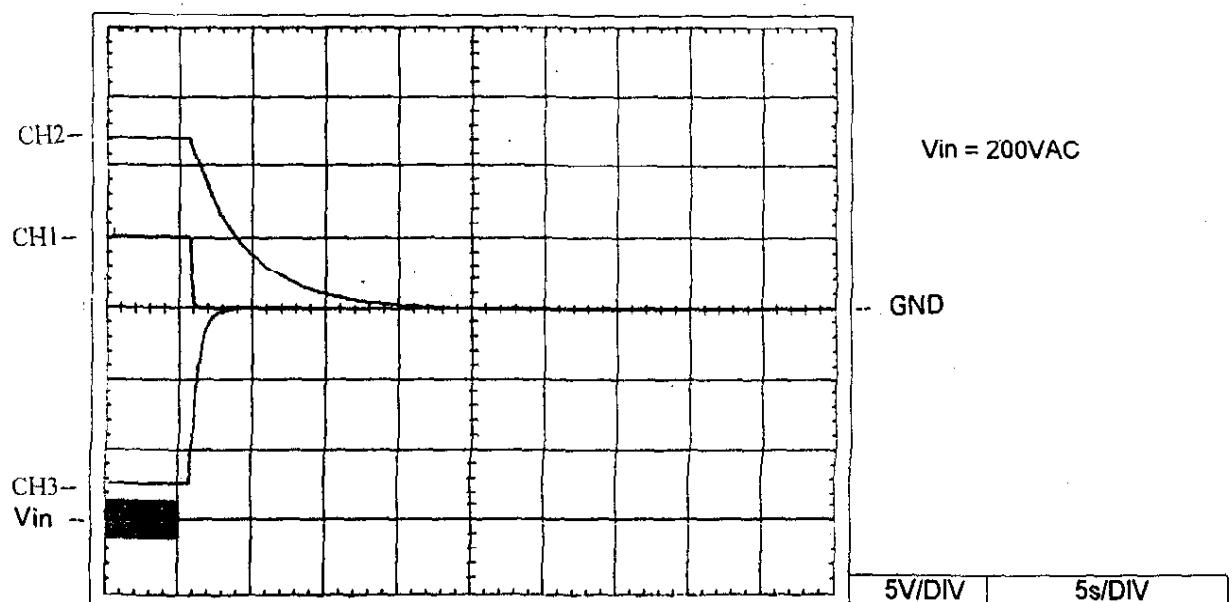
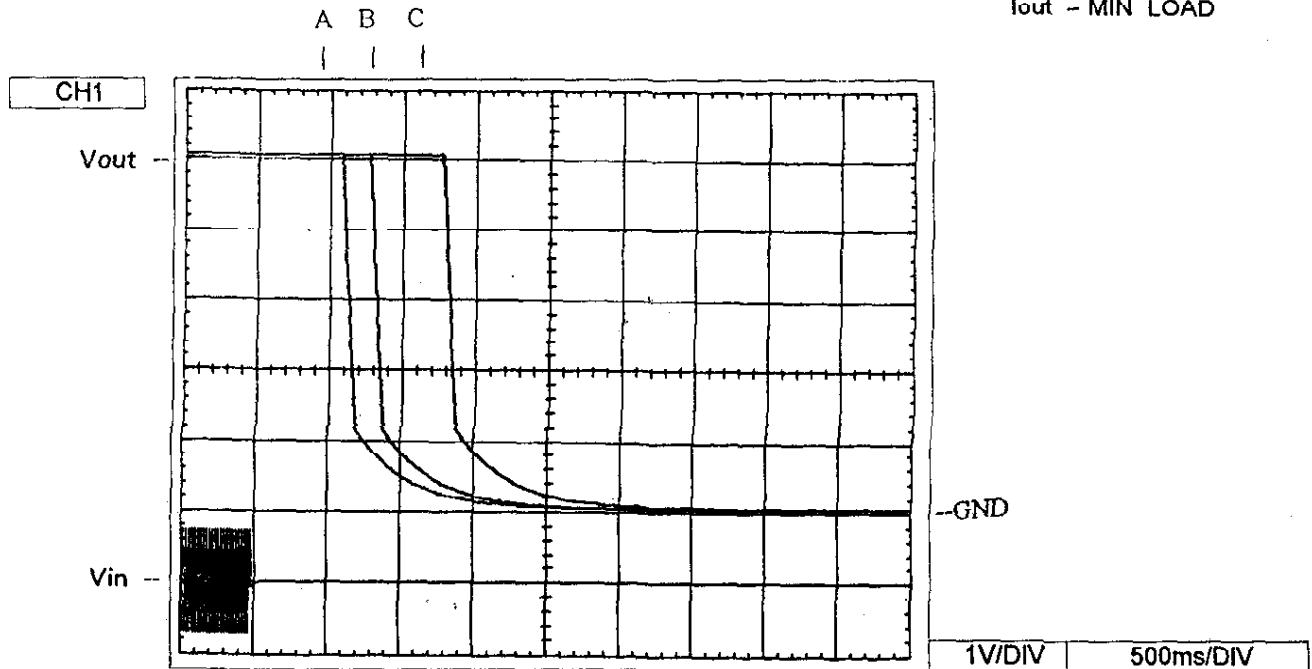
- (A) $V_{in} = 85\text{VAC}$
 (B) $V_{in} = 100\text{VAC}$
 (C) $V_{in} = 132\text{VAC}$
 $T_a = 25^\circ\text{C}$
 $I_{out} = \text{MIN LOAD}$



OUTPUT FALL TIME

Conditions

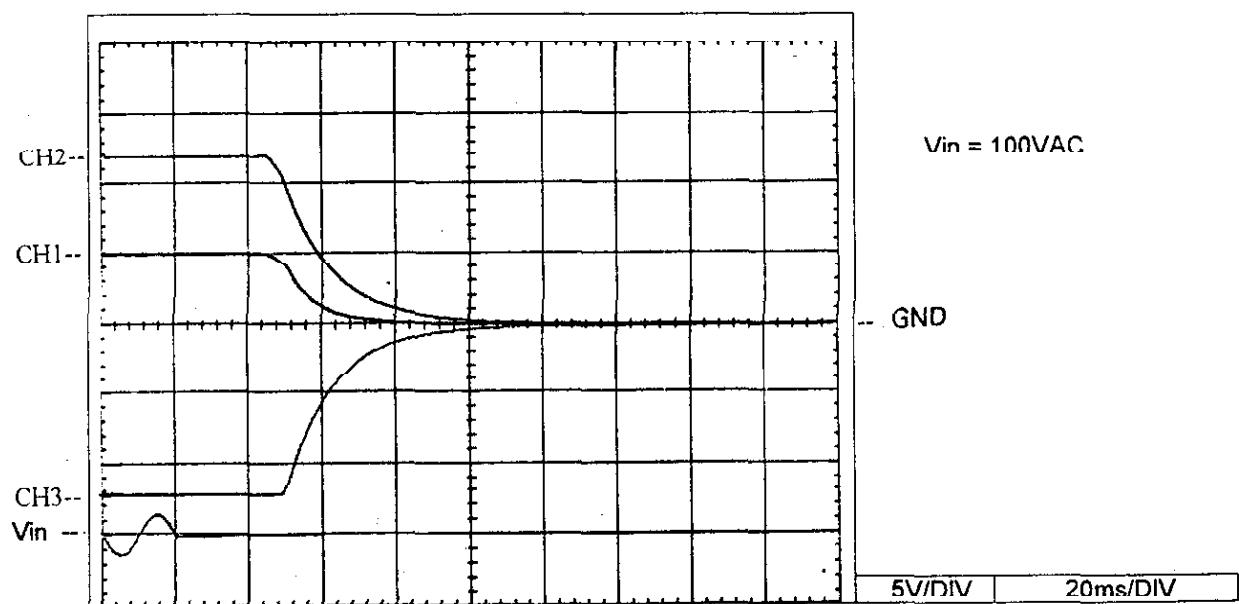
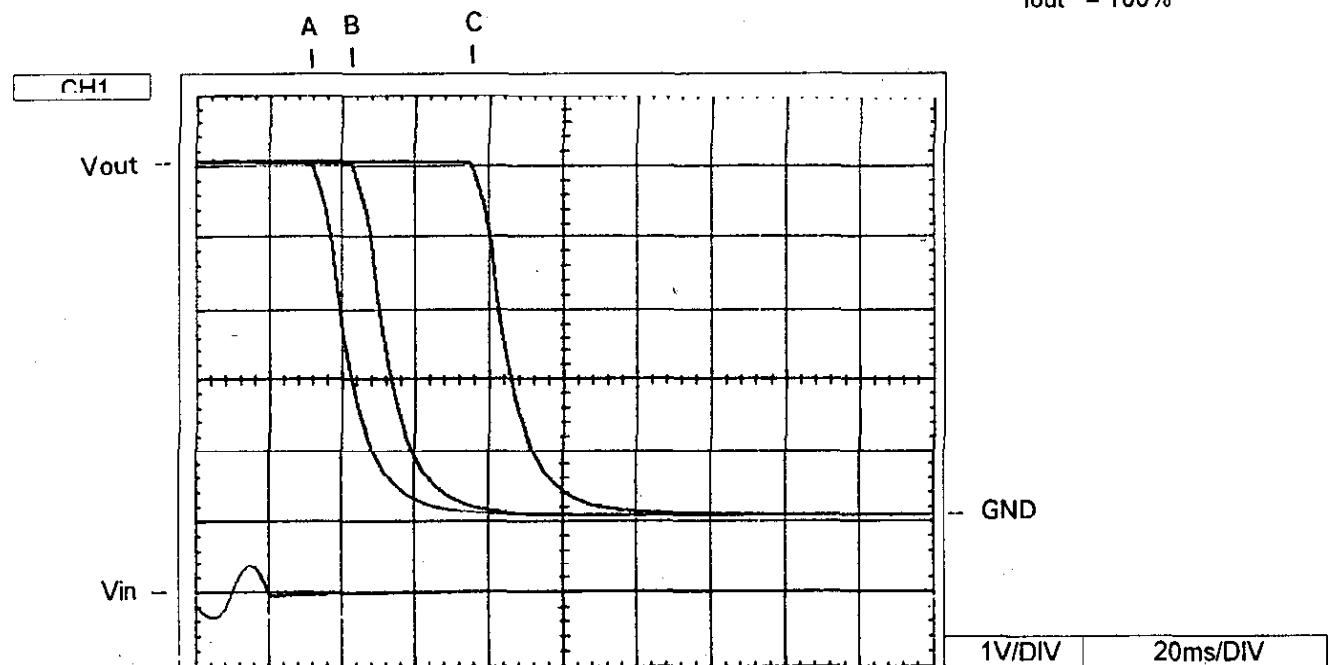
- (A) $V_{in} = 170\text{VAC}$
 (B) $V_{in} = 200\text{VAC}$
 (C) $V_{in} = 265\text{VAC}$
 $T_a = 25^\circ\text{C}$
 $I_{out} = \text{MIN LOAD}$



OUTPUT FALL TIME

Conditions

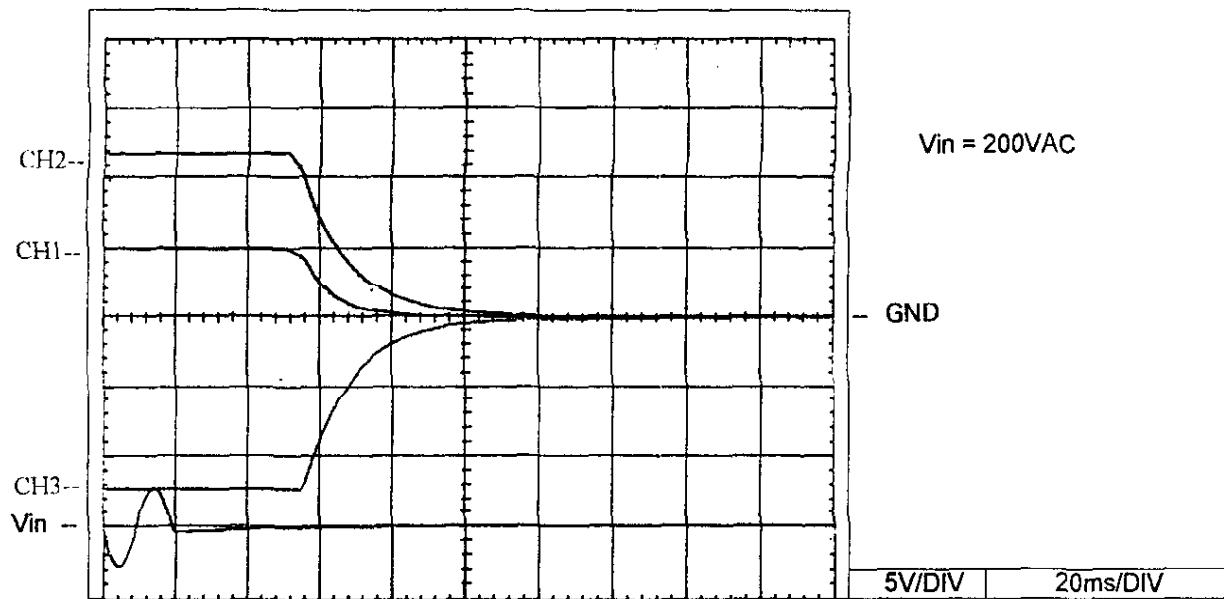
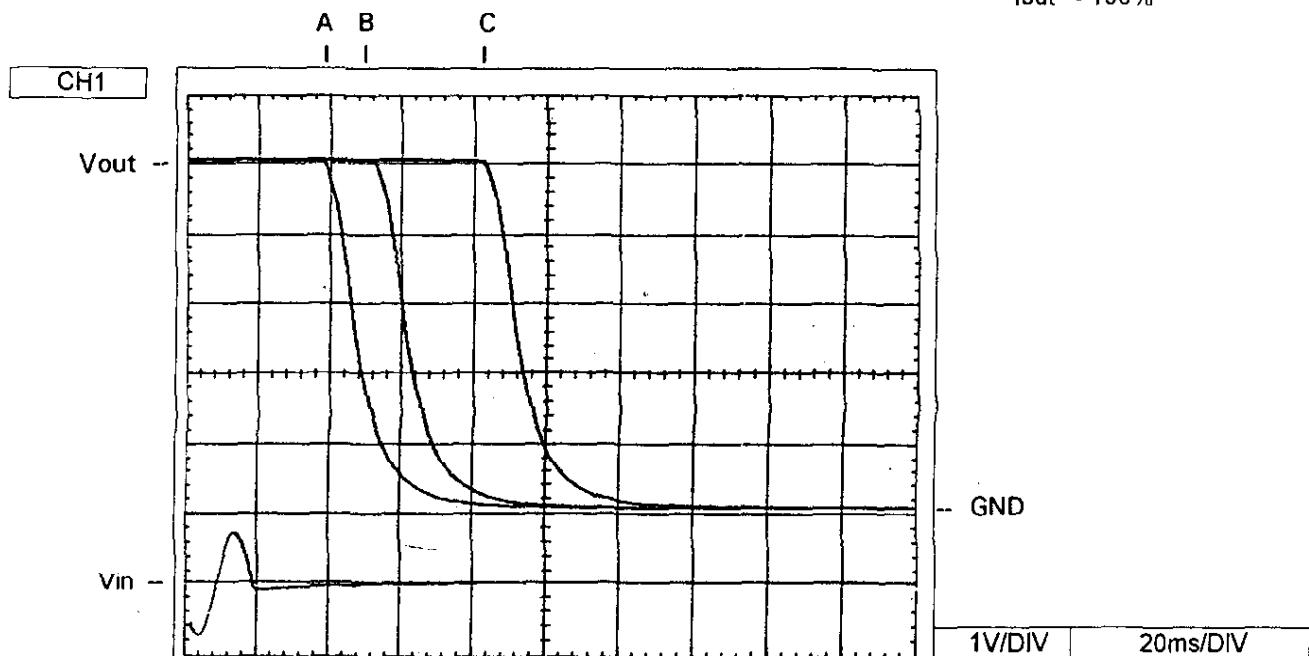
- (A) $V_{in} = 85VAC$
 (B) $V_{in} = 100VAC$
 (C) $V_{in} = 132VAC$
 $T_a = 25^\circ C$
 $I_{out} = 100\%$



OUTPUT FALL TIME

Conditions

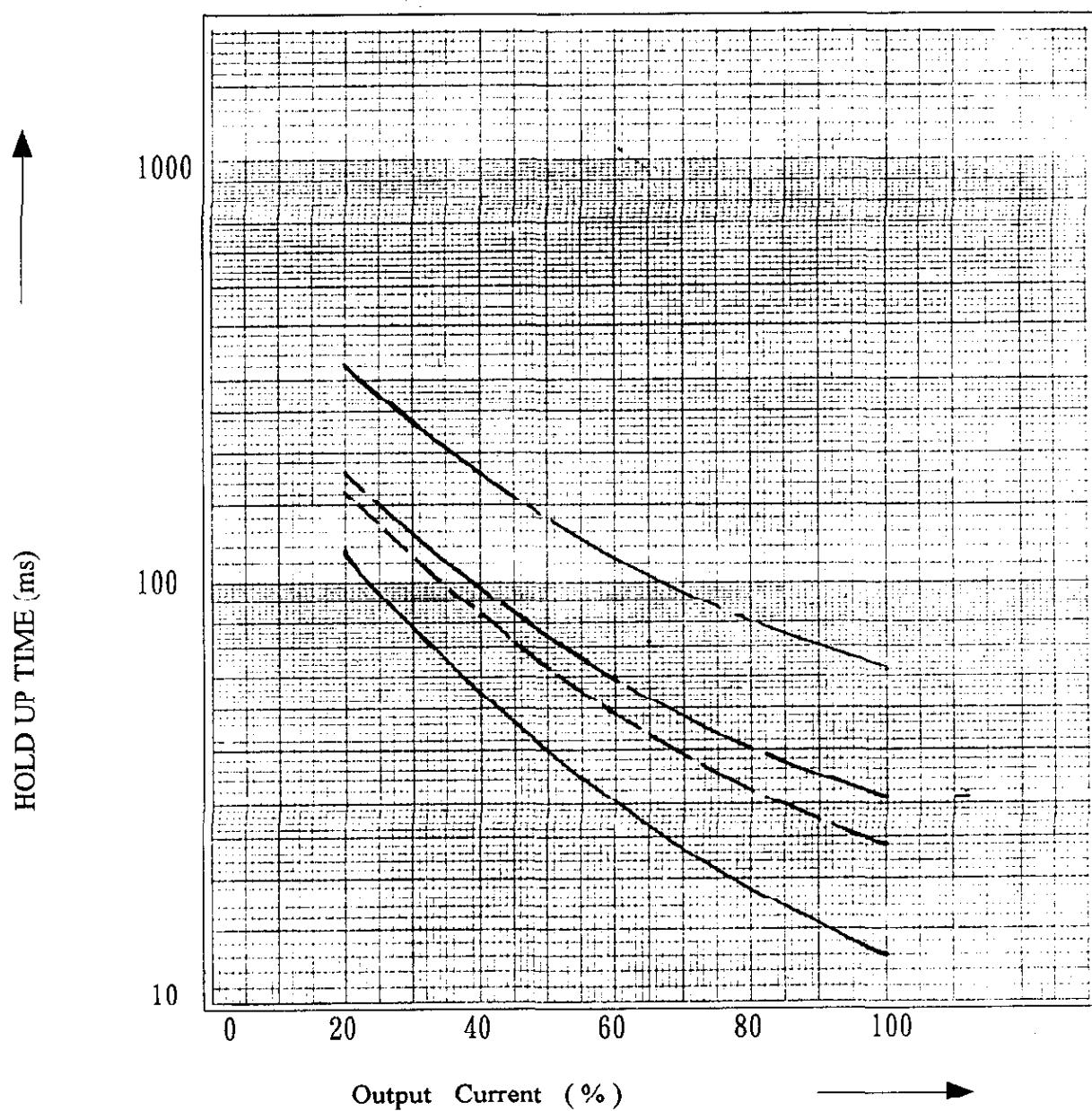
- (A) $V_{in} = 170\text{VAC}$
- (B) $V_{in} = 200\text{VAC}$
- (C) $V_{in} = 265\text{VAC}$
- $T_a = 25^\circ\text{C}$
- $I_{out} = 100\%$



HOLD UP TIME

Conditions

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



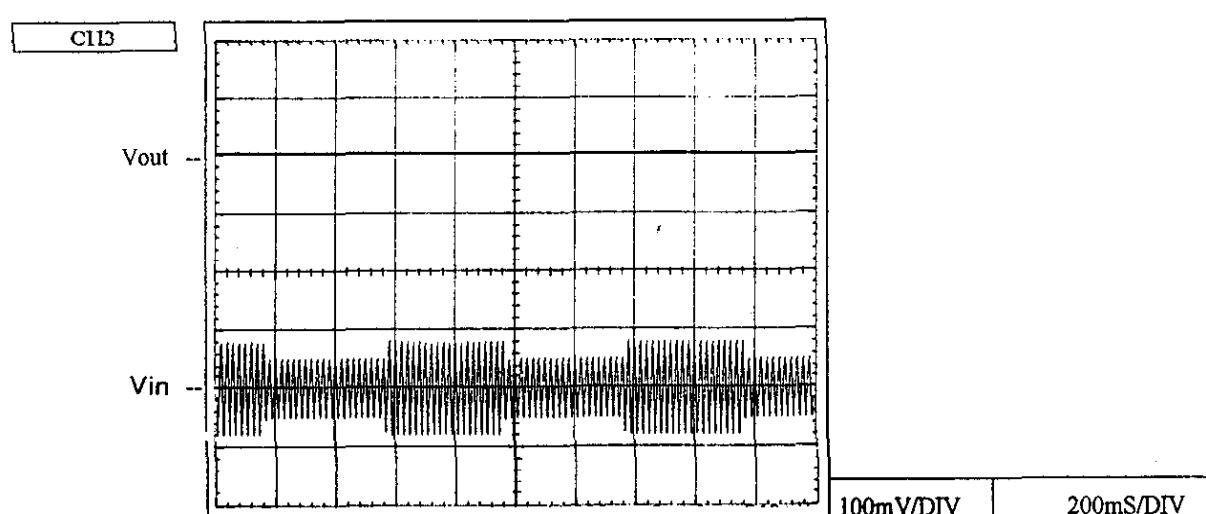
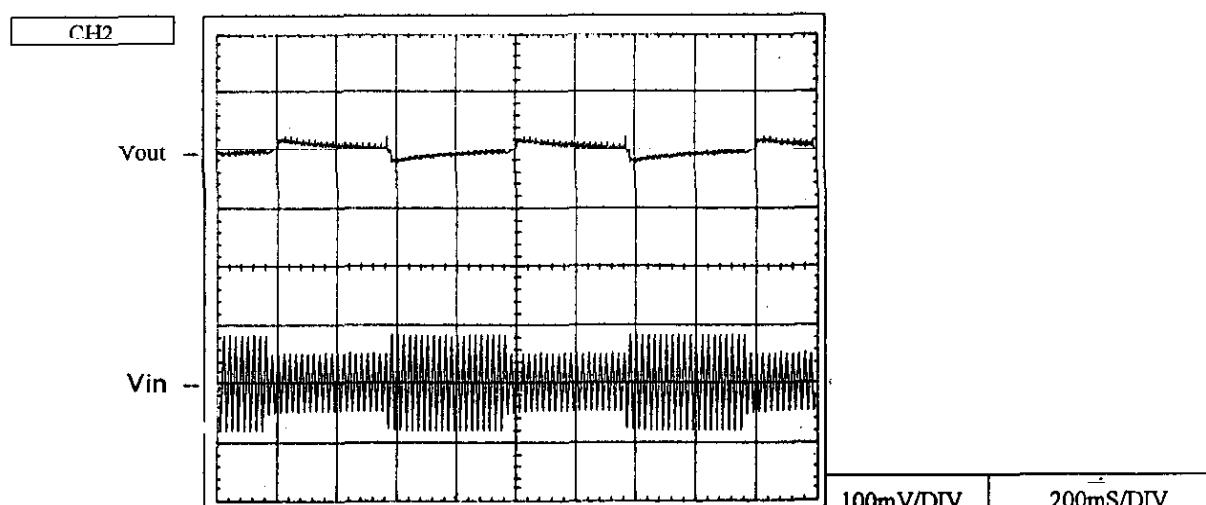
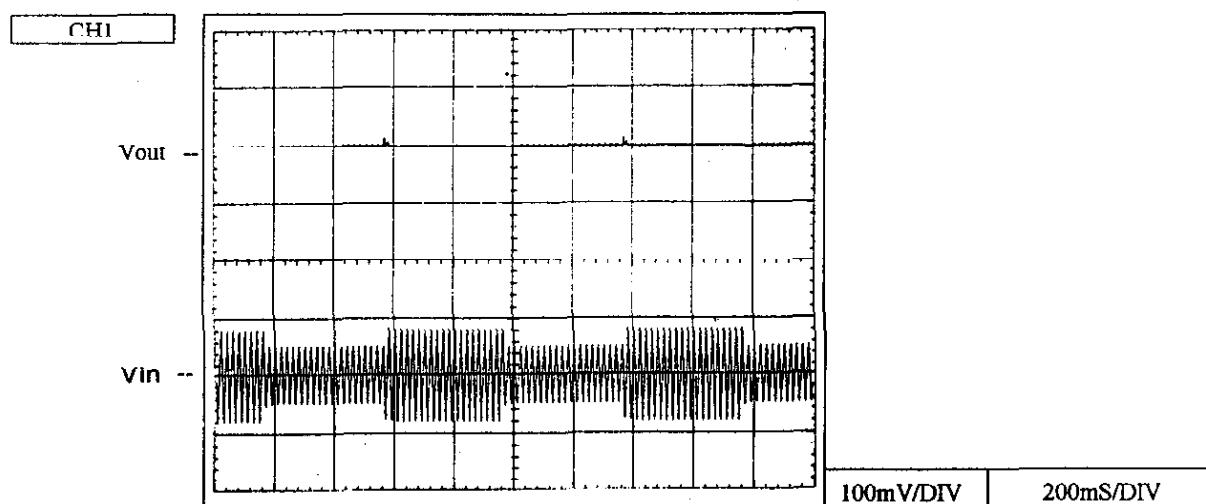
DYNAMIC LINE RESPONSE

SWT65-522

Conditions

I_{out} = 100%
Ta = 25 °C

V_{in} : 85VAC ↔ 132VAC



DYNAMIC LINE RESPONSE

SWT65-522

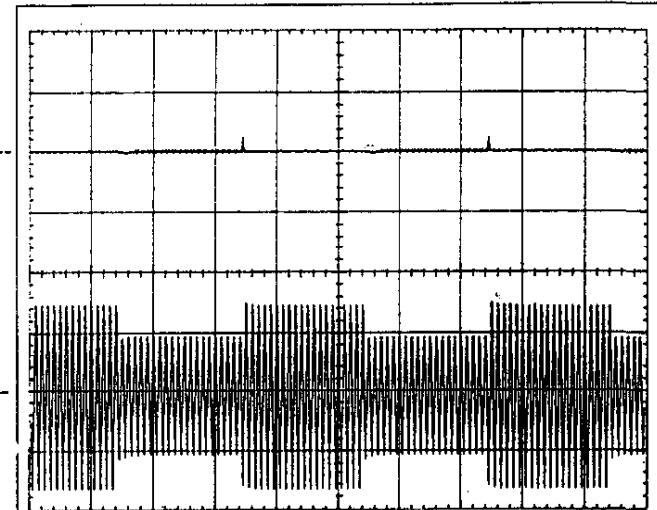
Conditions

Iout = 100%
Ta = 25 °C

Vin : 170VAC ↔ 265VAC

CH1

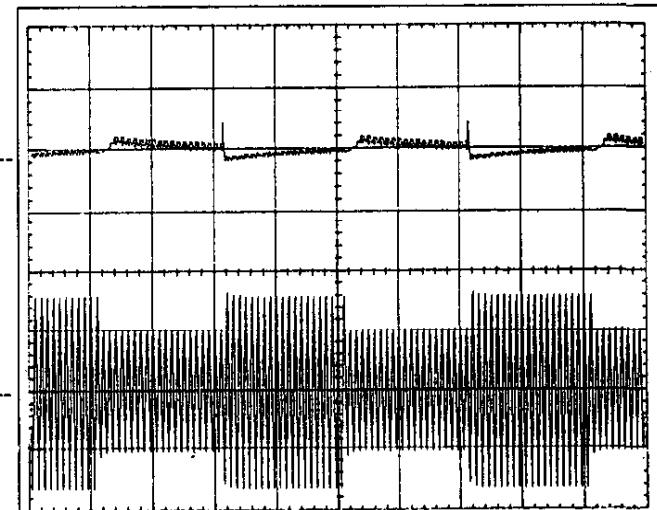
Vout



100mV/DIV 200mS/DIV

CH2

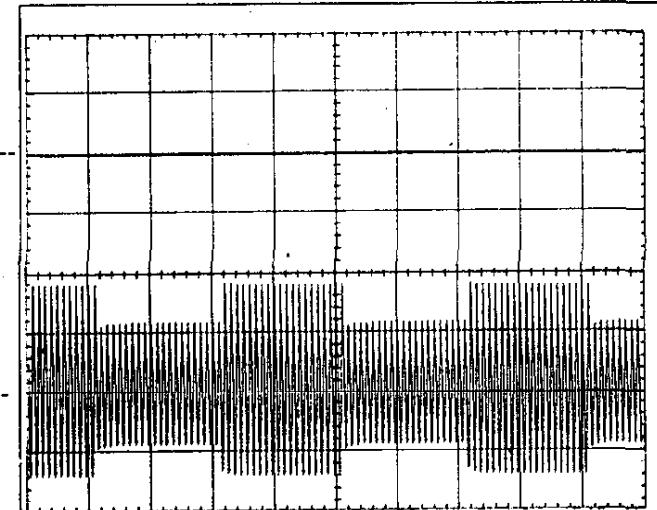
Vout



100mV/DIV 200mS/DIV

CH3

Vout



100mV/DIV 200mS/DIV

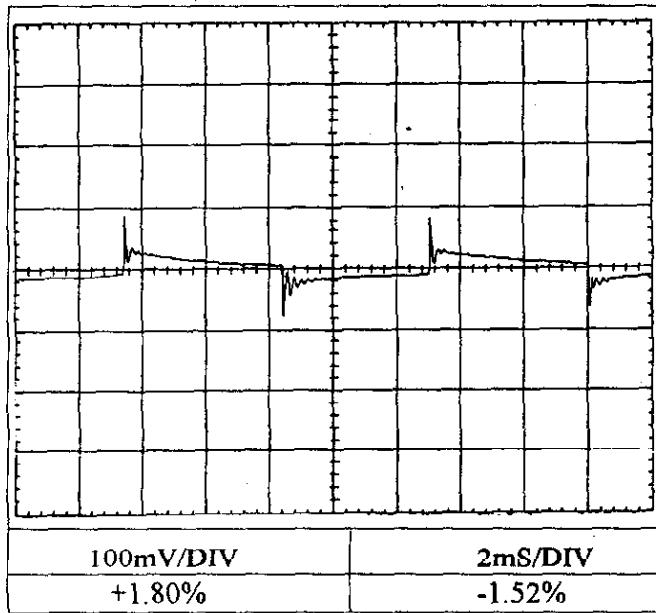
DYNAMIC LOAD RESPONSE

SWT65-522

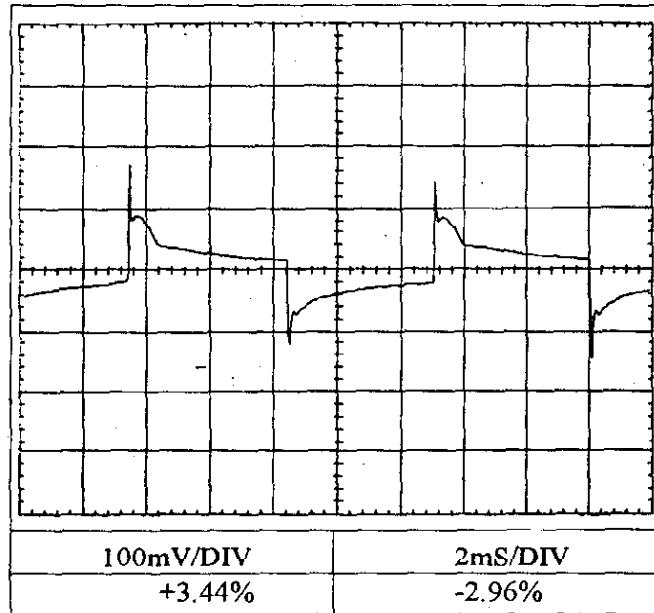
CH1

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

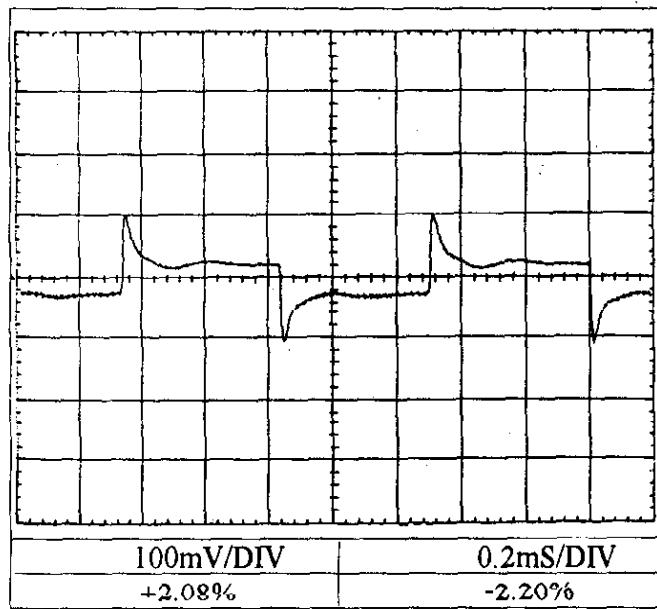
$I_{out} \text{ 50\%} \longleftrightarrow 100\% f = 100\text{Hz}$



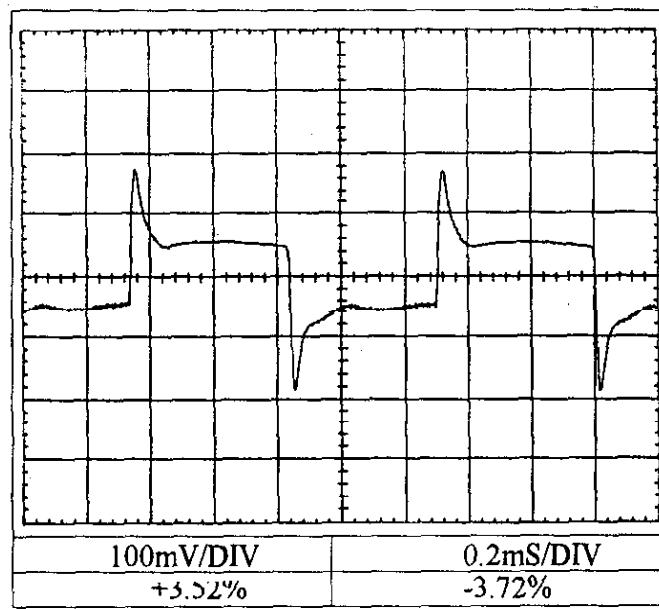
$I_{out} \text{ Min} \longleftrightarrow 100\% f=100\text{Hz}$



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



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



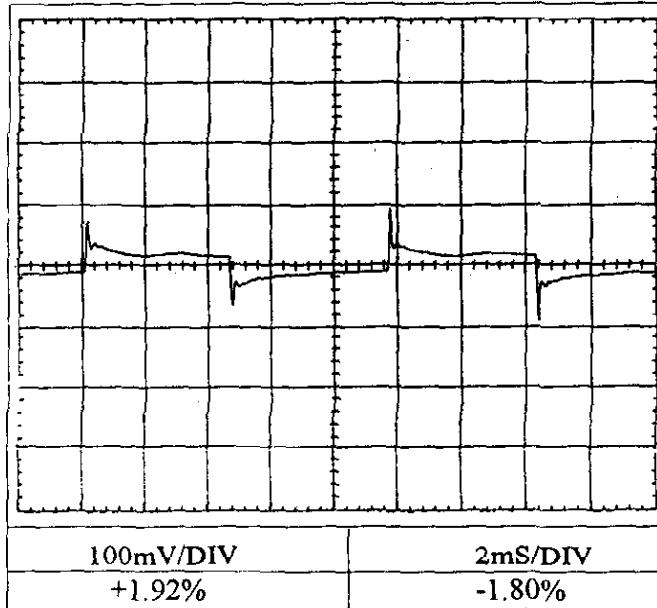
DYNAMIC LOAD RESPONSE

SWT65-522

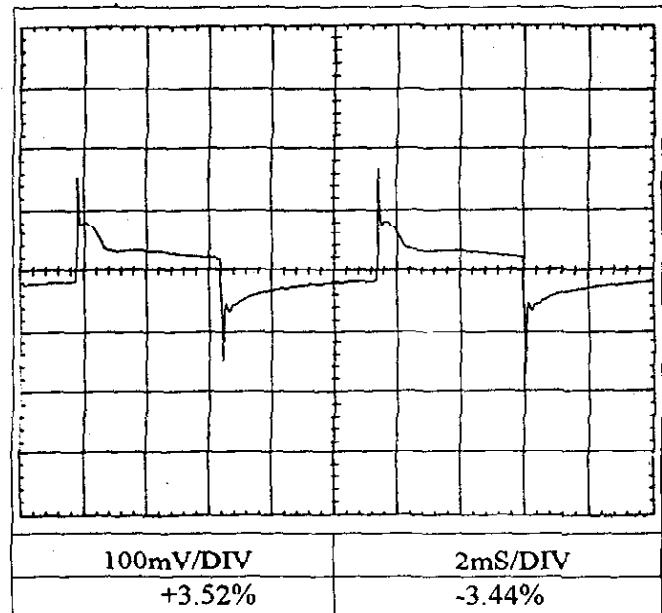
CIII

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

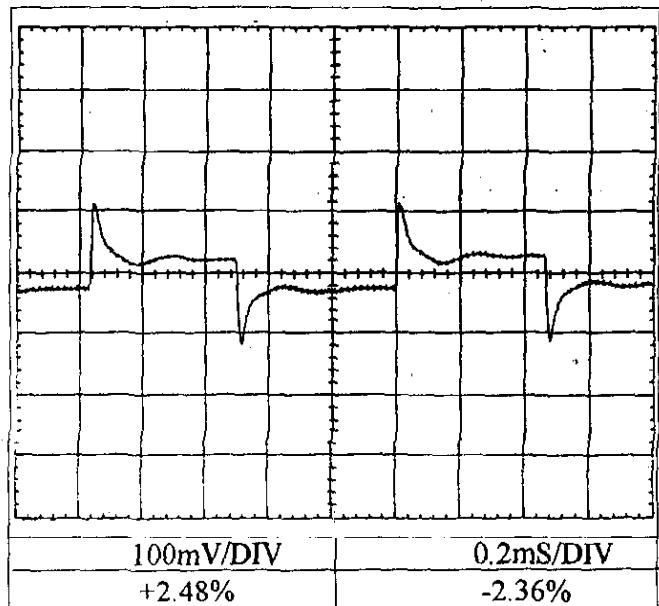
$I_{out} \ 50\% \longleftrightarrow 100\% \ f = 100\text{Hz}$



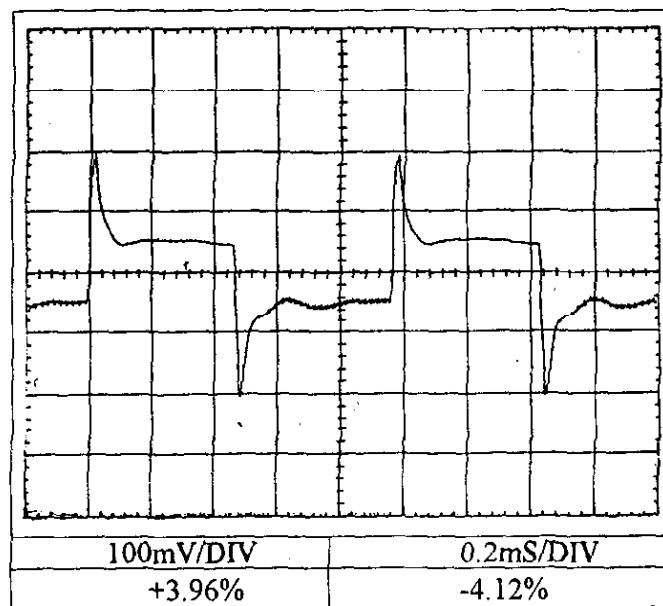
$I_{out} \ \text{Min} \longleftrightarrow 100\% \ f = 100\text{Hz}$



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



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



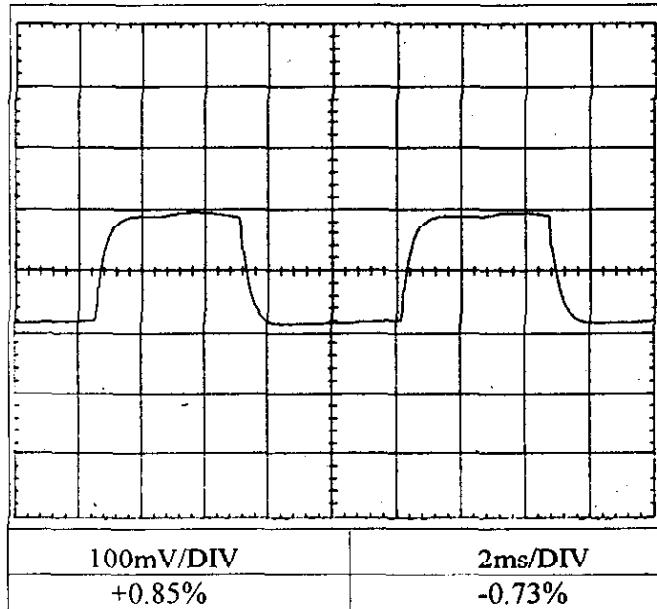
DYNAMIC LOAD RESPONSE

SWT65-522

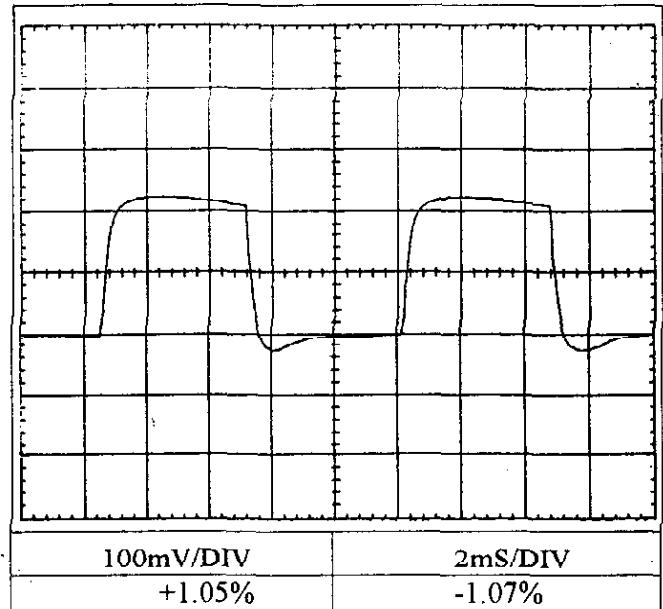
CH2

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

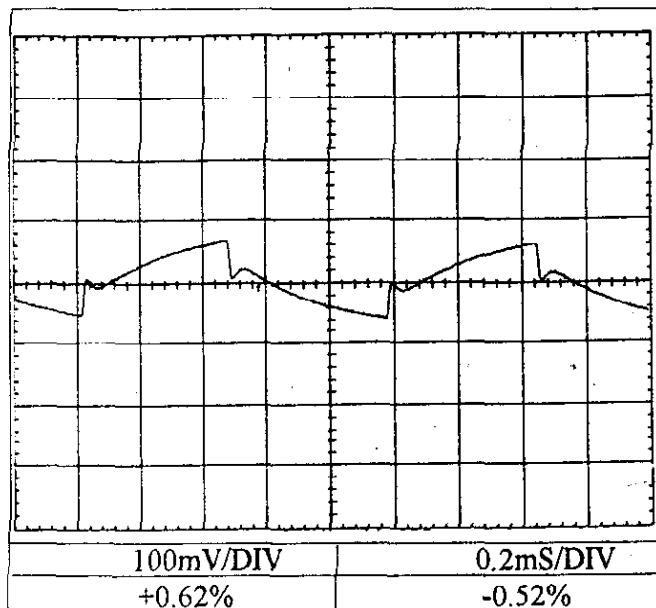
$I_{out} \text{ 50\%} \longleftrightarrow 100\% f = 100\text{Hz}$



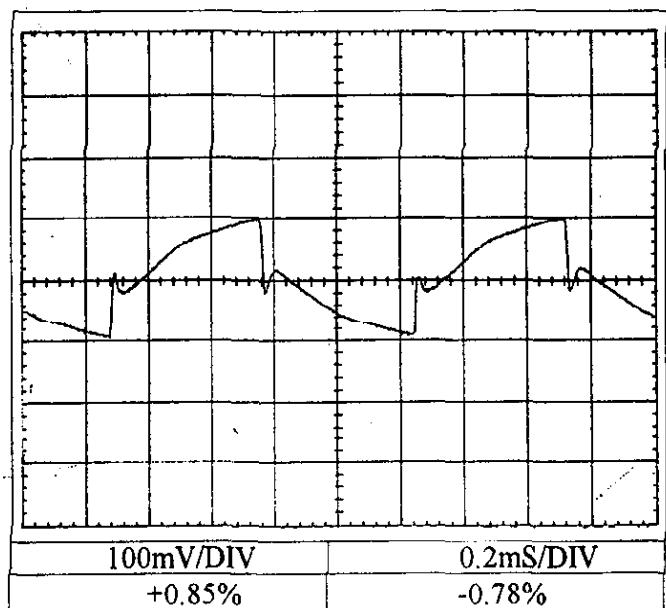
$I_{out} \text{ Min} \longleftrightarrow 100\% f=100\text{Hz}$



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



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



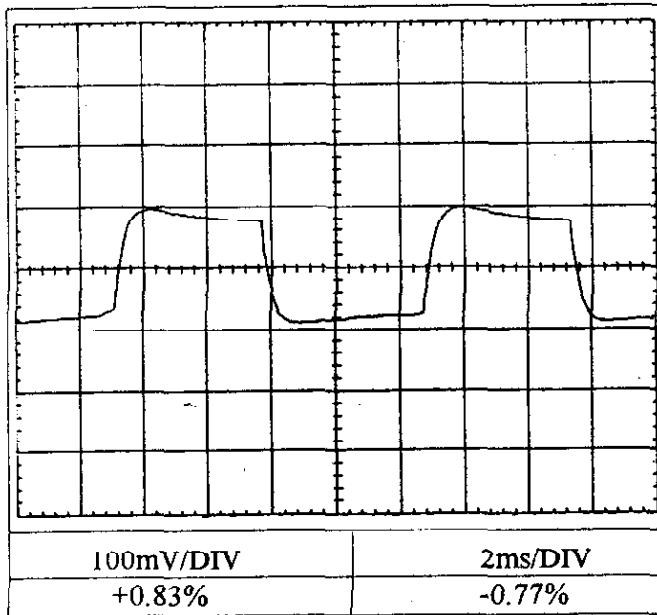
DYNAMIC LOAD RESPONSE

SWT65-522

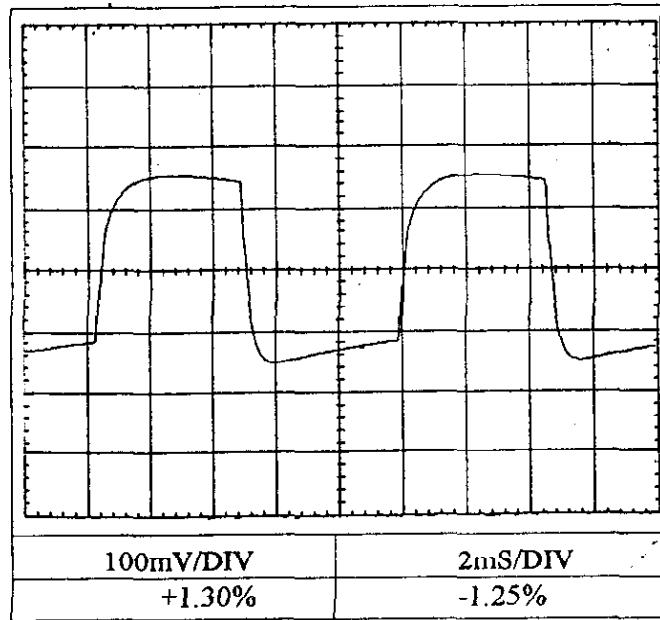
CH2

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

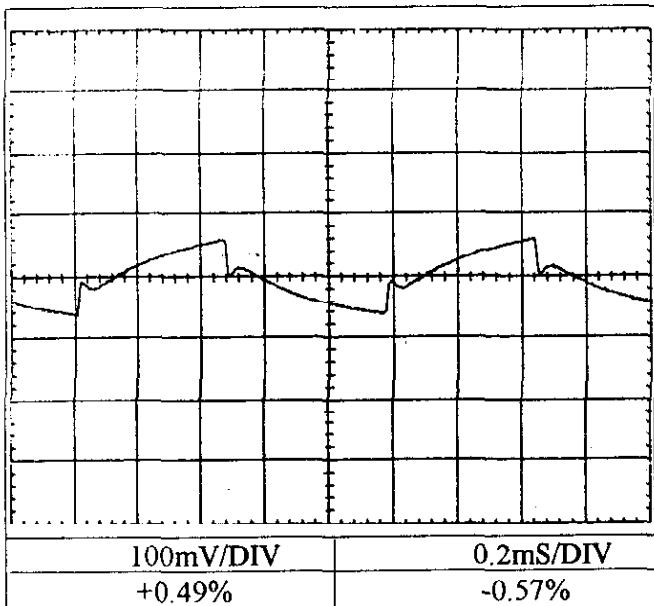
I_{out} 50% \longleftrightarrow 100% $f = 100\text{Hz}$



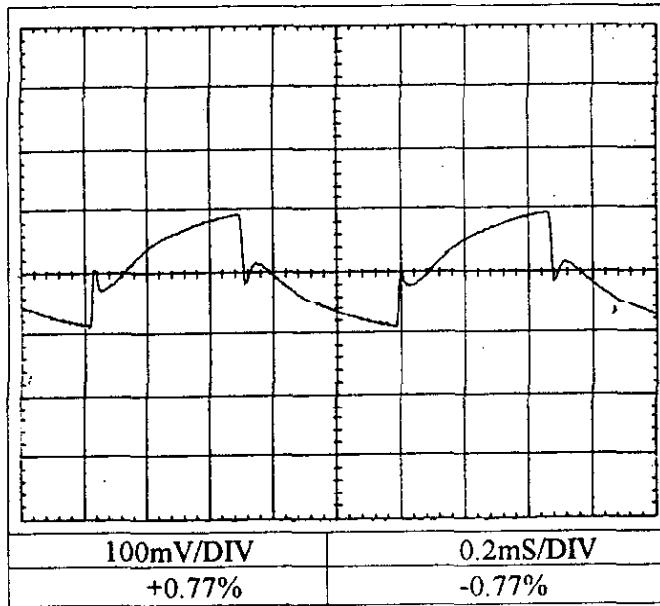
I_{out} Min \longleftrightarrow 100% $f = 100\text{Hz}$



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



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



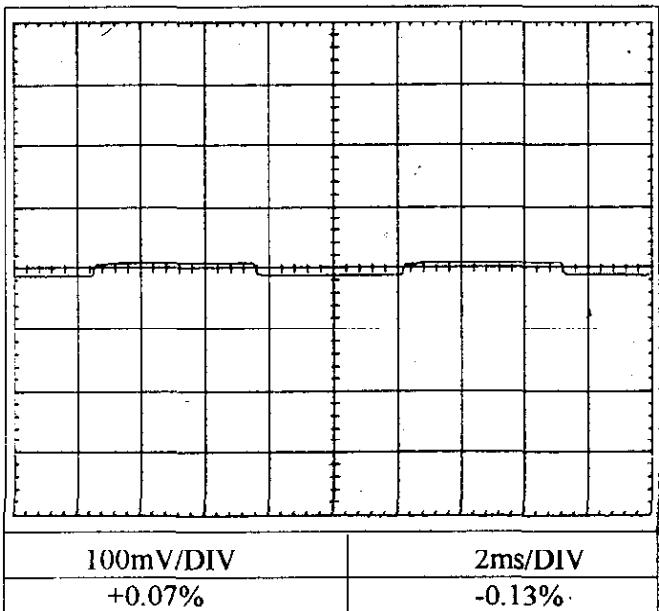
DYNAMIC LOAD RESPONSE

SWT65-522

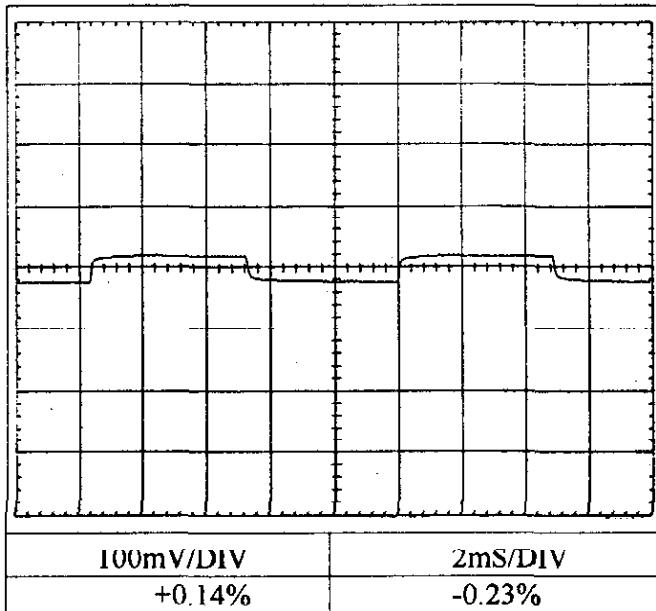
CH3

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

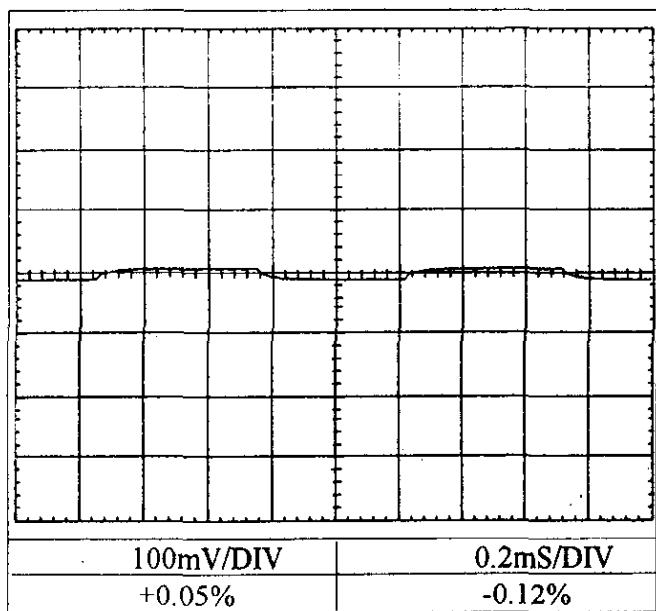
$I_{out} \text{ 50\%} \longleftrightarrow 100\% f = 100\text{Hz}$



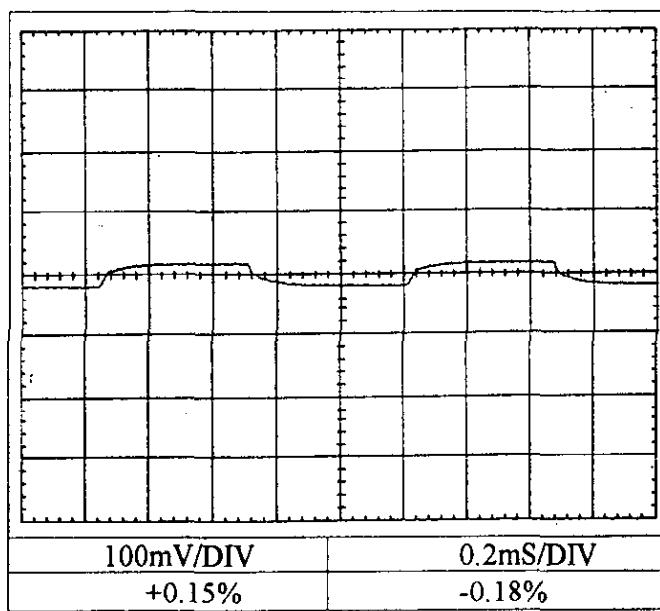
$I_{out} \text{ Min} \longleftrightarrow 100\% f=100\text{Hz}$



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



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



DYNAMIC LOAD RESPONSE

SWT65-522

CH3

Conditions

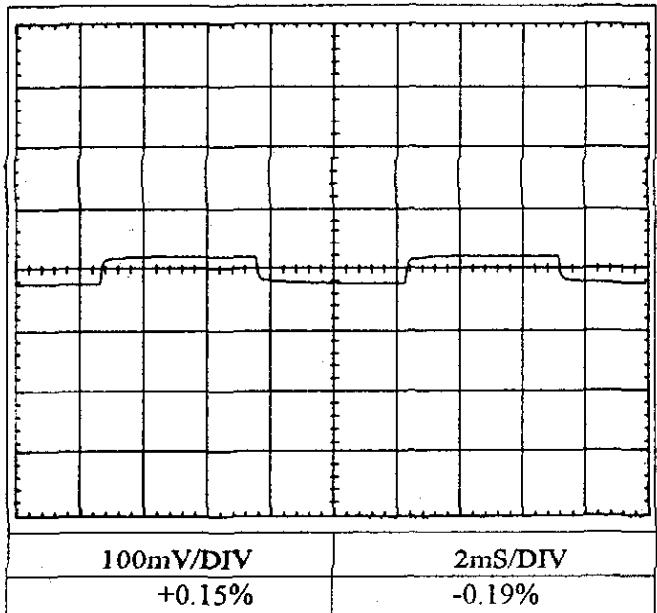
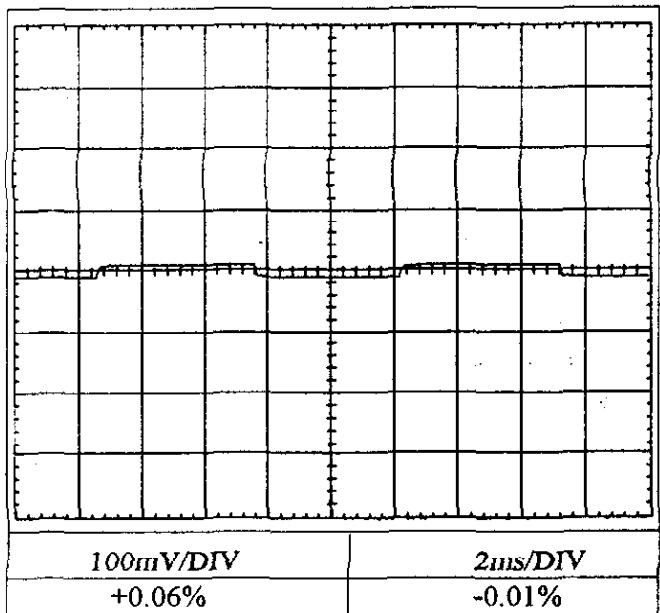
T_a = 25 °C

V_{in} = 200VAC

CH1,CH2: I_{out} = 100%

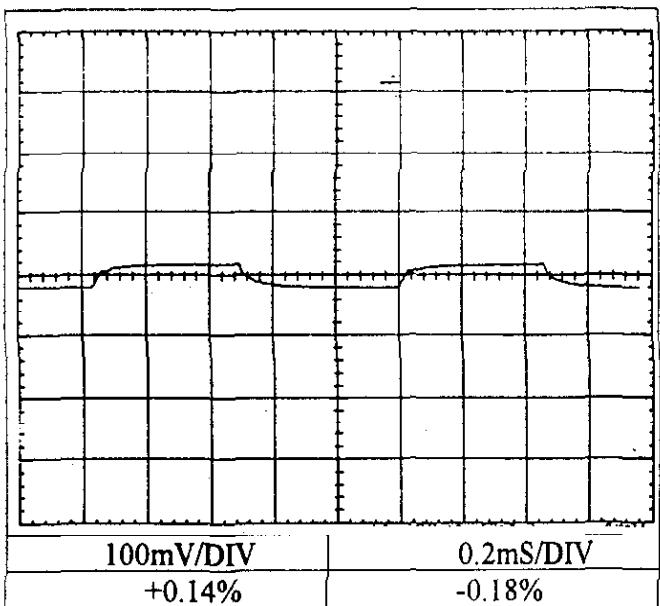
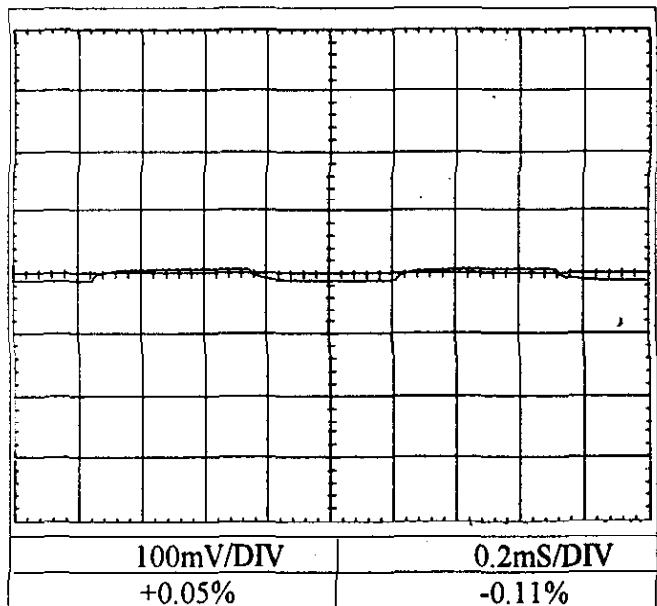
I_{out} 50% ← → 100% f = 100Hz

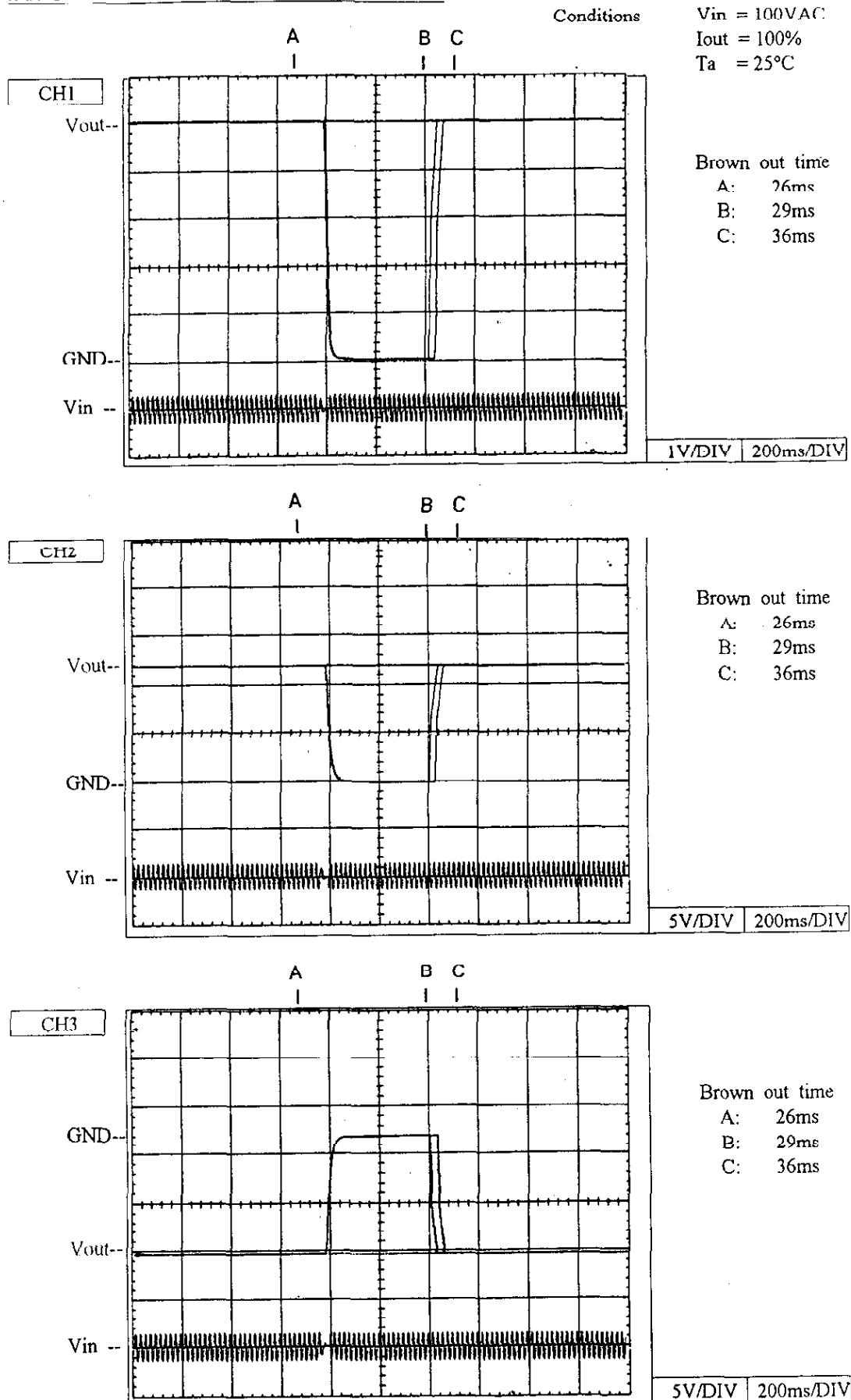
I_{out} Min ← → 100% f = 100Hz

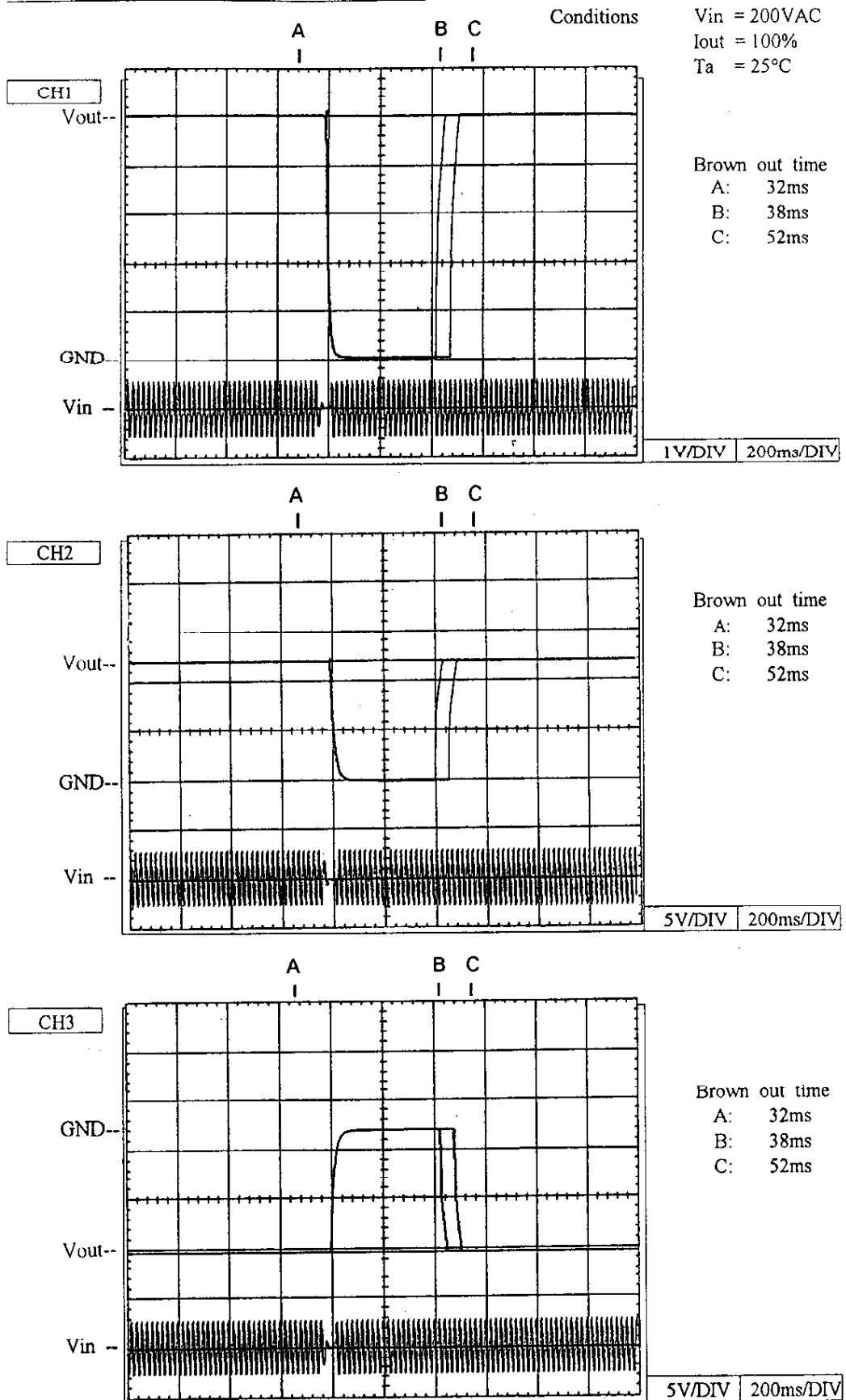


I_{out} 50% ← → 100% f = 1kHz

I_{out} Min ← → 100% f = 1kHz



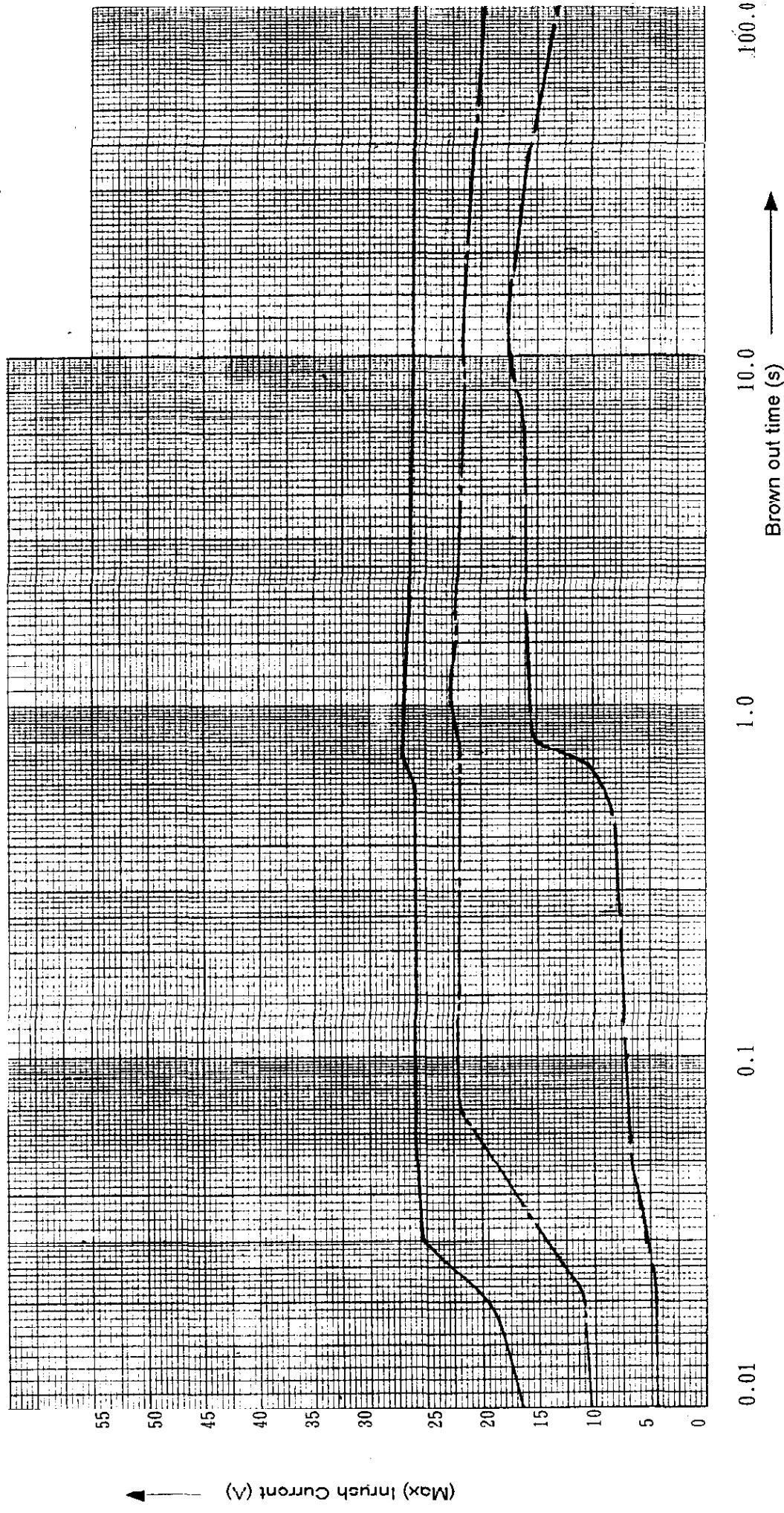
RESPONSE TO BROWN OUT

RESPONSE TO BROWN OUT

INRUSH v.s BROWN OUT TIME

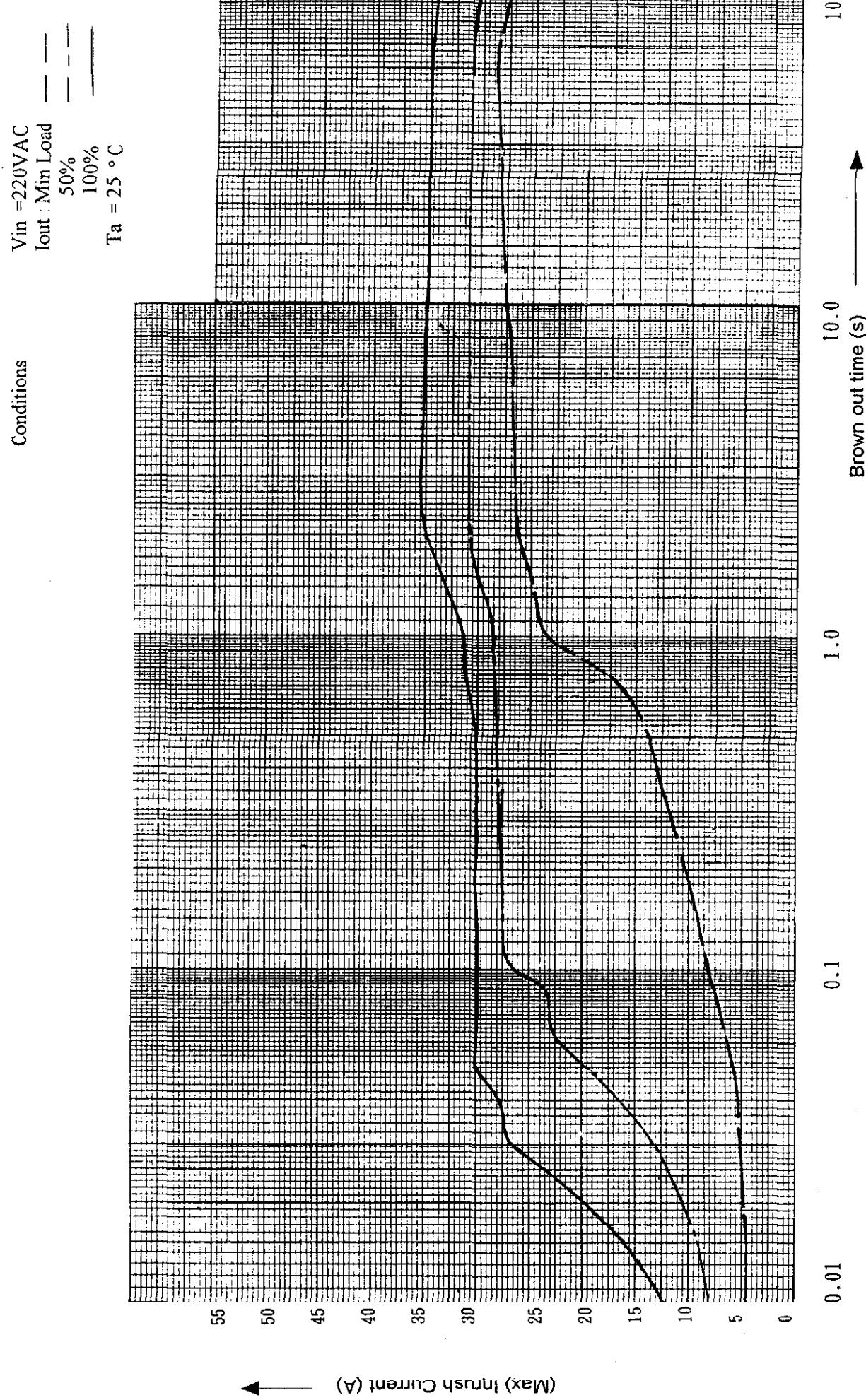
SWT65- *

Conditions
 $V_{in} = 100\text{VAC}$
 $I_{out} : \text{Min Load}$
 50%
 100%
 $T_a = 25^\circ\text{C}$



INRUSH v.s BROWN OUT TIME

SWT65- *



INRUSH CURRENT WAVEFORM

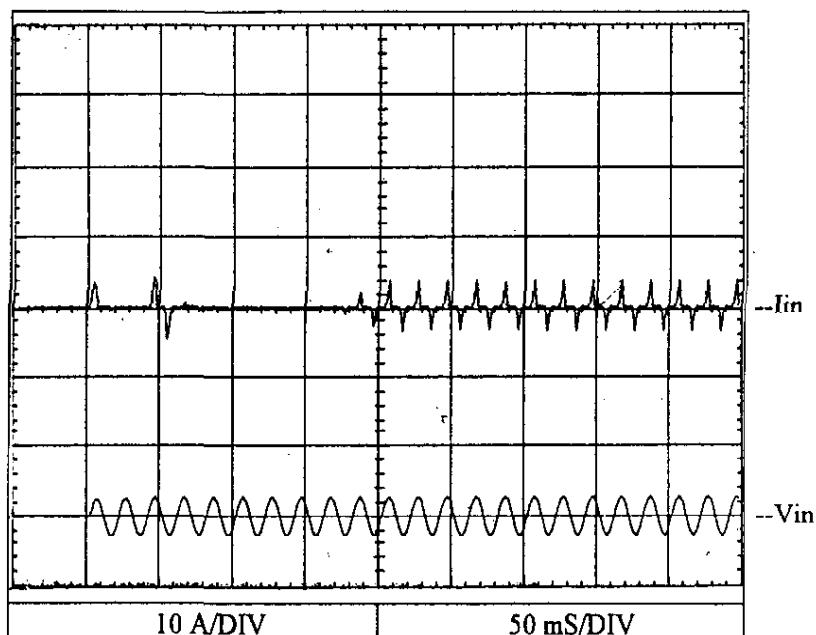
SWT65- *

Conditions

T_a = 25 °C
V_{in} = 100VAC
I_{out} = 100%

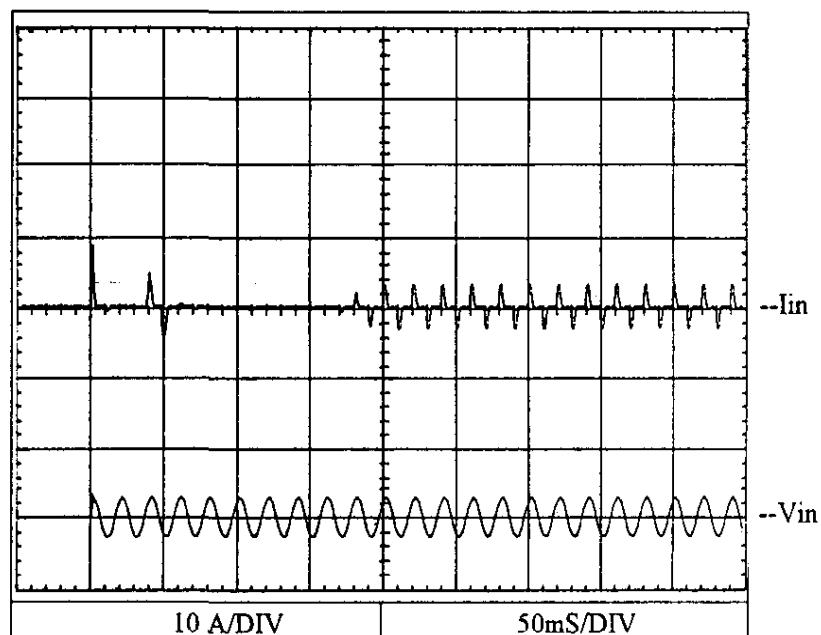
Switch on phase angle
of input AC voltage

$$\phi = 0^\circ$$



Switch on phase angle
of input AC voltage

$$\phi = 90^\circ$$



INRUSH CURRENT WAVEFORM

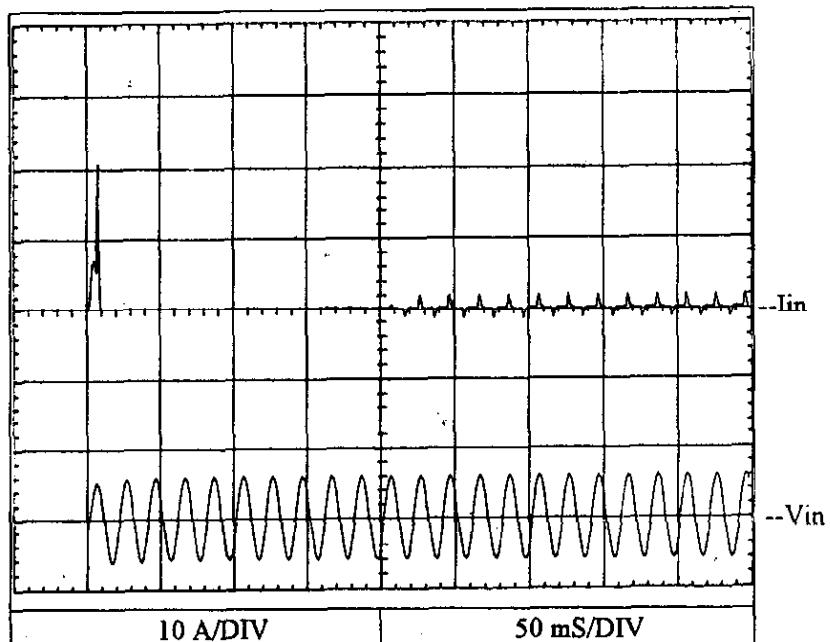
SWT65- *

Conditions

T_a = 25 °C
V_{in} = 220VAC
I_{out} = 100%

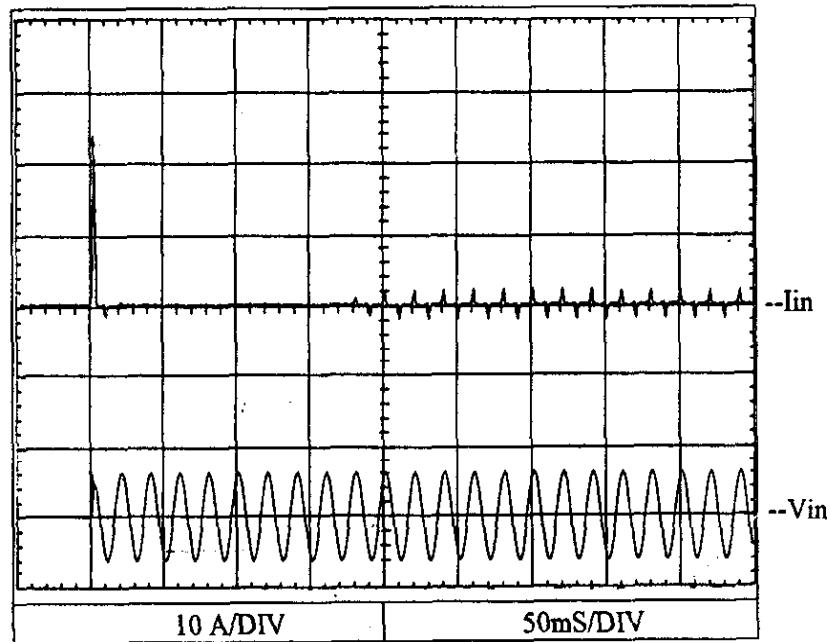
Switch on phase angle
of input AC voltage

$$\phi = 0^\circ$$



Switch on phase angle
of input AC voltage

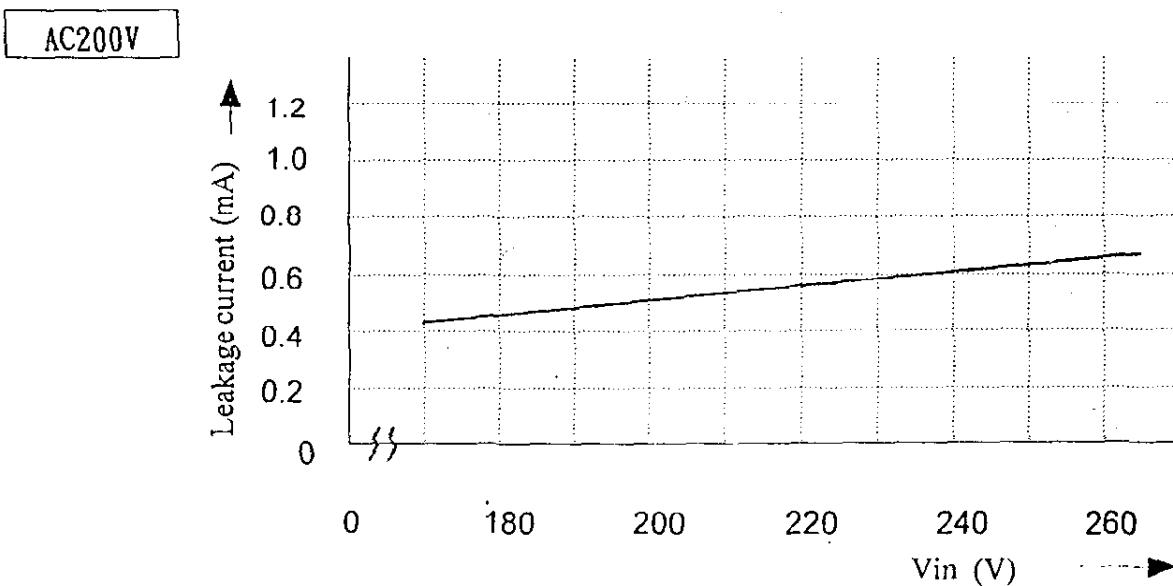
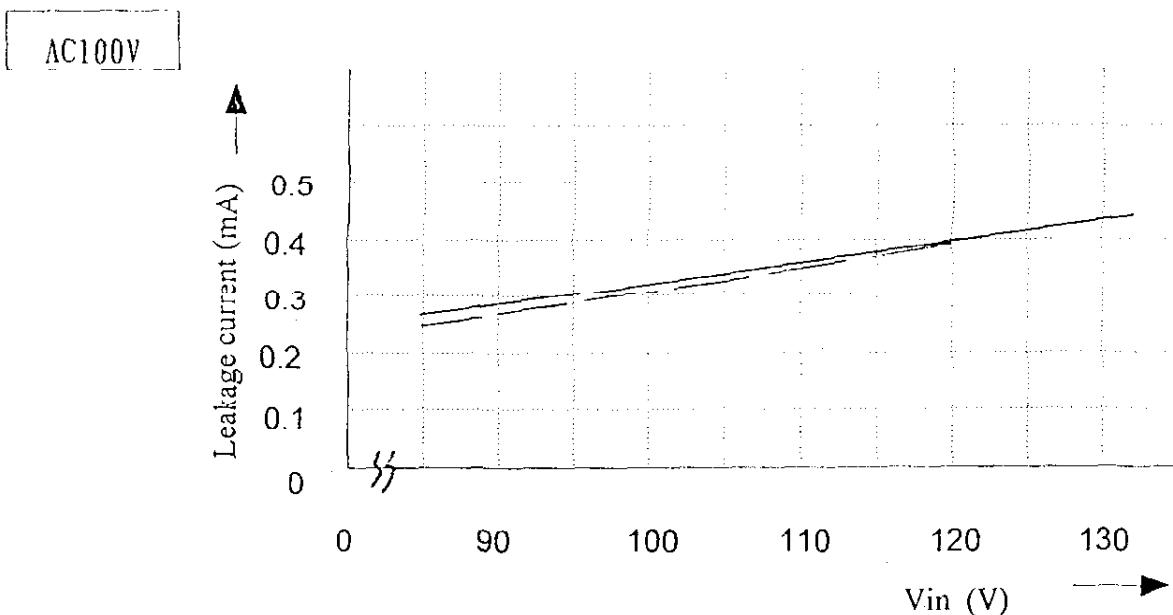
$$\phi = 90^\circ$$



LEAKAGE CURRENT

SWT65 - *

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



OUTPUT-RIPPLE, NOISE

SWT65 - 522

Conditions

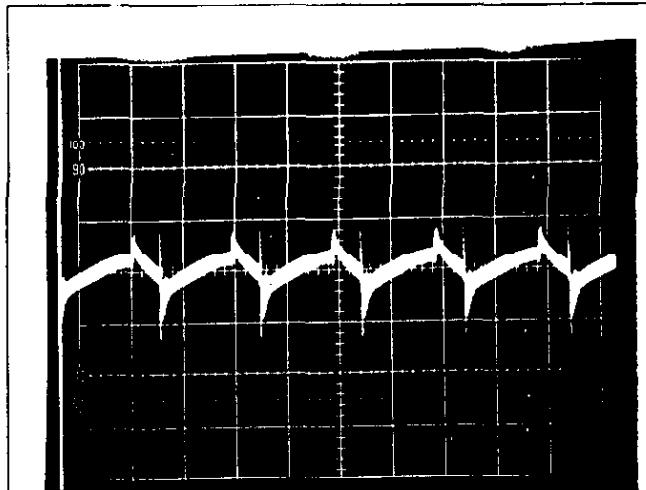
V_{in} = 100VAC

I_{out} = 100%

T_a = 25 °C

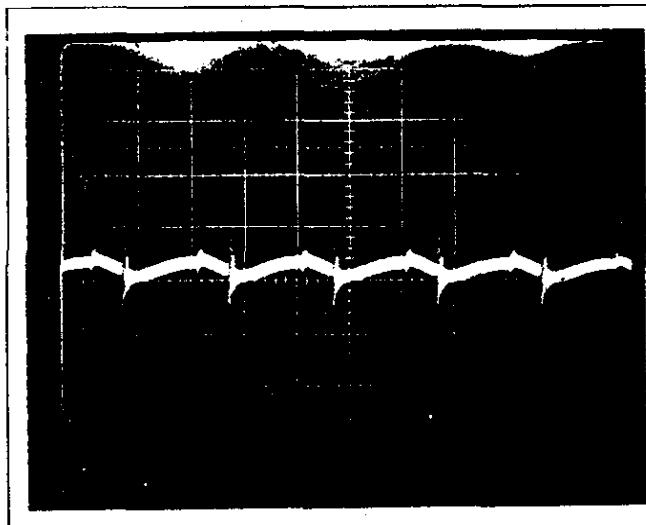
NORMAL MODE

CH1



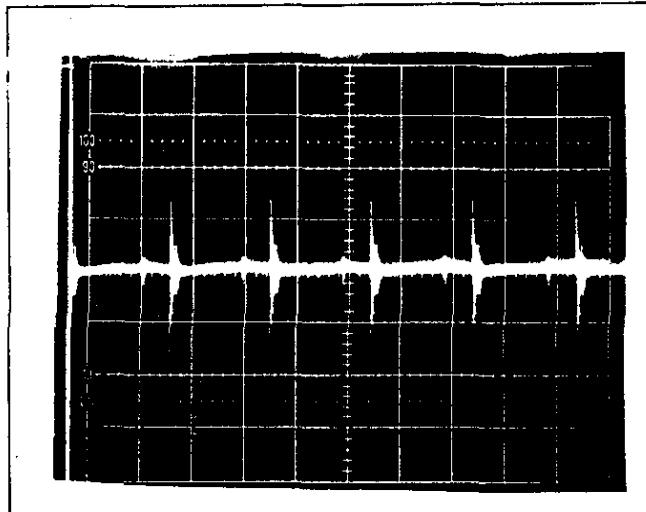
20mV/DIV 5μS/DIV

CH2



20mV/DIV 5μS/DIV

CH3



20mV/DIV 5μS/DIV

OUTPUT-RIPPLE, NOISE

SWT65 - 522

Conditions

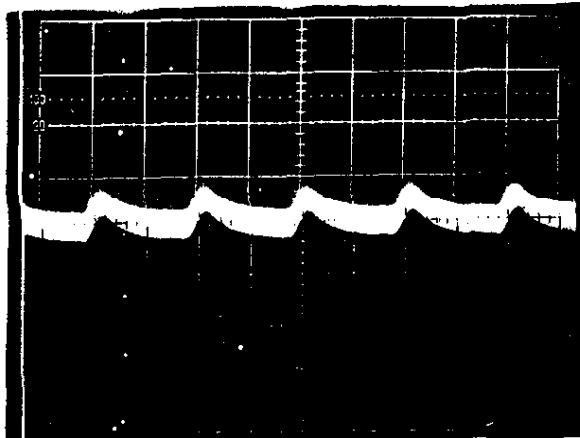
V_{in} = 100VAC

I_{out} = 100%

T_a = 25 °C

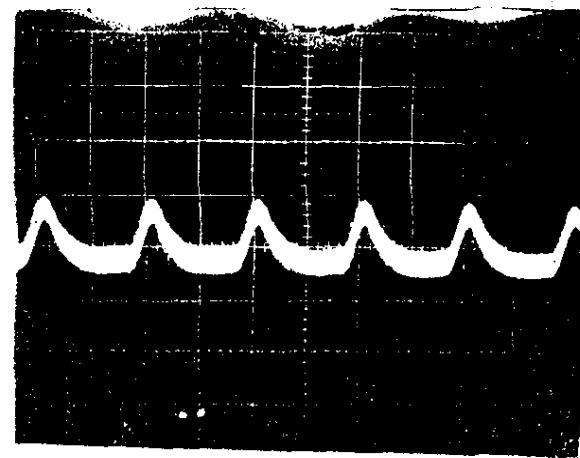
NORMAL MODE

CH1



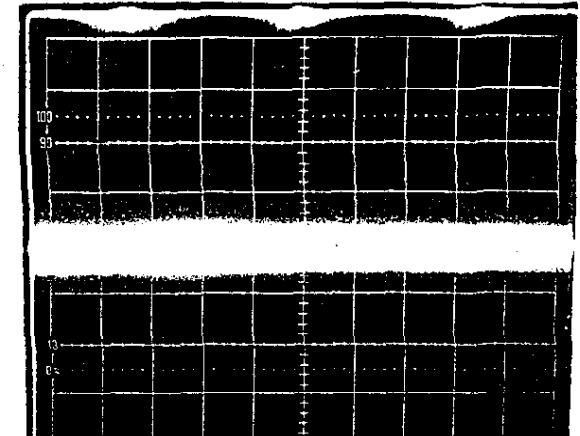
20mV/DIV 5ms/DIV

CH2



20mV/DIV 5ms/DIV

CH3



20mV/DIV 5ms/DIV

OUTPUT-RIPPLE, NOISE

SWT65 - 522

Conditions

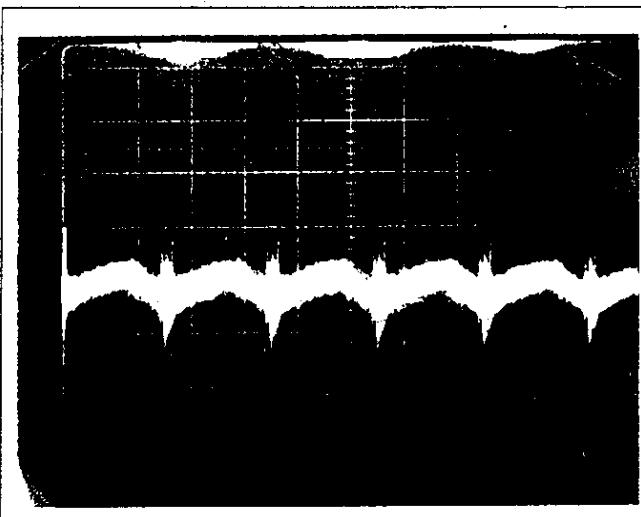
V_{in} = 100VAC

I_{out} = 100%

T_a = 25 °C

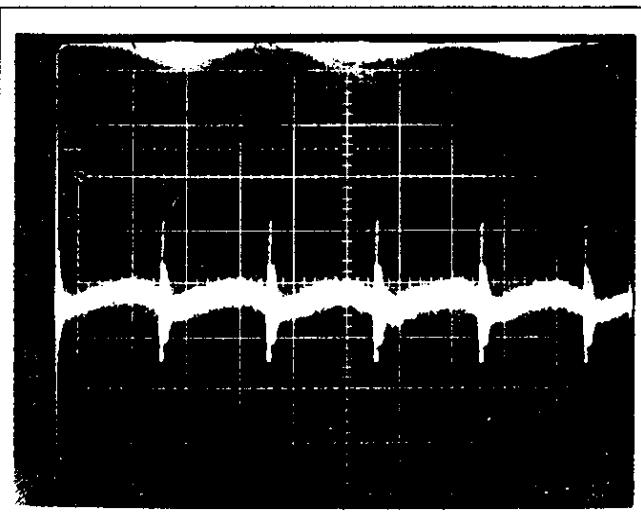
COMMON + NORMAL

CH1



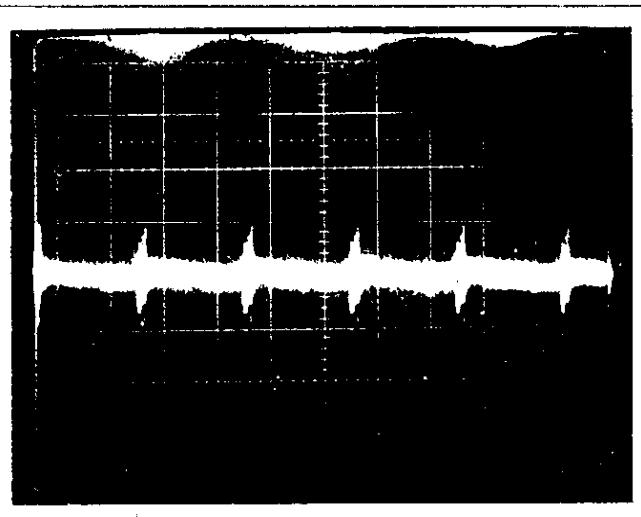
20mV/DIV 5μS/DIV

CH2



20mV/DIV 5μS/DIV

CH3



20mV/DIV 5μS/DIV

OUTPUT-RIPPLE, NOISE

SWT65 - 522

Conditions

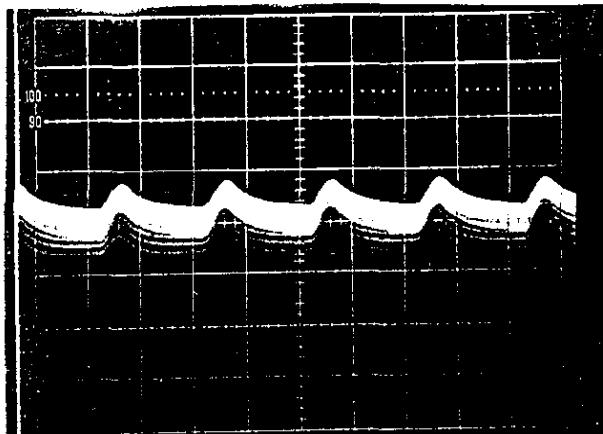
V_{in} = 100VAC

I_{out} = 100%

T_a = 25 °C

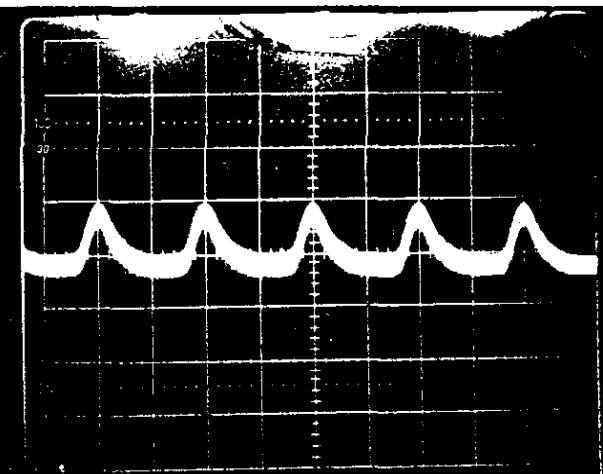
COMMON + NORMAL

CH1



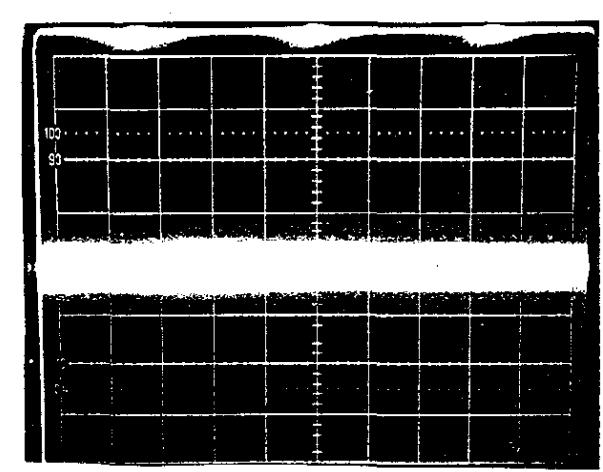
20mV/DIV | 5ms/DIV

CH2



20mV/DIV | 5ms/DIV

CH3



20mV/DIV | 5ms/DIV