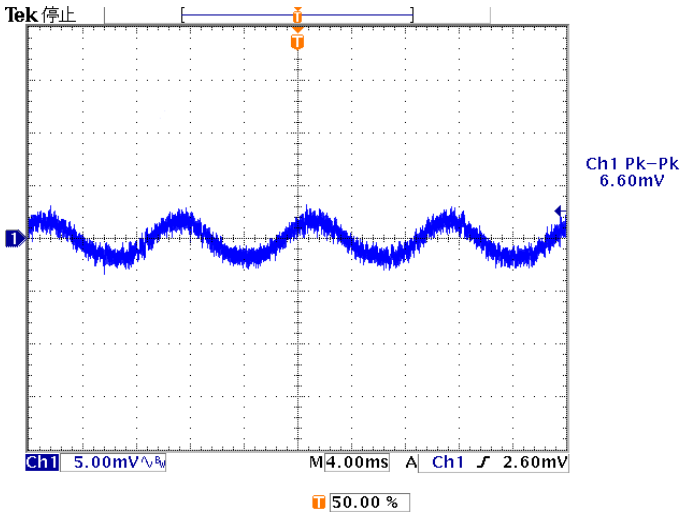
MODEL	LFS50A-5

Output Ripple and Noise Waveform

Ta : 25℃



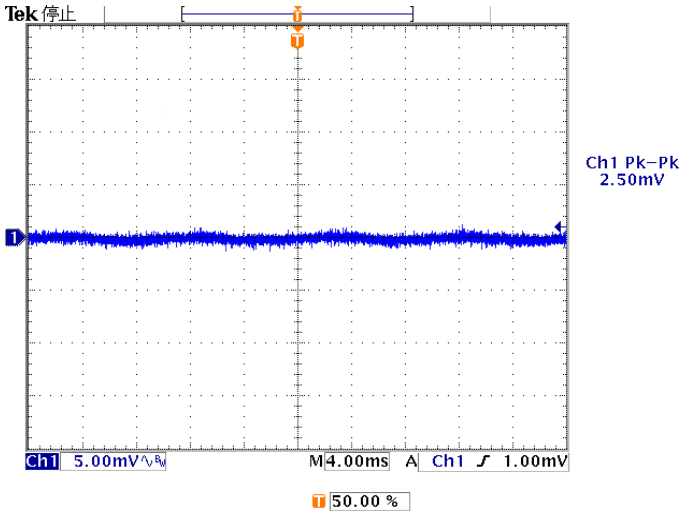
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 6.6 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

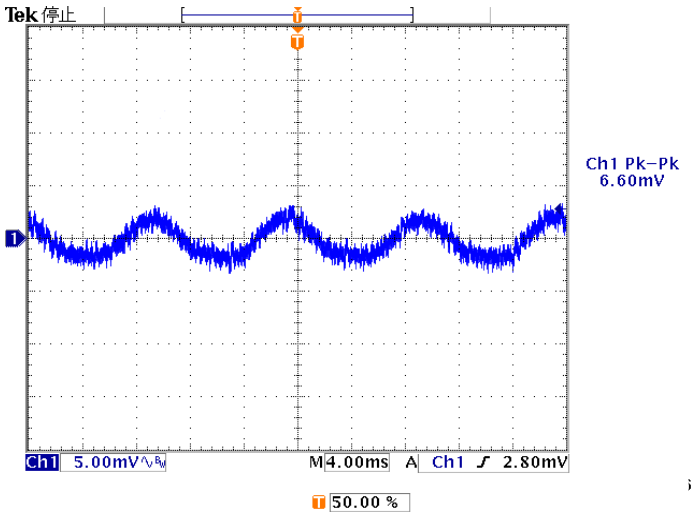
BW : 150 MHz

Vp-p : 2.5 mV

MODEL	LFS50A-5

Output Ripple and Noise Waveform

Ta : 25℃



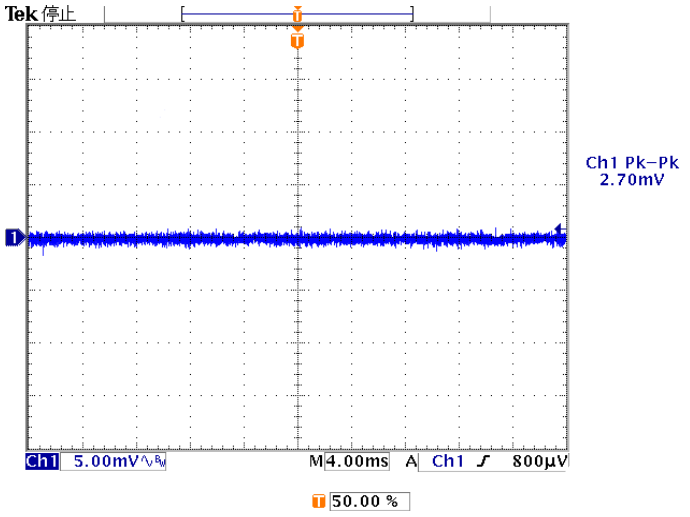
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 6.6 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

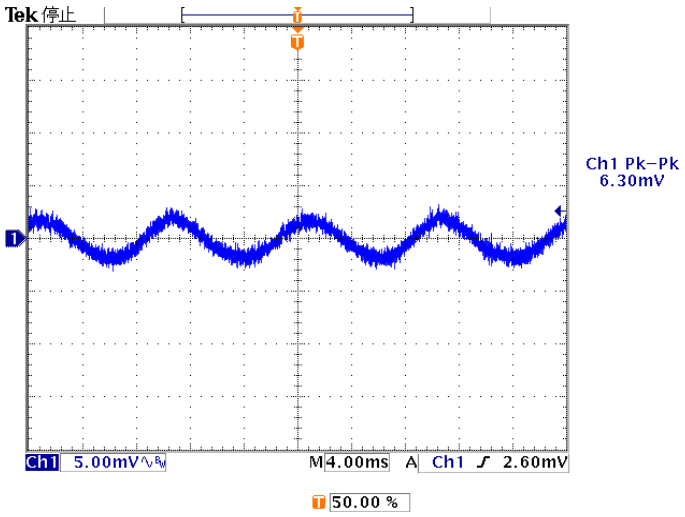
BW : 150 MHz

Vp-p : 2.7 mV

MODEL	LFS50A-12

Output Ripple and Noise Waveform

Ta : 25℃



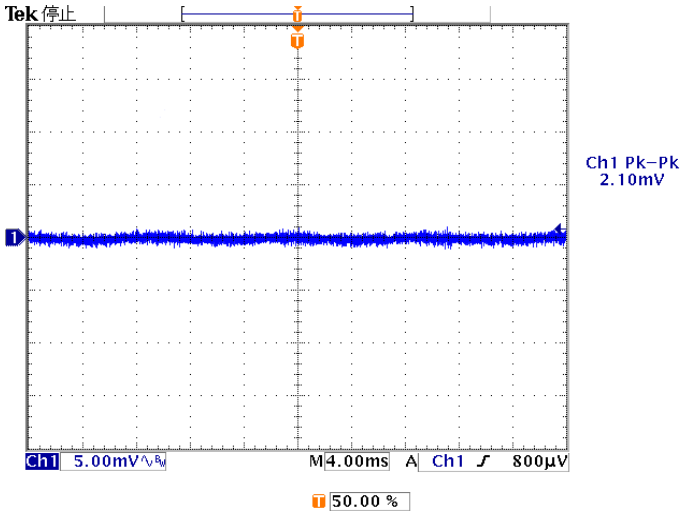
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 6.3 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

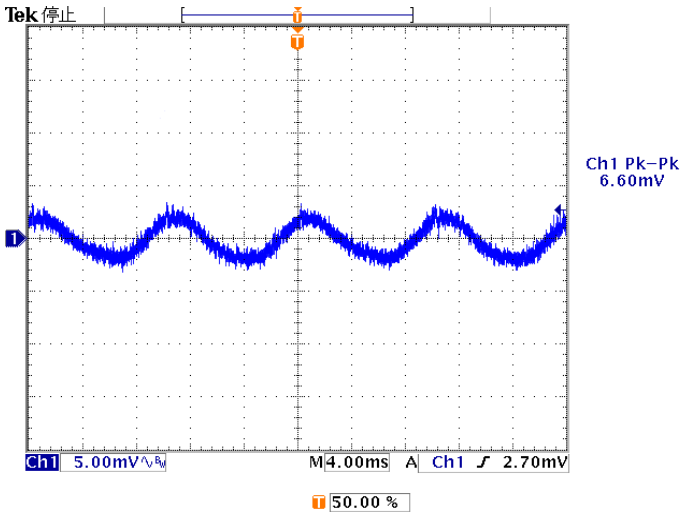
BW : 150 MHz

Vp-p : 2.1 mV

MODEL	LFS50A-12

Output Ripple and Noise Waveform

Ta : 25℃



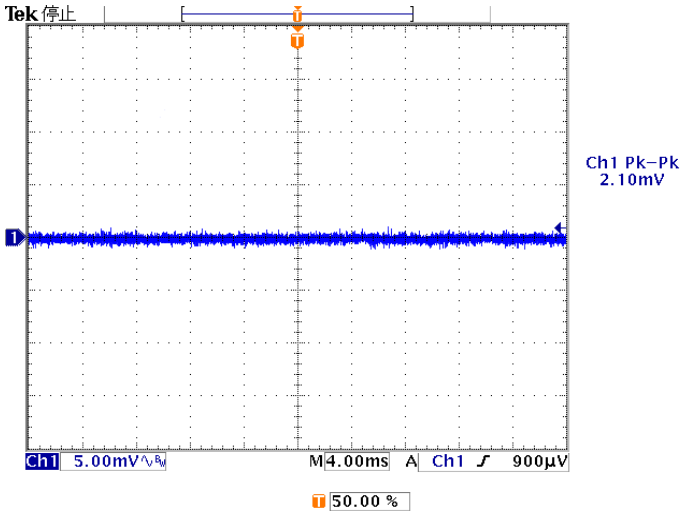
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 6.6 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

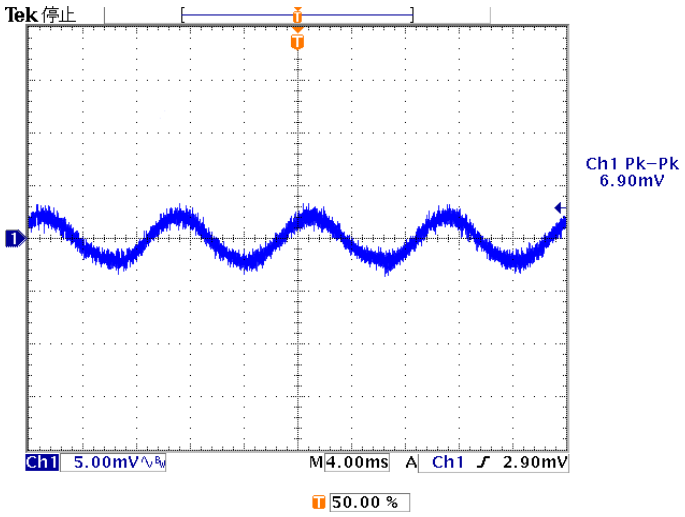
BW : 150 MHz

Vp-p : 2.1 mV

MODEL	LFS50A-15

Output Ripple and Noise Waveform

Ta : 25℃



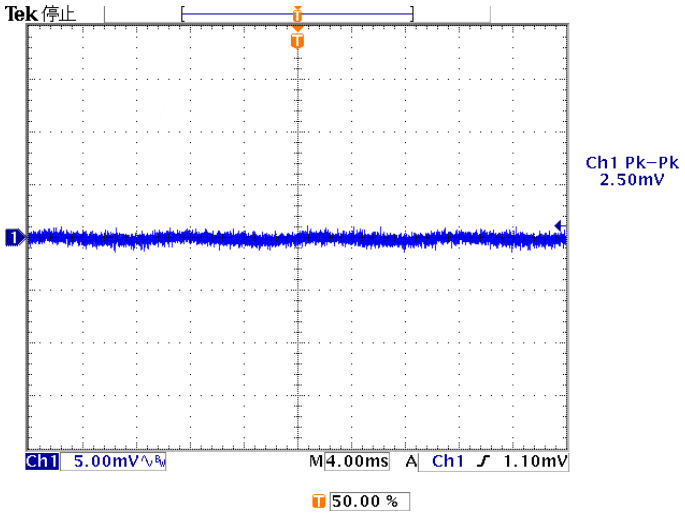
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 6.9 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

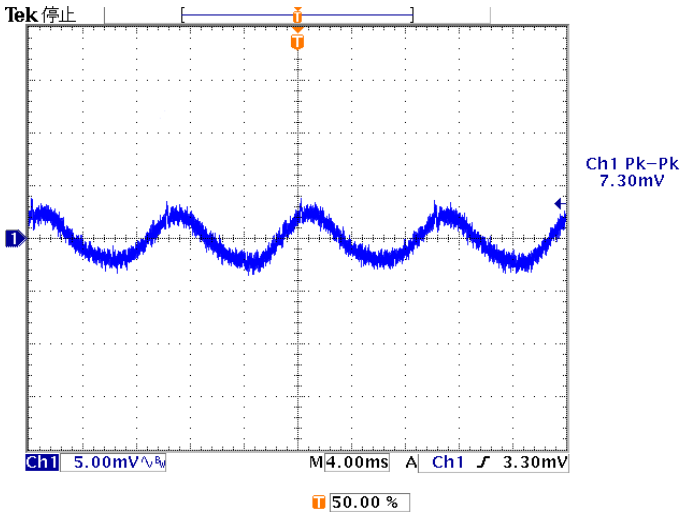
BW : 150 MHz

Vp-p : 2.5 mV

MODEL	LFS50A-15

Output Ripple and Noise Waveform

Ta : 25℃



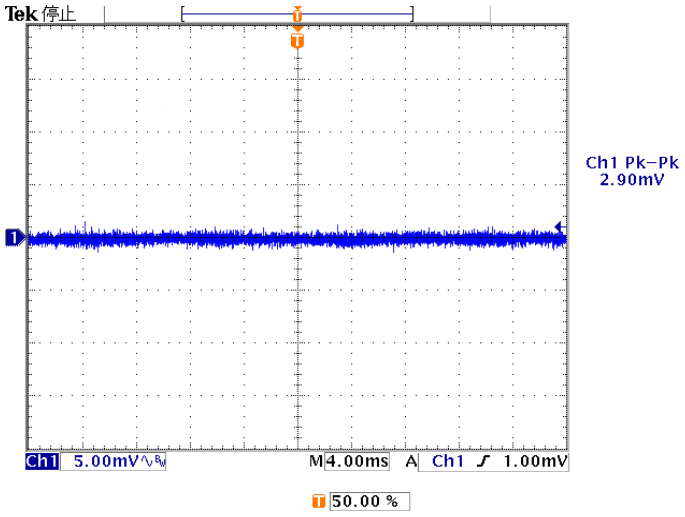
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 7.3 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

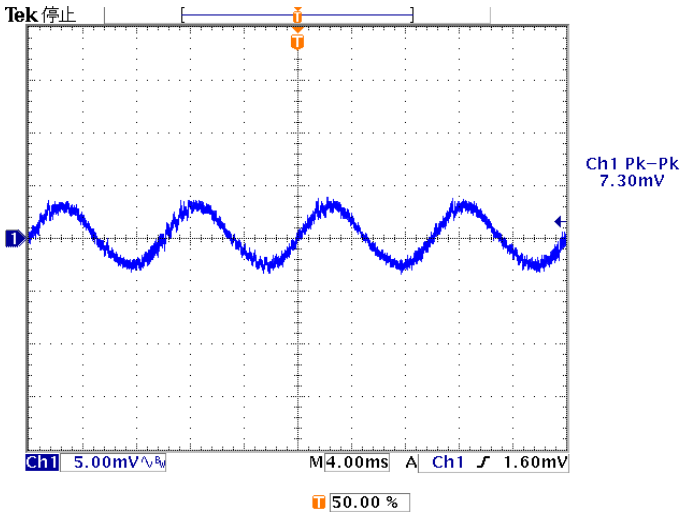
BW : 150 MHz

Vp-p : 2.9 mV

MODEL	LFS50A-24

Output Ripple and Noise Waveform

Ta : 25℃



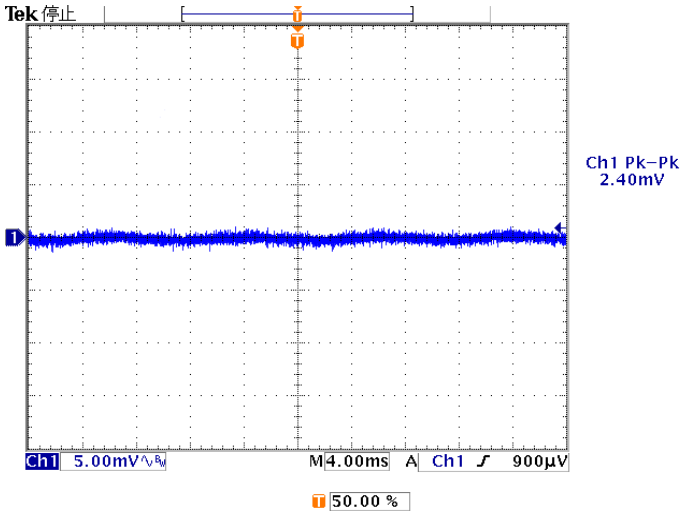
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 7.3 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

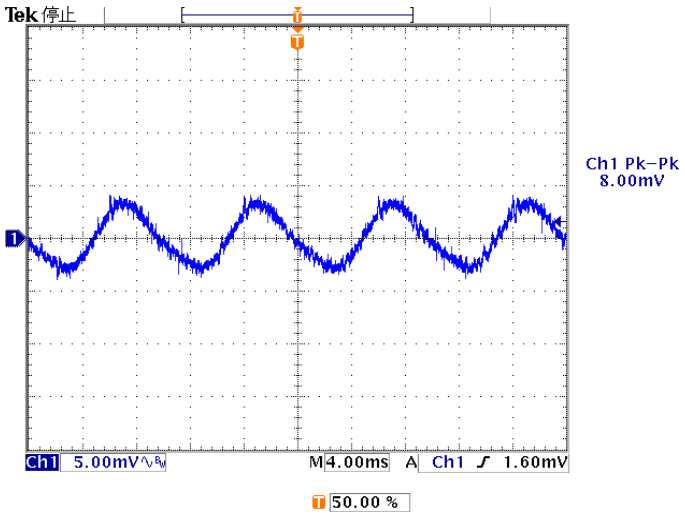
BW : 150 MHz

Vp-p : 2.4 mV

MODEL	LFS50A-24

Output Ripple and Noise Waveform

Ta : 25℃



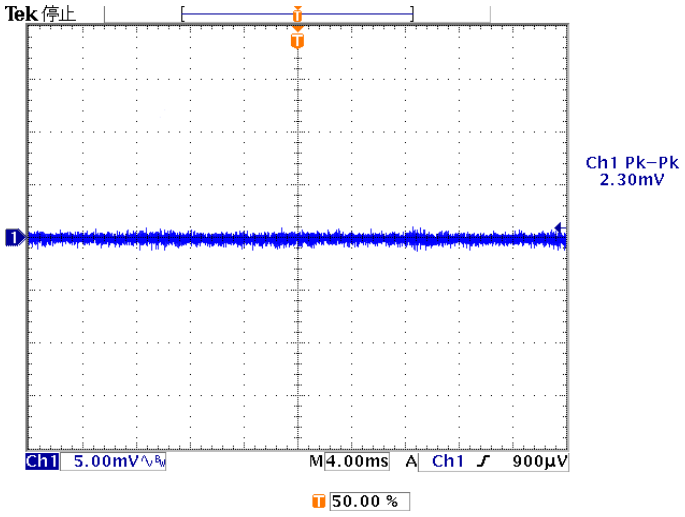
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 8.0 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

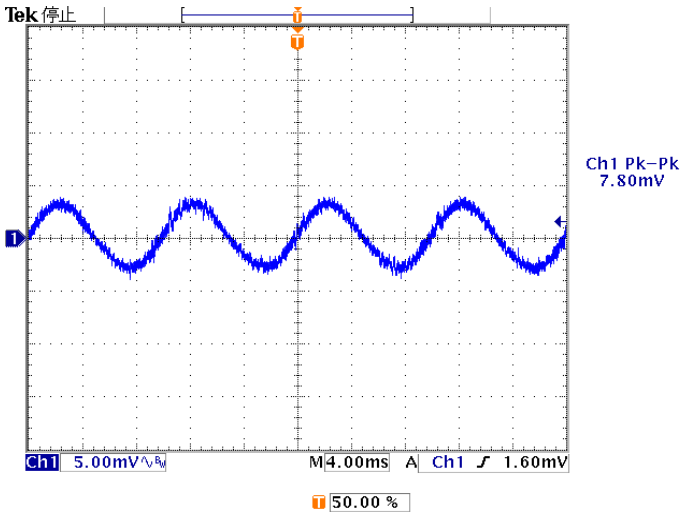
BW : 150 MHz

Vp-p : 2.3 mV

MODEL	LFS50A-30

Output Ripple and Noise Waveform

Ta : 25℃



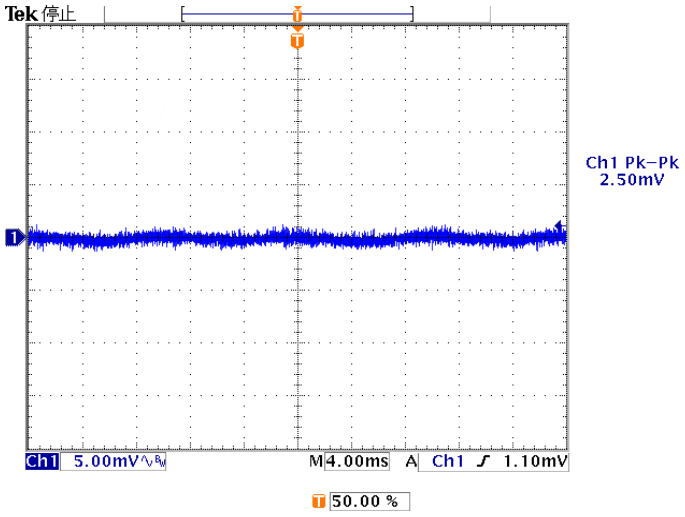
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 7.8 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

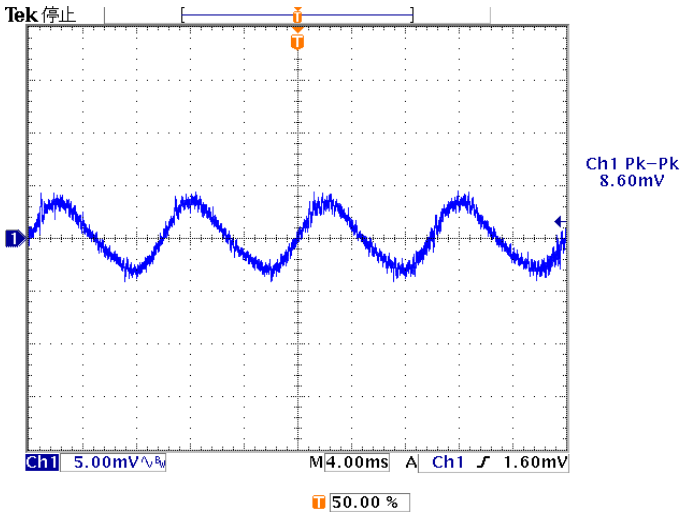
BW : 150 MHz

Vp-p : 2.5 mV

MODEL	LFS50A-30

Output Ripple and Noise Waveform

Ta : 25℃



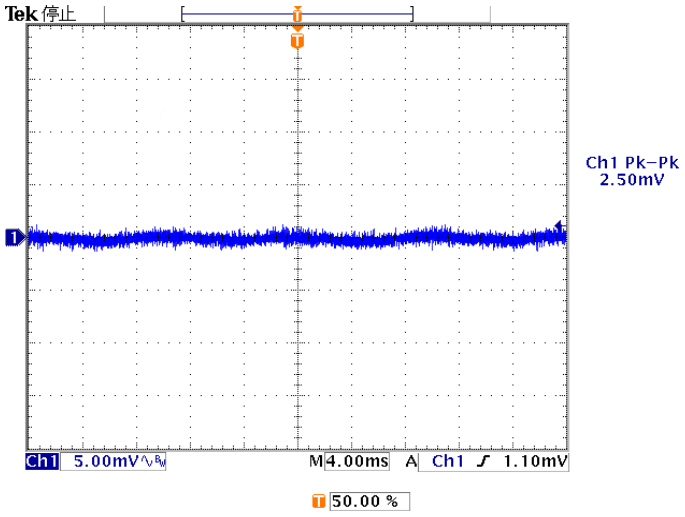
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 8.6 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

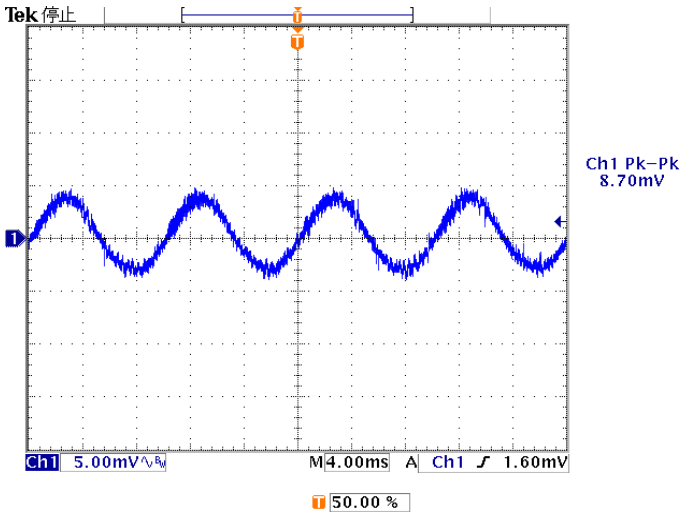
BW : 150 MHz

Vp-p : 2.5 mV

MODEL	LFS50A-48

Output Ripple and Noise Waveform

Ta : 25℃



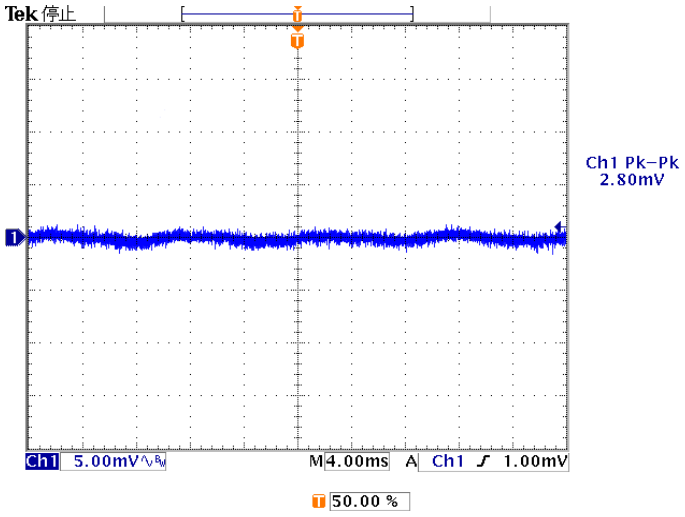
Input Voltage : 100 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 8.7 mV



Input Voltage : 100 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

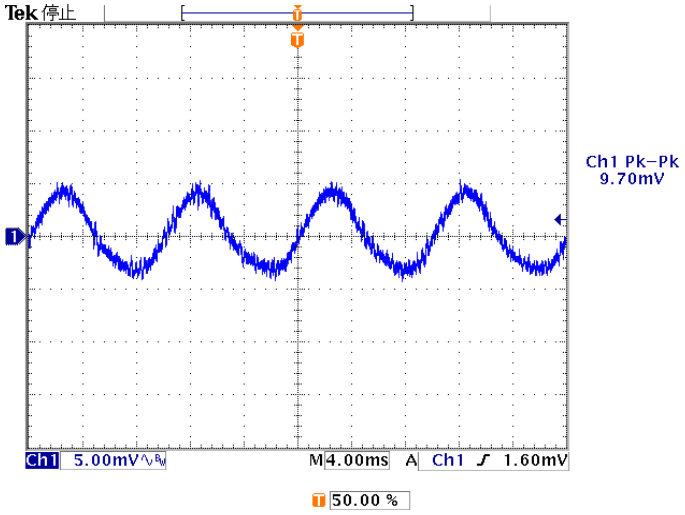
BW : 150 MHz

Vp-p : 2.8 mV

MODEL	LFS50A-48

Output Ripple and Noise Waveform

Ta : 25℃



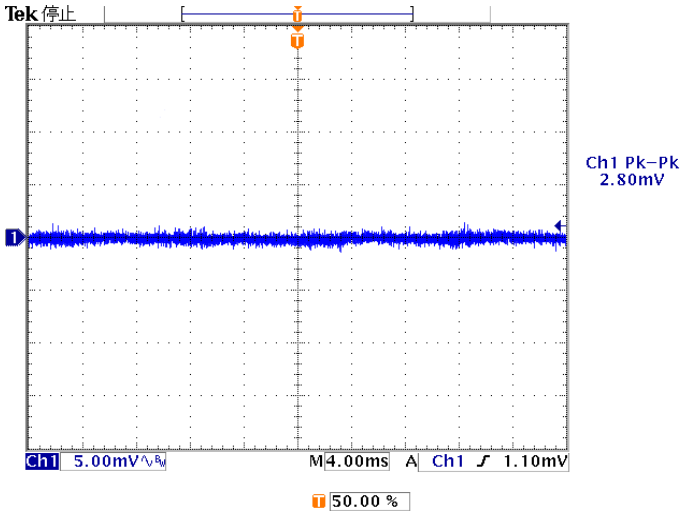
Input Voltage : 200 VAC
Output Current : 100 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

Vp-p : 9.7 mV



Input Voltage : 200 VAC
Output Current : 0 %

Vout : 5 mVAC/DIV

TIME : 4 ms/DIV

BW : 150 MHz

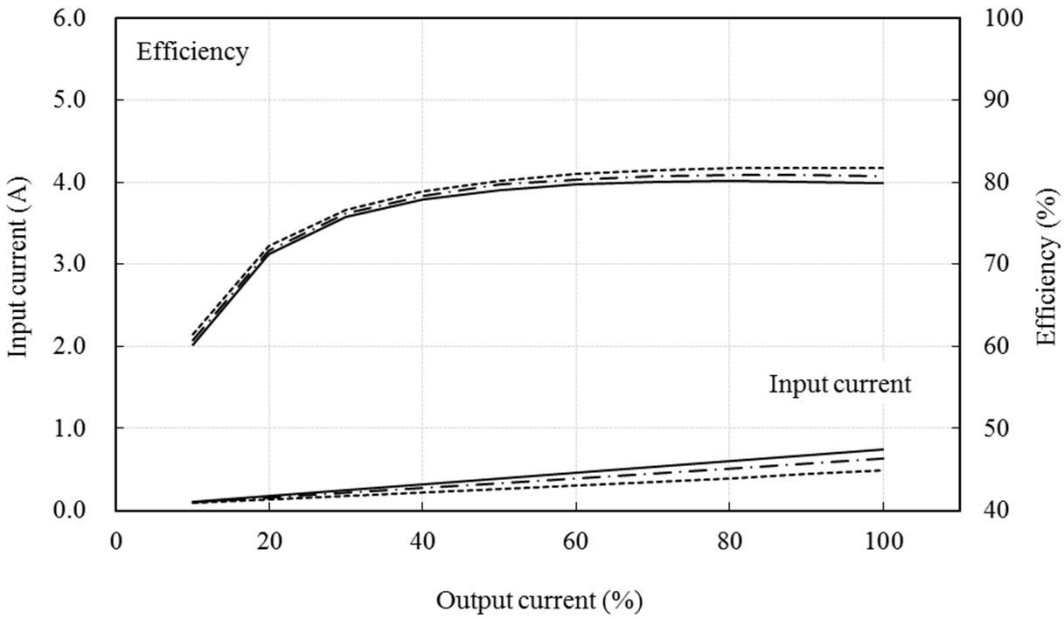
Vp-p : 2.8 mV

MODEL	LFS50A-5

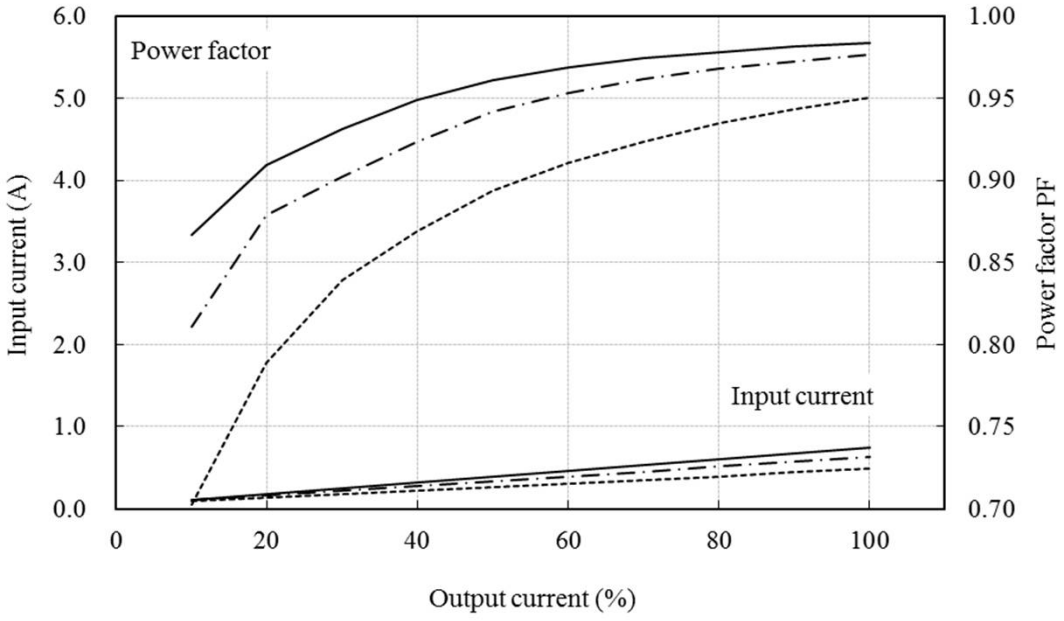
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -

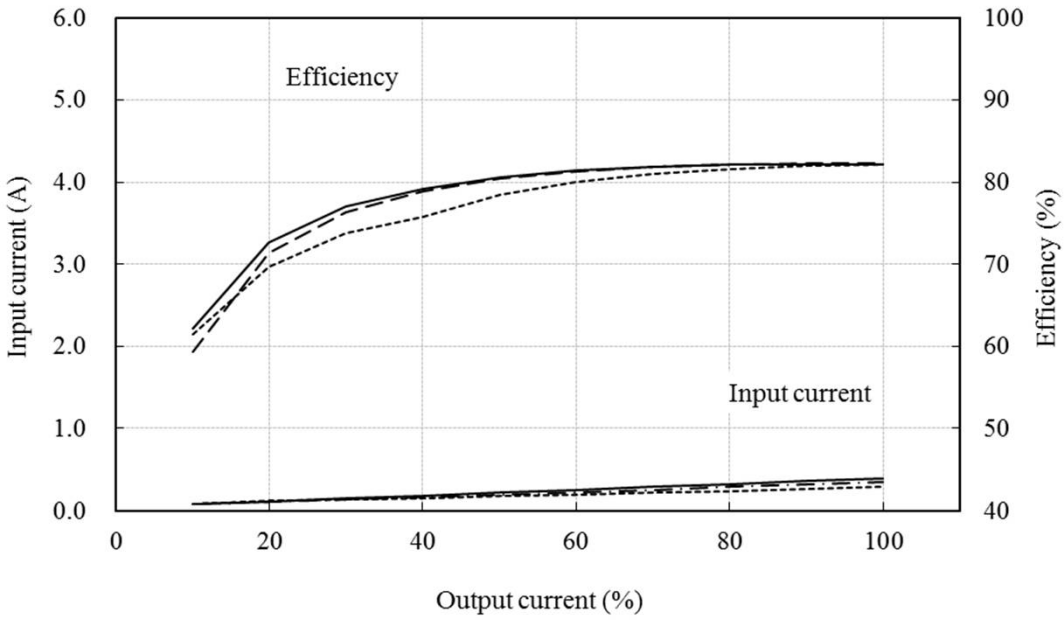


MODEL	LFS50A-5

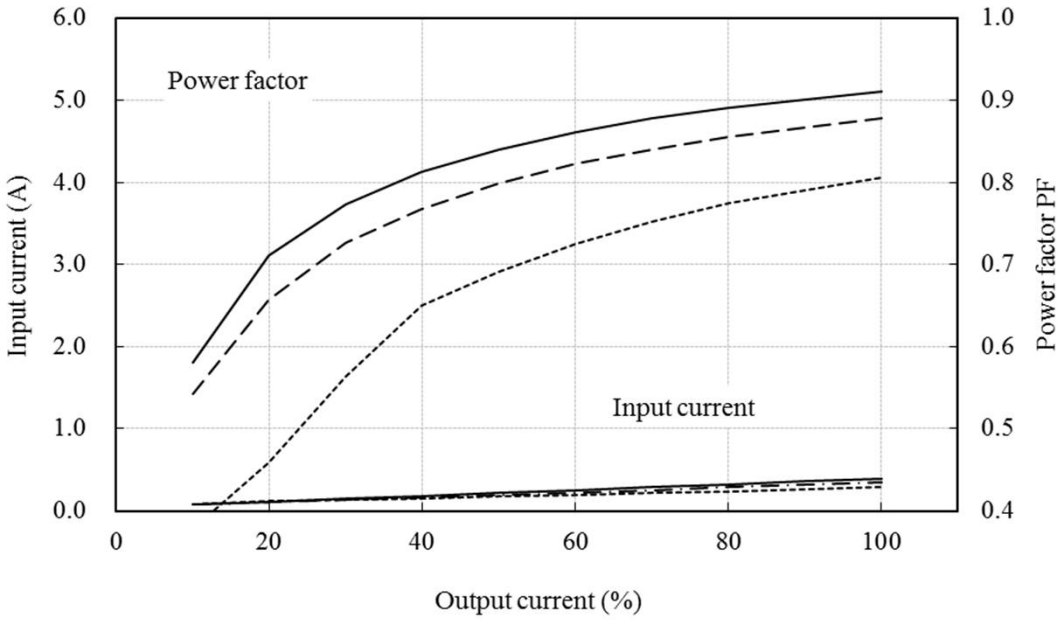
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ————
: 200VAC –·–·–·–
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ————
: 200VAC –·–·–·–
: 264VAC - - - - - - - - -

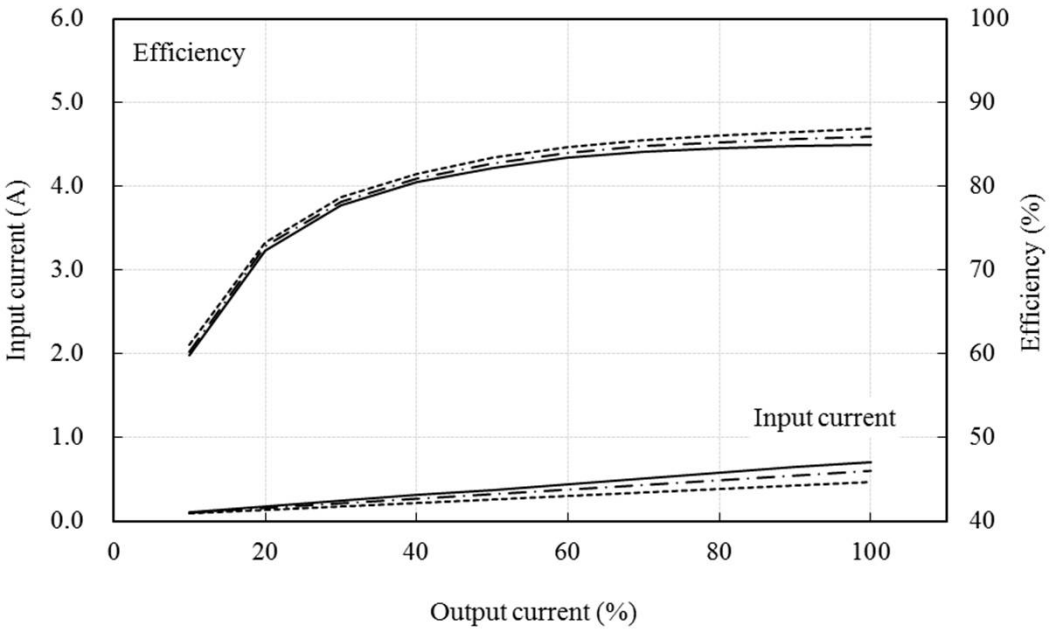


MODEL	LFS50A-12

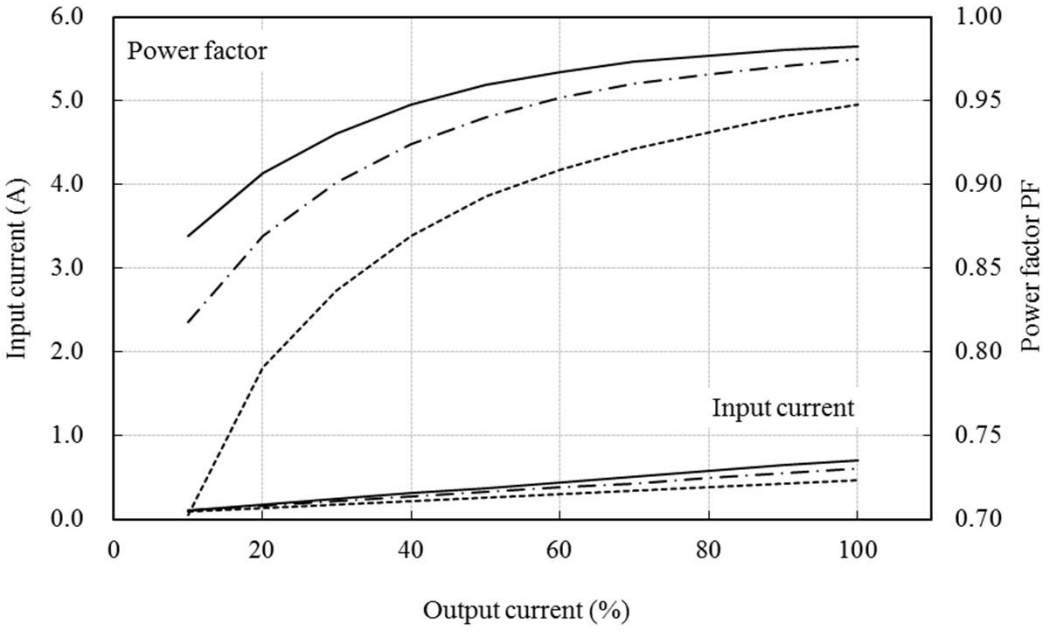
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ——————
: 100VAC —·—·—·—
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ——————
: 100VAC —·—·—·—
: 132VAC - - - - - - - - -

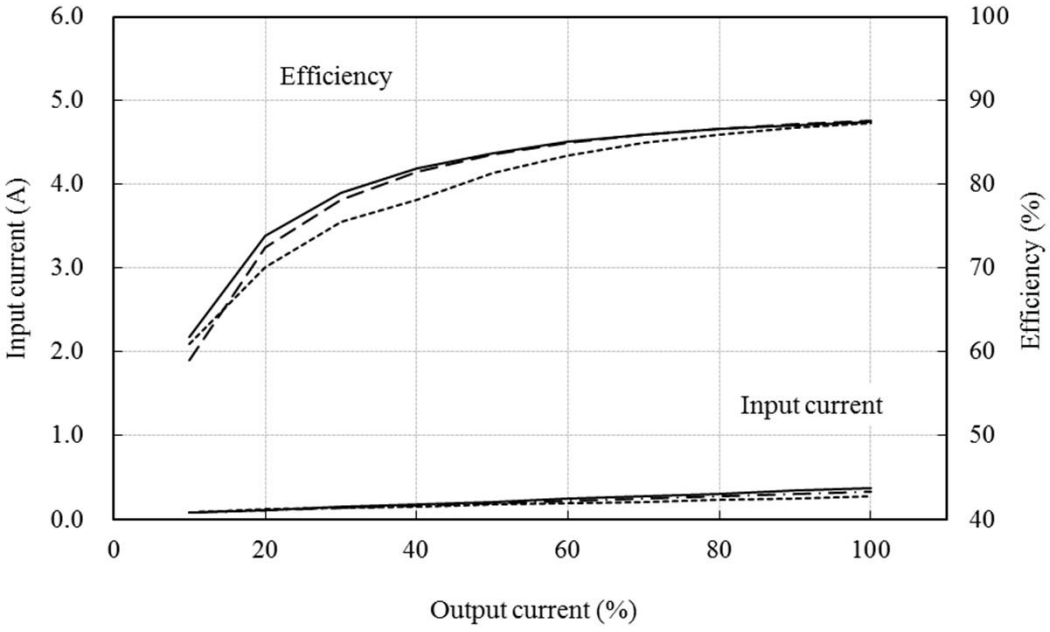


MODEL	LFS50A-12

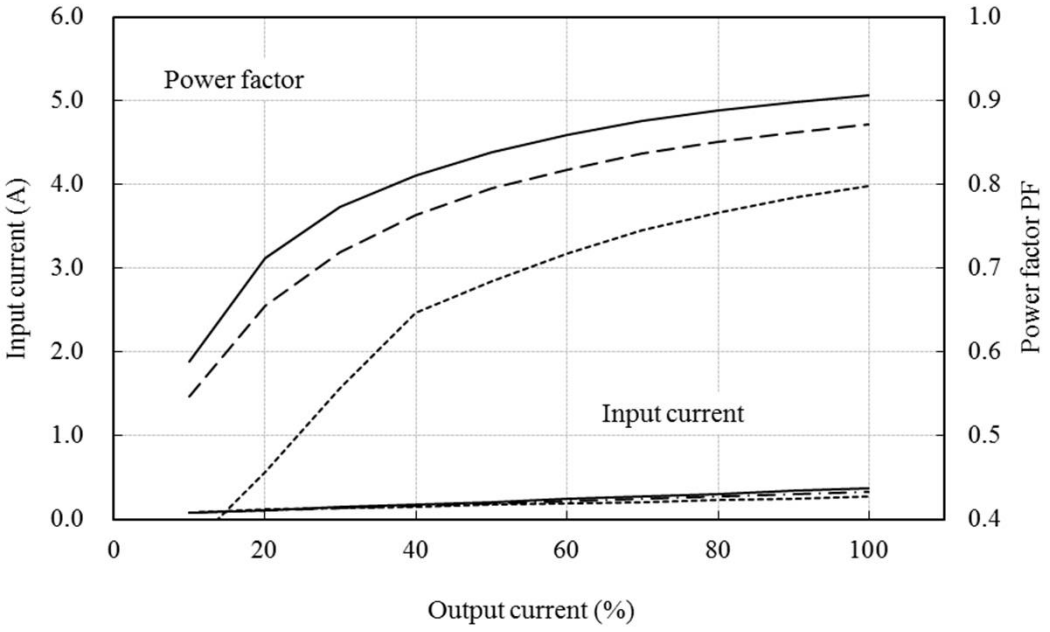
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -

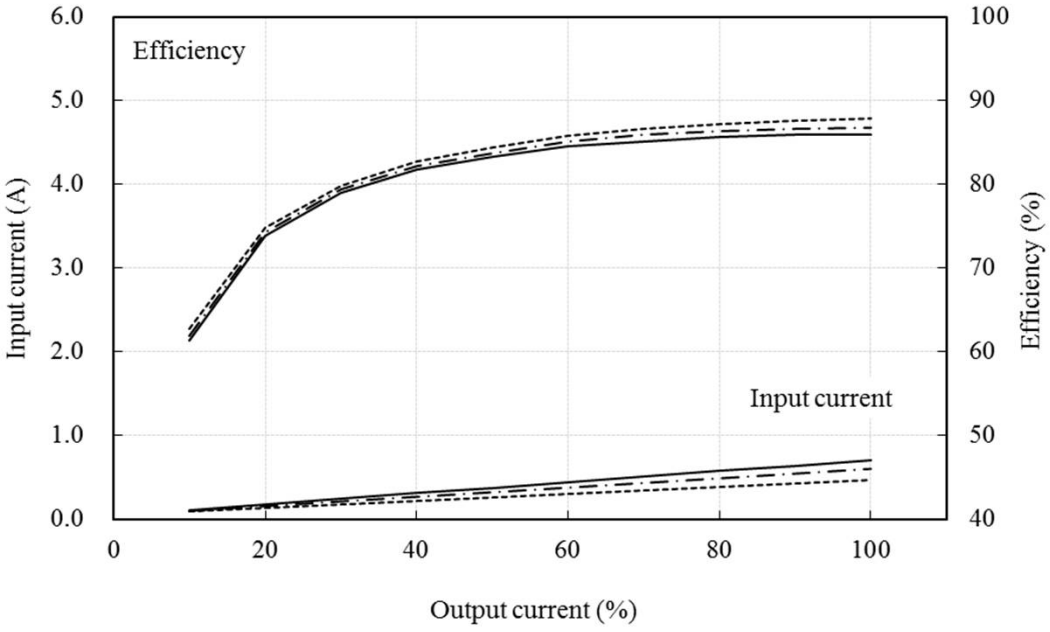


MODEL	LFS50A-15

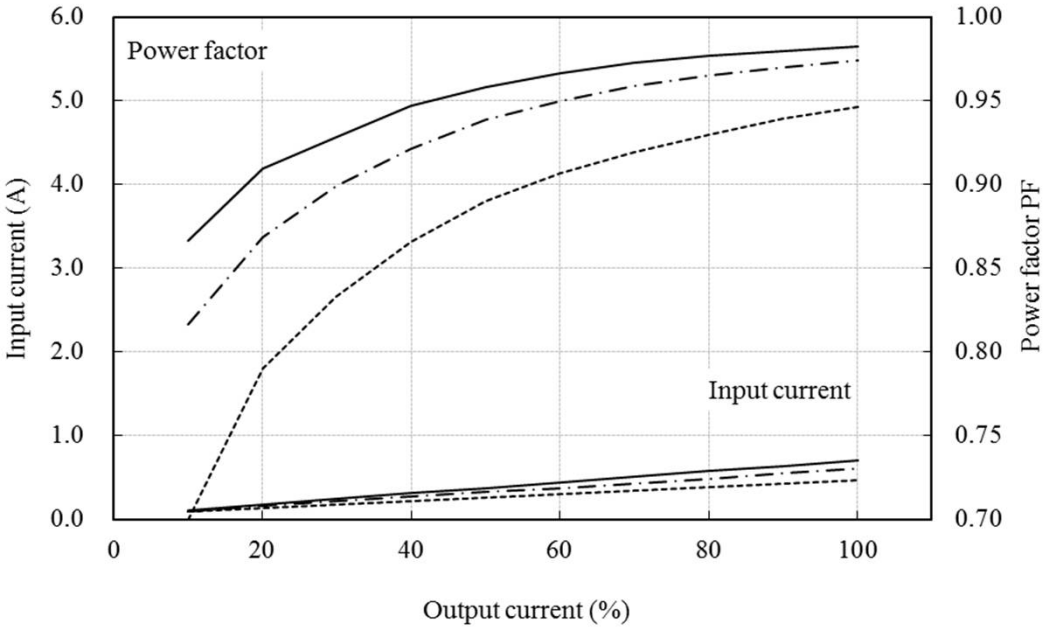
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -

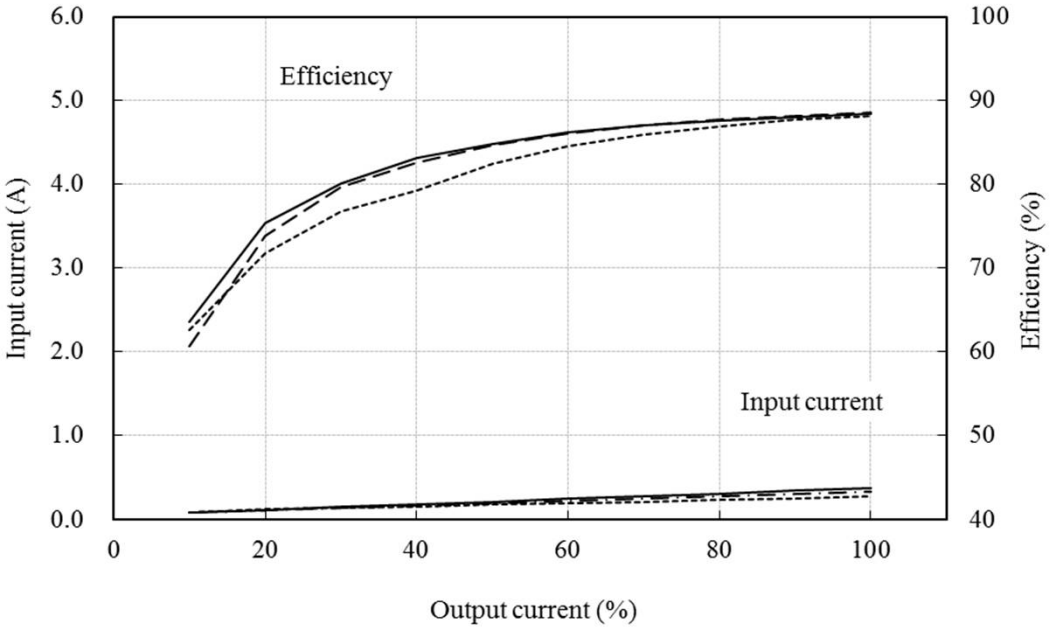


MODEL	LFS50A-15

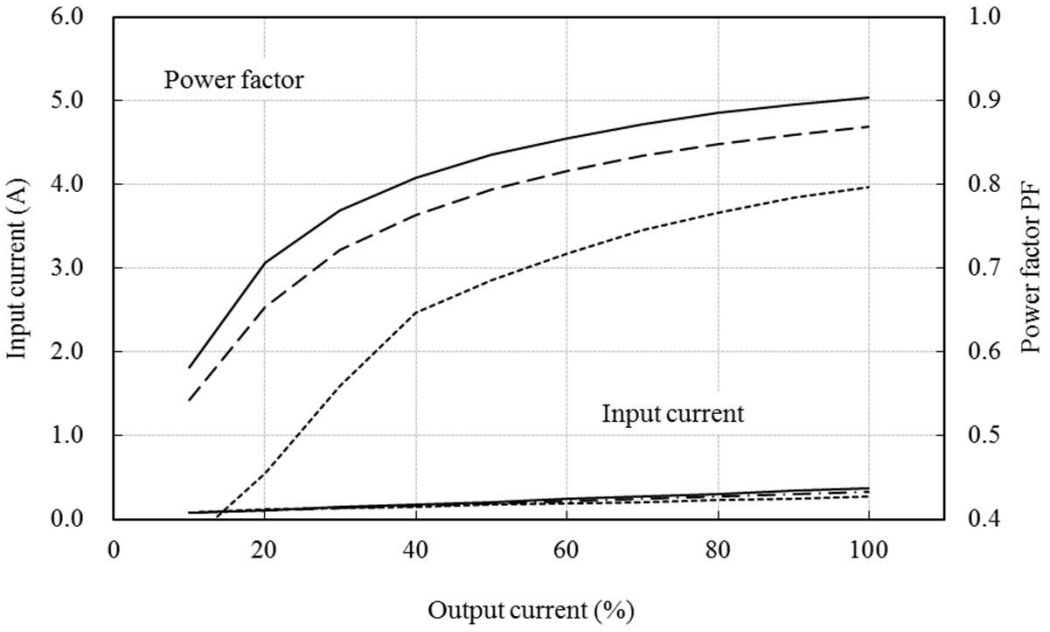
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -

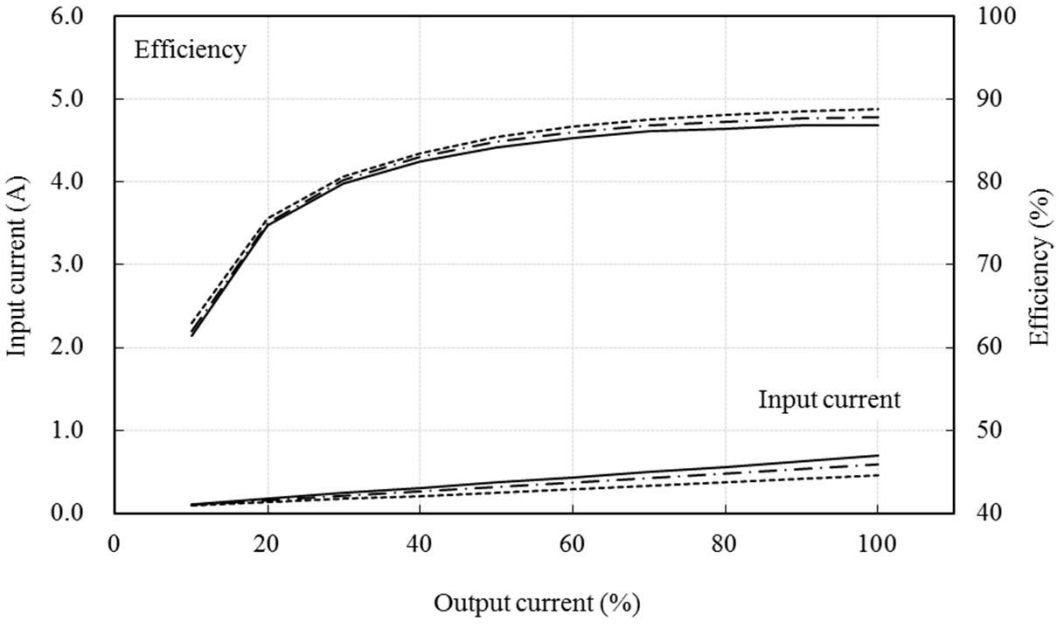


MODEL	LFS50A-24

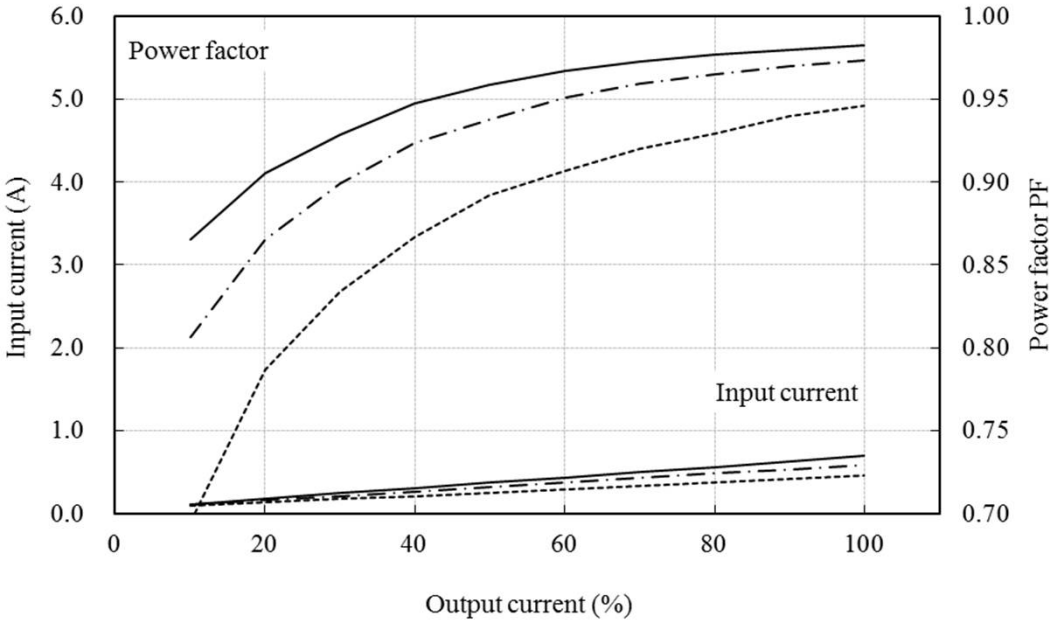
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -

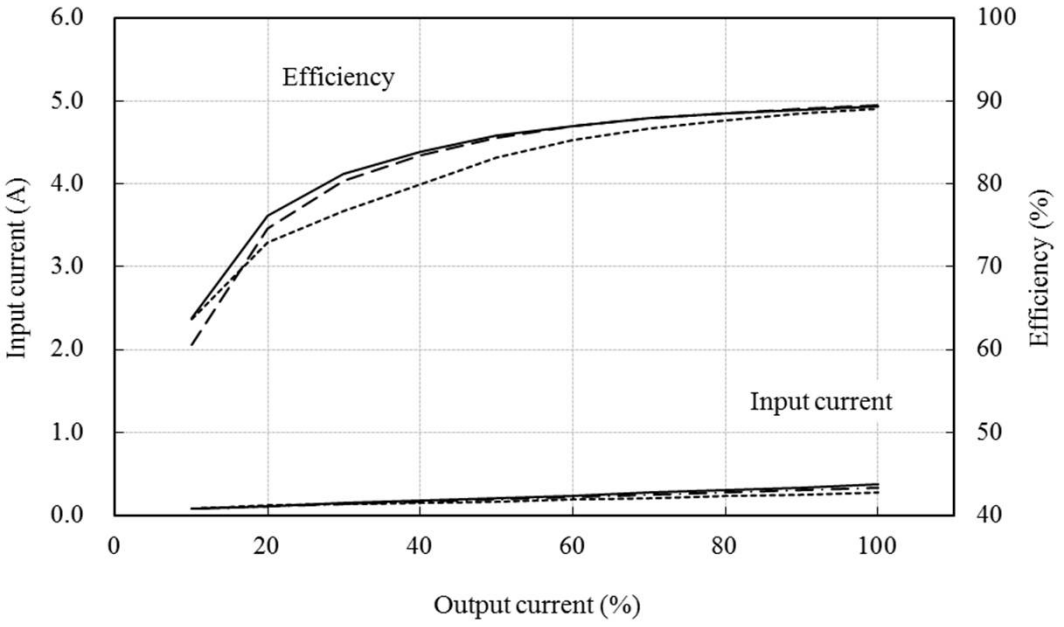


MODEL	LFS50A-24

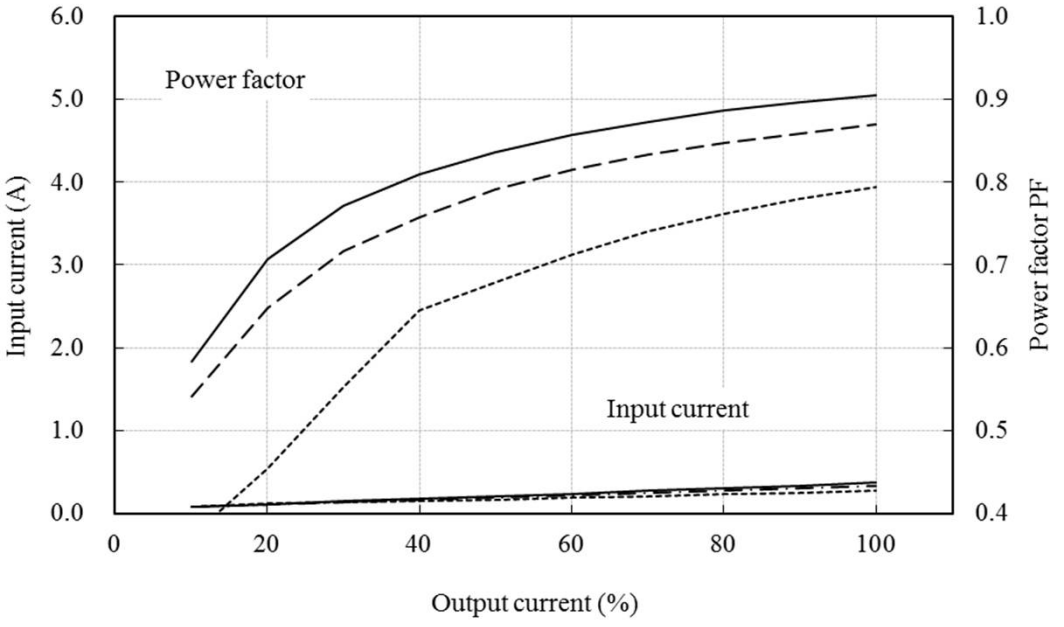
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ——————
: 200VAC —·—·—·—·—
: 264VAC - - - - - - - - -

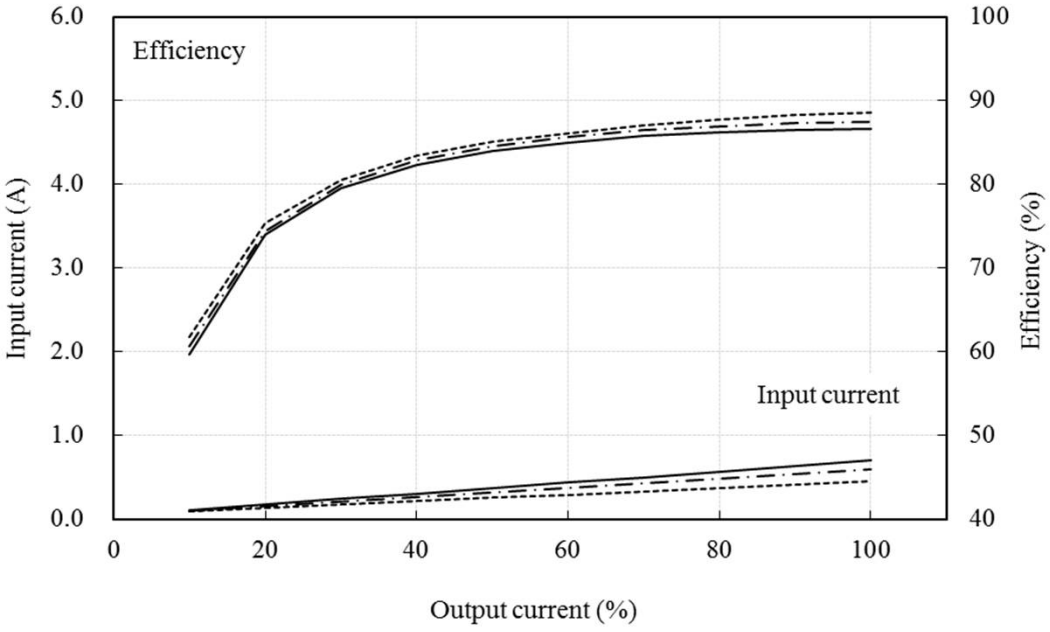


MODEL	LFS50A-30

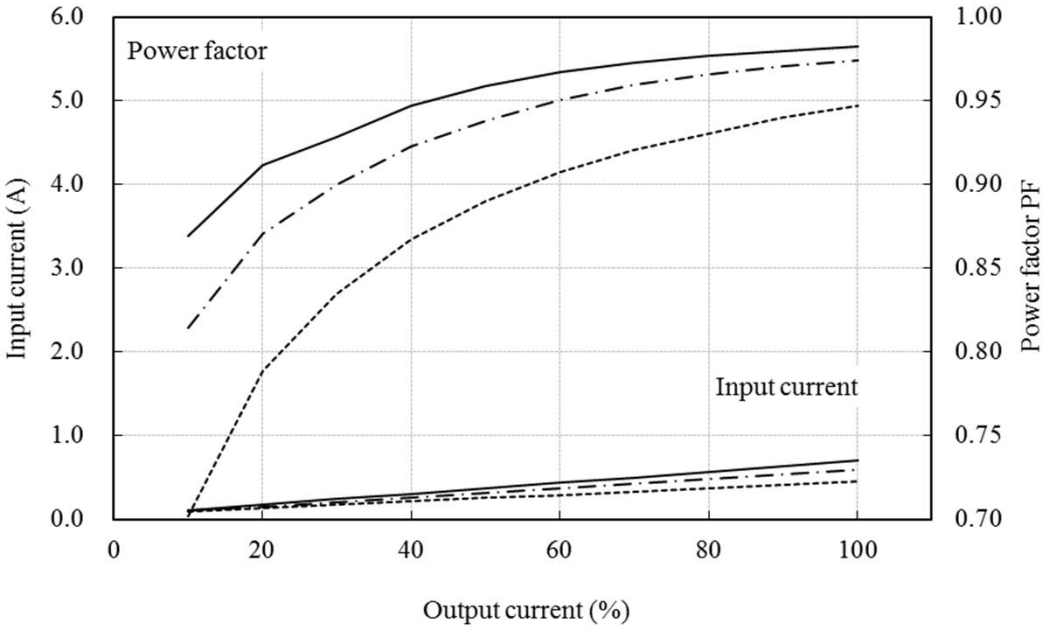
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ————
: 100VAC –·–·–·–
: 132VAC - - - - - - - - -

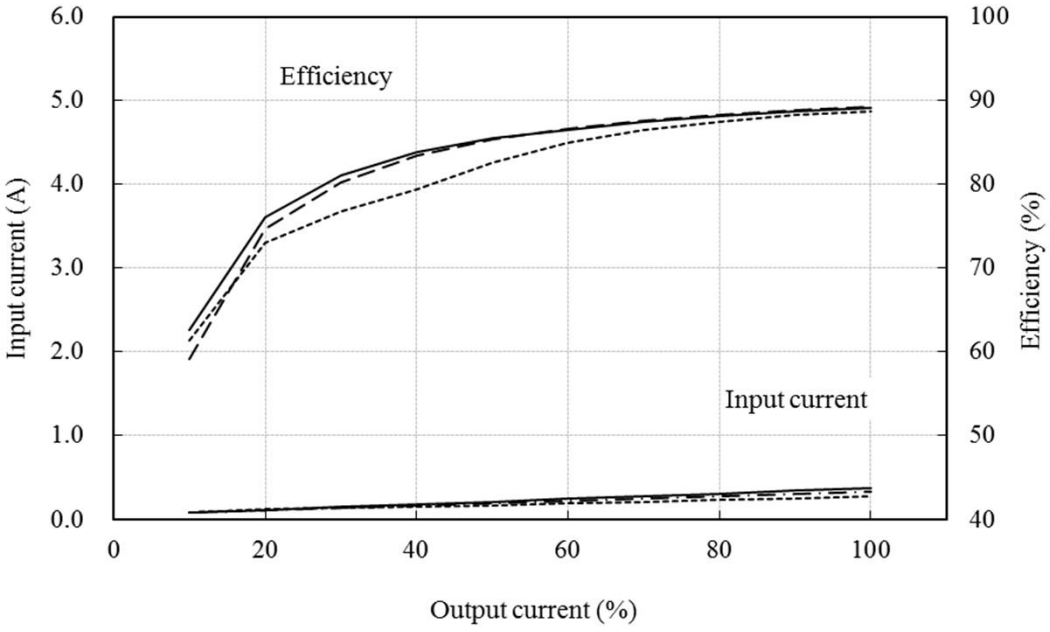


MODEL	LFS50A-30

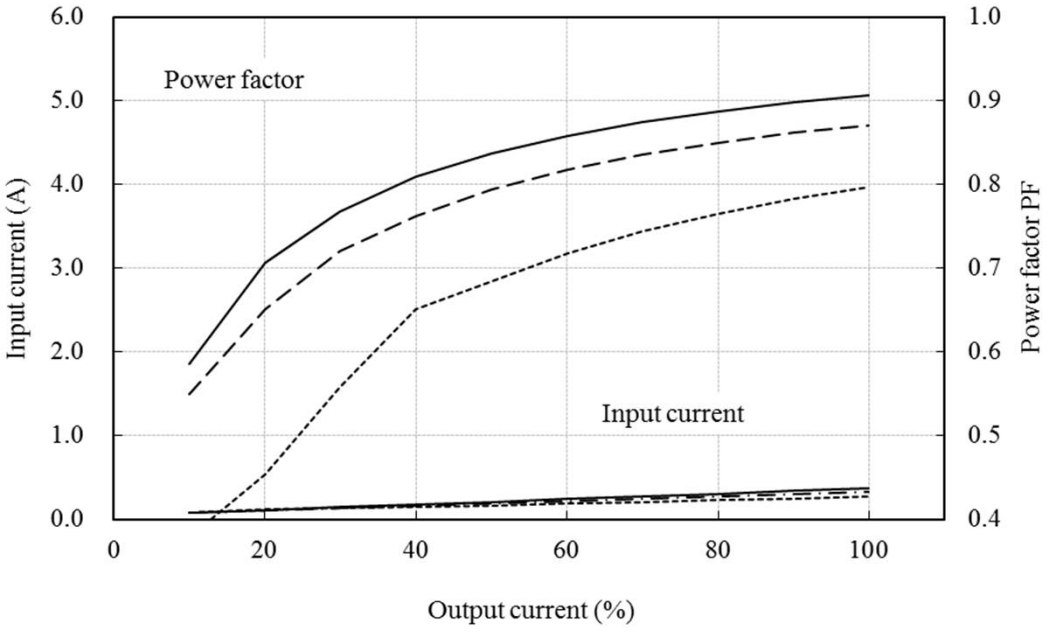
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ————
: 200VAC –·–·–·–
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ————
: 200VAC –·–·–·–
: 264VAC - - - - - - - - -

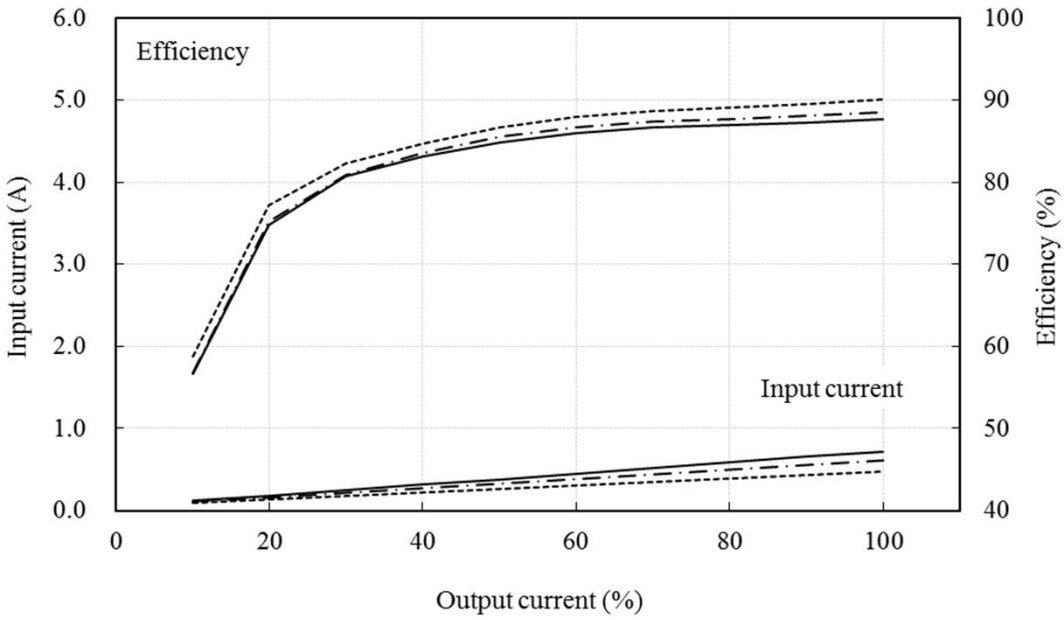


MODEL	LFS50A-48

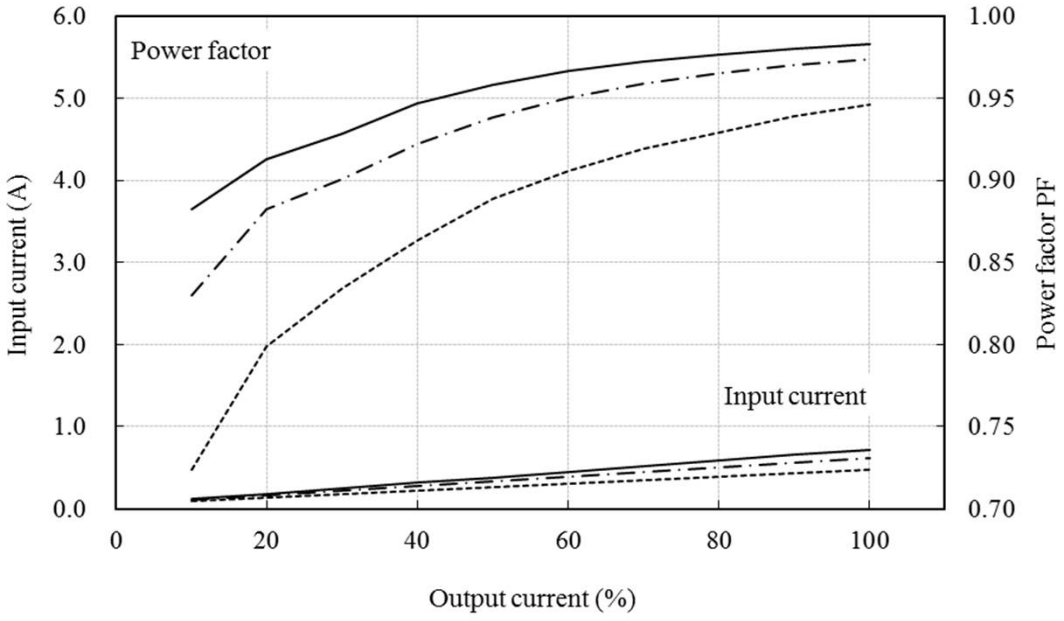
η and PF , input current v.s. output current

25℃

conditions Vin : 85VAC ——————
: 100VAC —·—·—·—
: 132VAC - - - - - - - - -



conditions Vin : 85VAC ——————
: 100VAC —·—·—·—
: 132VAC - - - - - - - - -

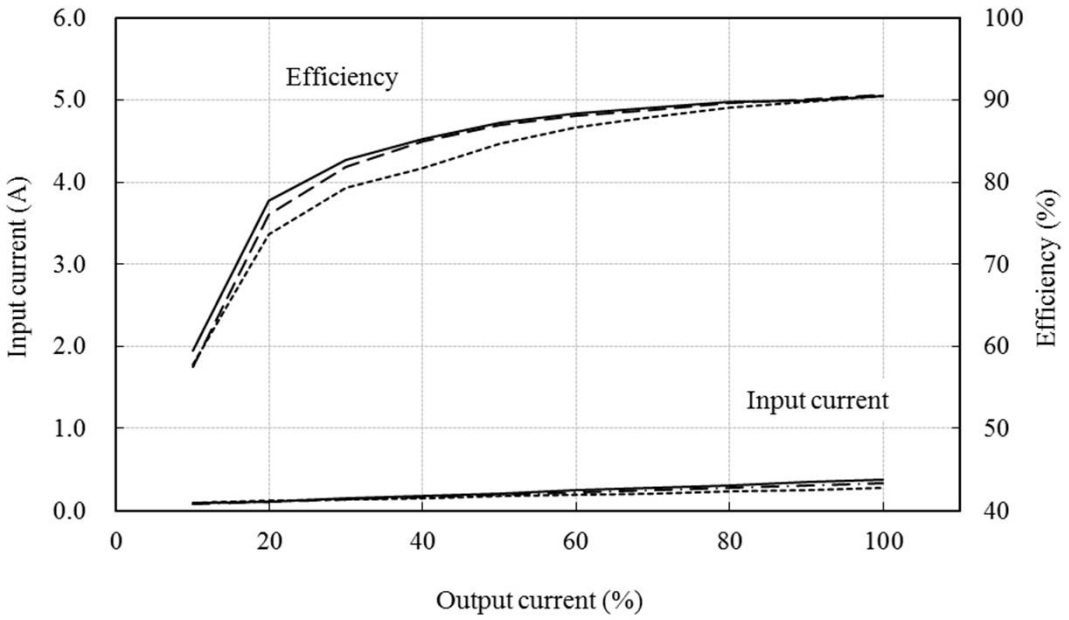


MODEL	LFS50A-48

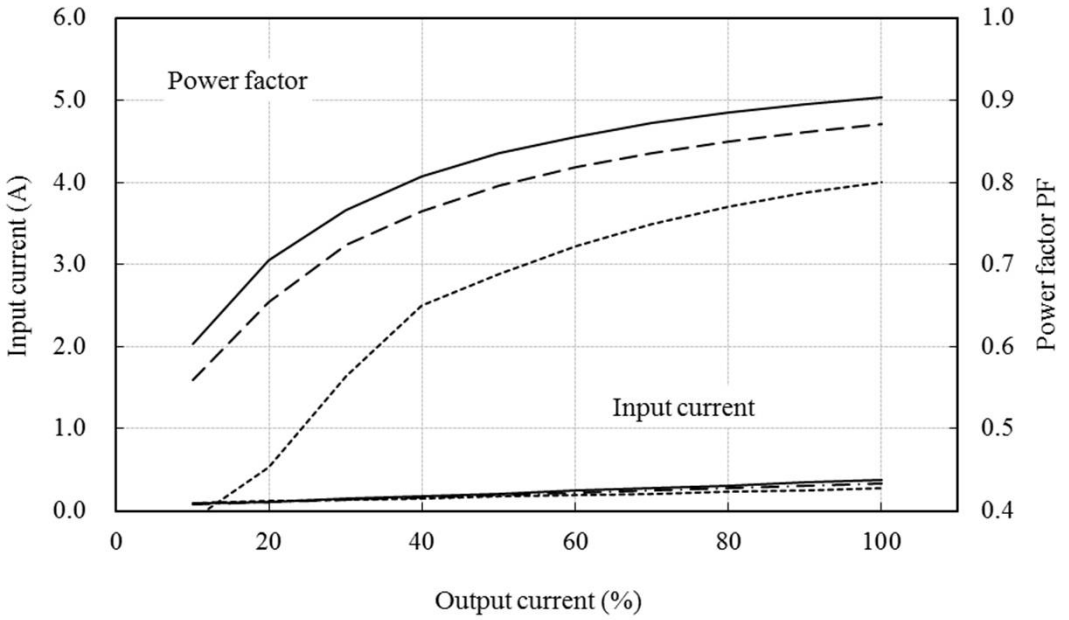
η and PF , input current v.s. output current

25℃

conditions Vin : 170VAC ————
: 200VAC —·—·—·—
: 264VAC - - - - - - - - -



conditions Vin : 170VAC ————
: 200VAC —·—·—·—
: 264VAC - - - - - - - - -



MODEL	LFS50A-5

Regulation - Line and Load

5V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	5.021 V	5.019 V	5.017 V	5.015 V	5.014 V	5.012 V		9 mV	0.18%
AC100V	5.022 V	5.019 V	5.017 V	5.015 V	5.014 V	5.012 V		10 mV	0.19%
AC132V	5.022 V	5.019 V	5.017 V	5.015 V	5.014 V	5.012 V		10 mV	0.19%
AC170V	5.022 V	5.019 V	5.017 V	5.015 V	5.014 V	5.012 V		10 mV	0.19%
AC200V	5.022 V	5.019 V	5.017 V	5.015 V	5.014 V	5.012 V		10 mV	0.19%
AC264V	5.022 V	5.019 V	5.017 V	5.015 V	5.013 V	5.012 V		10 mV	0.19%
line	1.1 mV	0.6 mV	0.5 mV	0.5 mV	0.5 mV	0.4 mV	0.0 mV		
regulation	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	5.027 V	5.025 V	5.023 V	5.021 V	5.019 V	5.017 V		10 mV	0.19%
AC100V	5.028 V	5.026 V	5.023 V	5.021 V	5.019 V	5.018 V		10 mV	0.21%
AC132V	5.029 V	5.026 V	5.024 V	5.022 V	5.020 V	5.018 V		11 mV	0.21%
AC170V	5.029 V	5.027 V	5.024 V	5.022 V	5.020 V	5.019 V		11 mV	0.22%
AC200V	5.030 V	5.027 V	5.025 V	5.023 V	5.021 V	5.019 V		11 mV	0.22%
AC264V	5.030 V	5.028 V	5.025 V	5.023 V	5.021 V	5.019 V		11 mV	0.22%
line	3.5 mV	2.9 mV	2.6 mV	2.4 mV	2.2 mV	2.0 mV	0.0 mV		
regulation	0.07%	0.06%	0.05%	0.05%	0.04%	0.04%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	5.036 V	5.033 V	5.031 V	5.029 V	5.028 V	5.026 V		10 mV	0.20%
AC100V	5.038 V	5.035 V	5.032 V	5.030 V	5.028 V	5.027 V		11 mV	0.22%
AC132V	5.038 V	5.036 V	5.033 V	5.031 V	5.029 V	5.027 V		11 mV	0.22%
AC170V	5.039 V	5.036 V	5.034 V	5.032 V	5.029 V	5.028 V		11 mV	0.23%
AC200V	5.039 V	5.037 V	5.034 V	5.032 V	5.030 V	5.028 V		11 mV	0.23%
AC264V	5.040 V	5.037 V	5.035 V	5.033 V	5.030 V	5.029 V		12 mV	0.24%
line	4.5 mV	3.9 mV	3.4 mV	3.2 mV	2.9 mV	2.8 mV	0.0 mV		
regulation	0.09%	0.08%	0.07%	0.06%	0.06%	0.06%	0.00%		

2. Temperature drift

conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	5.012 V	5.018 V	5.027 V	14mV	0.29%

MODEL	LFS50A-12

Regulation - Line and Load

12V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	12.046 V	12.046 V	12.046 V	12.045 V	12.044 V	12.044 V		2 mV	0.02%
AC100V	12.048 V	12.047 V	12.046 V	12.045 V	12.045 V	12.044 V		4 mV	0.03%
AC132V	12.049 V	12.048 V	12.046 V	12.046 V	12.045 V	12.045 V		4 mV	0.03%
AC170V	12.049 V	12.048 V	12.047 V	12.046 V	12.046 V	12.045 V		4 mV	0.03%
AC200V	12.050 V	12.048 V	12.047 V	12.047 V	12.046 V	12.046 V		4 mV	0.03%
AC264V	12.050 V	12.049 V	12.048 V	12.047 V	12.046 V	12.046 V		4 mV	0.04%
line	3.8 mV	2.6 mV	2.0 mV	2.0 mV	1.9 mV	1.9 mV	0.0 mV		
regulation	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	12.068 V	12.068 V	12.067 V	12.067 V	12.066 V	12.066 V		3 mV	0.02%
AC100V	12.071 V	12.069 V	12.069 V	12.068 V	12.067 V	12.067 V		4 mV	0.03%
AC132V	12.072 V	12.070 V	12.069 V	12.069 V	12.068 V	12.068 V		4 mV	0.03%
AC170V	12.072 V	12.071 V	12.070 V	12.069 V	12.069 V	12.068 V		4 mV	0.03%
AC200V	12.073 V	12.072 V	12.071 V	12.070 V	12.069 V	12.069 V		4 mV	0.03%
AC264V	12.073 V	12.071 V	12.070 V	12.069 V	12.069 V	12.068 V		5 mV	0.04%
line	4.4 mV	3.9 mV	3.5 mV	3.2 mV	2.9 mV	2.7 mV	0.0 mV		
regulation	0.04%	0.03%	0.03%	0.03%	0.02%	0.02%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	12.091 V	12.090 V	12.090 V	12.089 V	12.088 V	12.088 V		3 mV	0.02%
AC100V	12.093 V	12.092 V	12.091 V	12.090 V	12.090 V	12.089 V		4 mV	0.03%
AC132V	12.094 V	12.093 V	12.092 V	12.091 V	12.091 V	12.090 V		4 mV	0.03%
AC170V	12.095 V	12.094 V	12.093 V	12.092 V	12.091 V	12.091 V		4 mV	0.04%
AC200V	12.096 V	12.095 V	12.094 V	12.093 V	12.092 V	12.092 V		4 mV	0.04%
AC264V	12.097 V	12.096 V	12.095 V	12.094 V	12.093 V	12.092 V		5 mV	0.04%
line	6.2 mV	5.6 mV	5.2 mV	4.9 mV	4.6 mV	4.3 mV	0.0 mV		
regulation	0.05%	0.05%	0.04%	0.04%	0.04%	0.04%	0.00%		

2. Temperature drift

conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	12.044 V	12.067 V	12.089 V	45mV	0.38%

MODEL	LFS50A-15

Regulation - Line and Load

15V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	15.031 V	15.031 V	15.030 V	15.030 V	15.029 V	15.029 V		3 mV	0.02%
AC100V	15.033 V	15.031 V	15.031 V	15.030 V	15.029 V	15.029 V		3 mV	0.02%
AC132V	15.033 V	15.032 V	15.032 V	15.031 V	15.030 V	15.030 V		3 mV	0.02%
AC170V	15.034 V	15.033 V	15.032 V	15.031 V	15.031 V	15.030 V		4 mV	0.02%
AC200V	15.034 V	15.033 V	15.032 V	15.032 V	15.031 V	15.031 V		4 mV	0.02%
AC264V	15.035 V	15.034 V	15.033 V	15.032 V	15.031 V	15.031 V		4 mV	0.03%
line	3.8 mV	2.7 mV	2.3 mV	2.4 mV	2.3 mV	2.3 mV	0.0 mV		
regulation	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	15.055 V	15.054 V	15.054 V	15.053 V	15.053 V	15.052 V		2 mV	0.02%
AC100V	15.056 V	15.055 V	15.055 V	15.054 V	15.054 V	15.053 V		3 mV	0.02%
AC132V	15.057 V	15.056 V	15.056 V	15.055 V	15.054 V	15.054 V		4 mV	0.02%
AC170V	15.058 V	15.057 V	15.056 V	15.055 V	15.054 V	15.054 V		4 mV	0.03%
AC200V	15.058 V	15.057 V	15.056 V	15.056 V	15.055 V	15.054 V		4 mV	0.03%
AC264V	15.059 V	15.057 V	15.057 V	15.056 V	15.055 V	15.055 V		4 mV	0.03%
line	4.2 mV	3.3 mV	3.1 mV	2.8 mV	2.7 mV	2.5 mV	0.0 mV		
regulation	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	15.070 V	15.069 V	15.068 V	15.067 V	15.067 V	15.066 V		3 mV	0.02%
AC100V	15.071 V	15.070 V	15.069 V	15.068 V	15.068 V	15.067 V		4 mV	0.02%
AC132V	15.072 V	15.071 V	15.070 V	15.069 V	15.068 V	15.068 V		4 mV	0.03%
AC170V	15.072 V	15.071 V	15.070 V	15.069 V	15.068 V	15.068 V		4 mV	0.03%
AC200V	15.072 V	15.071 V	15.070 V	15.070 V	15.069 V	15.068 V		4 mV	0.03%
AC264V	15.073 V	15.072 V	15.071 V	15.070 V	15.069 V	15.069 V		4 mV	0.03%
line	3.4 mV	2.9 mV	2.6 mV	2.5 mV	2.1 mV	2.2 mV	0.0 mV		
regulation	0.02%	0.02%	0.02%	0.02%	0.01%	0.01%	0.00%		

2. Temperature drift

conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	15.029 V	15.053 V	15.067 V	38mV	0.25%

MODEL	LFS50A-24

Regulation - Line and Load

24V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	24.043 V	24.042 V	24.038 V	24.039 V	24.039 V	24.038 V		5 mV	0.02%
AC100V	24.041 V	24.040 V	24.040 V	24.039 V	24.039 V	24.039 V		3 mV	0.01%
AC132V	24.042 V	24.041 V	24.040 V	24.040 V	24.040 V	24.039 V		3 mV	0.01%
AC170V	24.042 V	24.041 V	24.041 V	24.040 V	24.040 V	24.039 V		3 mV	0.01%
AC200V	24.042 V	24.041 V	24.041 V	24.040 V	24.040 V	24.039 V		3 mV	0.01%
AC264V	24.044 V	24.043 V	24.043 V	24.042 V	24.042 V	24.042 V		2 mV	0.01%
line	2.4 mV	3.2 mV	4.7 mV	3.6 mV	3.3 mV	4.0 mV	0.0 mV		
regulation	0.01%	0.01%	0.02%	0.02%	0.01%	0.02%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	24.065 V	24.064 V	24.064 V	24.064 V	24.063 V	24.063 V		2 mV	0.01%
AC100V	24.066 V	24.066 V	24.065 V	24.065 V	24.065 V	24.064 V		2 mV	0.01%
AC132V	24.067 V	24.066 V	24.066 V	24.065 V	24.065 V	24.064 V		3 mV	0.01%
AC170V	24.067 V	24.066 V	24.065 V	24.065 V	24.064 V	24.064 V		3 mV	0.01%
AC200V	24.067 V	24.066 V	24.065 V	24.065 V	24.064 V	24.064 V		3 mV	0.01%
AC264V	24.067 V	24.066 V	24.065 V	24.065 V	24.064 V	24.063 V		4 mV	0.01%
line	2.2 mV	2.0 mV	1.7 mV	1.6 mV	1.4 mV	1.6 mV	0.0 mV		
regulation	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	24.061 V	24.060 V	24.060 V	24.060 V	24.060 V	24.062 V		2 mV	0.01%
AC100V	24.067 V	24.067 V	24.067 V	24.068 V	24.067 V	24.067 V		1 mV	0.01%
AC132V	24.071 V	24.071 V	24.070 V	24.070 V	24.069 V	24.068 V		3 mV	0.01%
AC170V	24.072 V	24.071 V	24.071 V	24.070 V	24.070 V	24.069 V		3 mV	0.01%
AC200V	24.072 V	24.071 V	24.071 V	24.070 V	24.069 V	24.069 V		3 mV	0.01%
AC264V	24.072 V	24.071 V	24.071 V	24.070 V	24.069 V	24.068 V		5 mV	0.02%
line	11.0 mV	11.3 mV	10.7 mV	10.5 mV	9.5 mV	7.3 mV	0.0 mV		
regulation	0.05%	0.05%	0.04%	0.04%	0.04%	0.03%	0.00%		

2. Temperature drift

conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	24.039 V	24.064 V	24.067 V	28mV	0.12%

MODEL	LFS50A-30

Regulation - Line and Load

30V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	30.069 V	30.069 V	30.068 V	30.067 V	30.066 V	30.067 V		3 mV	0.01%
AC100V	30.075 V	30.074 V	30.073 V	30.072 V	30.070 V	30.069 V		6 mV	0.02%
AC132V	30.076 V	30.074 V	30.073 V	30.072 V	30.070 V	30.068 V		7 mV	0.02%
AC170V	30.075 V	30.074 V	30.073 V	30.071 V	30.070 V	30.069 V		6 mV	0.02%
AC200V	30.075 V	30.074 V	30.073 V	30.072 V	30.070 V	30.069 V		6 mV	0.02%
AC264V	30.076 V	30.074 V	30.073 V	30.072 V	30.071 V	30.069 V		6 mV	0.02%
line	6.8 mV	5.5 mV	4.9 mV	5.2 mV	5.2 mV	2.0 mV	0.0 mV		
regulation	0.02%	0.02%	0.02%	0.02%	0.02%	0.01%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	30.046 V	30.045 V	30.044 V	30.043 V	30.041 V	30.040 V		6 mV	0.02%
AC100V	30.048 V	30.047 V	30.046 V	30.044 V	30.043 V	30.042 V		7 mV	0.02%
AC132V	30.049 V	30.048 V	30.047 V	30.045 V	30.043 V	30.042 V		7 mV	0.02%
AC170V	30.050 V	30.049 V	30.048 V	30.046 V	30.044 V	30.042 V		8 mV	0.03%
AC200V	30.050 V	30.049 V	30.048 V	30.046 V	30.044 V	30.043 V		7 mV	0.02%
AC264V	30.049 V	30.047 V	30.046 V	30.043 V	30.042 V	30.041 V		8 mV	0.03%
line	4.3 mV	3.8 mV	3.5 mV	3.3 mV	2.9 mV	2.8 mV	0.0 mV		
regulation	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	30.041 V	30.040 V	30.038 V	30.036 V	30.034 V	30.032 V		8 mV	0.03%
AC100V	30.039 V	30.036 V	30.030 V	30.028 V	30.032 V	30.032 V		11 mV	0.04%
AC132V	30.041 V	30.039 V	30.037 V	30.035 V	30.034 V	30.034 V		7 mV	0.02%
AC170V	30.042 V	30.041 V	30.038 V	30.037 V	30.036 V	30.035 V		8 mV	0.03%
AC200V	30.043 V	30.041 V	30.039 V	30.037 V	30.035 V	30.034 V		8 mV	0.03%
AC264V	30.043 V	30.041 V	30.040 V	30.038 V	30.037 V	30.036 V		8 mV	0.03%
line	4.1 mV	5.5 mV	9.9 mV	9.8 mV	4.3 mV	3.5 mV	0.0 mV		
regulation	0.01%	0.02%	0.03%	0.03%	0.01%	0.01%	0.00%		

2. Temperature drift

conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	30.069 V	30.042 V	30.032 V	37mV	0.12%

MODEL	LFS50A-48

Regulation - Line and Load

48V

1.Regulation - line and load

conditions Ta : -10℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	48.072 V	48.071 V	48.063 V	48.054 V	48.051 V	48.048 V		24 mV	0.05%
AC100V	48.080 V	48.078 V	48.067 V	48.057 V	48.052 V	48.049 V		31 mV	0.06%
AC132V	48.081 V	48.078 V	48.068 V	48.058 V	48.053 V	48.050 V		31 mV	0.06%
AC170V	48.082 V	48.080 V	48.070 V	48.058 V	48.054 V	48.051 V		31 mV	0.07%
AC200V	48.083 V	48.081 V	48.070 V	48.058 V	48.054 V	48.051 V		32 mV	0.07%
AC264V	48.087 V	48.086 V	48.073 V	48.078 V	48.078 V	48.074 V		14 mV	0.03%
line	14.9 mV	15.3 mV	9.9 mV	24.0 mV	26.9 mV	26.8 mV	0.0 mV		
regulation	0.03%	0.03%	0.02%	0.05%	0.06%	0.06%	0.00%		

conditions Ta : 25℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	48.117 V	48.115 V	48.105 V	48.093 V	48.089 V	48.085 V		32 mV	0.07%
AC100V	48.117 V	48.115 V	48.105 V	48.094 V	48.090 V	48.086 V		30 mV	0.06%
AC132V	48.118 V	48.116 V	48.105 V	48.094 V	48.091 V	48.087 V		31 mV	0.06%
AC170V	48.119 V	48.116 V	48.105 V	48.094 V	48.091 V	48.087 V		32 mV	0.07%
AC200V	48.119 V	48.116 V	48.106 V	48.095 V	48.091 V	48.087 V		31 mV	0.07%
AC264V	48.120 V	48.117 V	48.106 V	48.095 V	48.092 V	48.088 V		32 mV	0.07%
line	2.9 mV	2.4 mV	1.4 mV	2.2 mV	3.1 mV	2.6 mV	0.0 mV		
regulation	0.01%	0.01%	0.00%	0.00%	0.01%	0.01%	0.00%		

conditions Ta : 60℃

Vin \ Iout	0%	20%	40%	60%	80%	100%	120%	load regulation	
AC85V	48.102 V	48.105 V	48.095 V	48.089 V	48.091 V	48.099 V		16 mV	0.03%
AC100V	48.133 V	48.131 V	48.118 V	48.105 V	48.101 V	48.097 V		37 mV	0.08%
AC132V	48.131 V	48.128 V	48.115 V	48.105 V	48.101 V	48.096 V		35 mV	0.07%
AC170V	48.132 V	48.129 V	48.117 V	48.110 V	48.106 V	48.094 V		39 mV	0.08%
AC200V	48.128 V	48.127 V	48.113 V	48.109 V	48.103 V	48.099 V		29 mV	0.06%
AC264V	48.152 V	48.150 V	48.136 V	48.130 V	48.125 V	48.120 V		32 mV	0.07%
line	49.7 mV	44.7 mV	41.7 mV	41.4 mV	34.1 mV	26.2 mV	0.0 mV		
regulation	0.10%	0.09%	0.09%	0.09%	0.07%	0.05%	0.00%		

2. Temperature drift

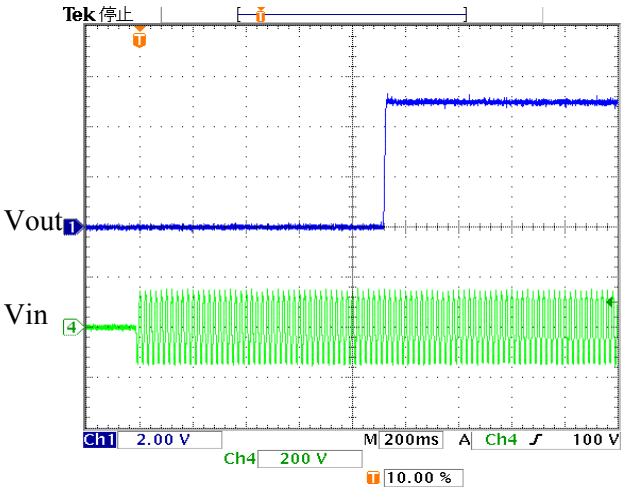
conditions Vin : 100VAC
Iout : 100%

Ta	-10℃	25℃	60℃	temperature stability	
Vo	48.049 V	48.086 V	48.097 V	48mV	0.10%

MODEL	LFS50A-5

Output Rise Waveform and Start Time

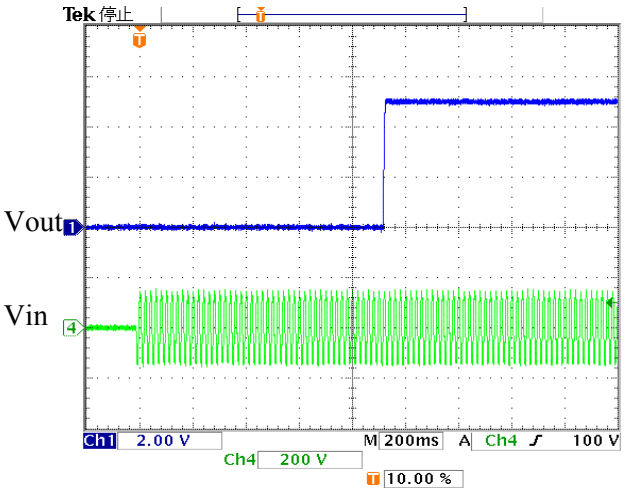
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 2 VDC/DIV
TIME : 200 ms/DIV

Start Time : 928 ms



Input Voltage : 100 VAC
Output Current : 0 %

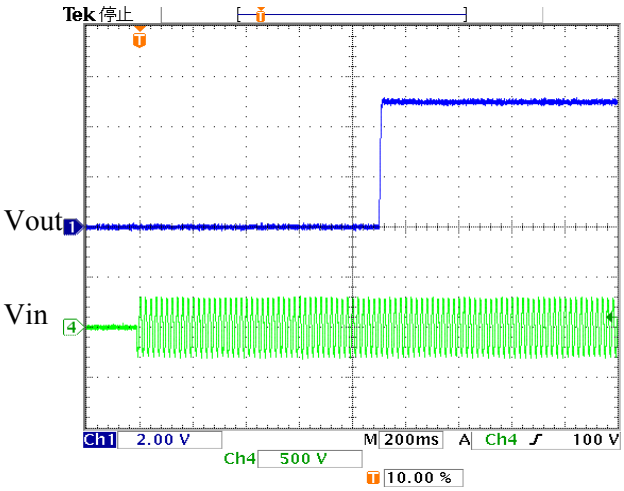
Vin : 200 VAC/DIV
Vout : 2 VDC/DIV
TIME : 200 ms/DIV

Start Time : 928 ms

MODEL	LFS50A-5

Output Rise Waveform and Start Time

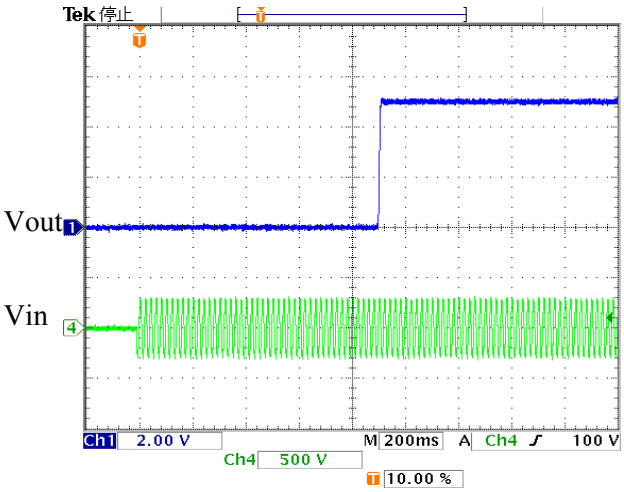
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 2 VDC/DIV
TIME : 200 ms/DIV

Start Time : 908 ms



Input Voltage : 200 VAC
Output Current : 0 %

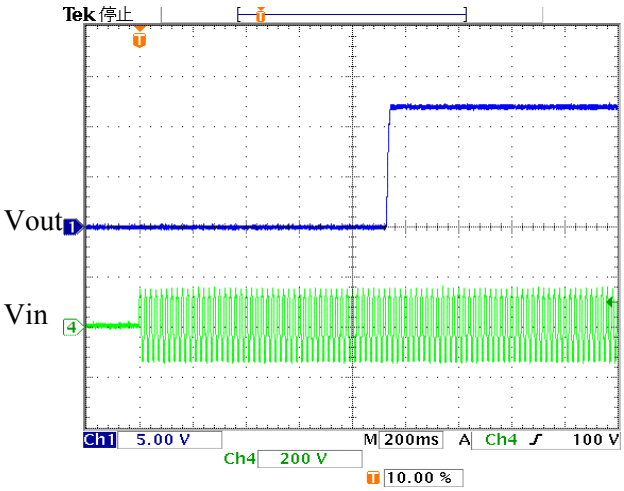
Vin : 500 VAC/DIV
Vout : 2 VDC/DIV
TIME : 200 ms/DIV

Start Time : 908 ms

MODEL	LFS50A-12

Output Rise Waveform and Start Time

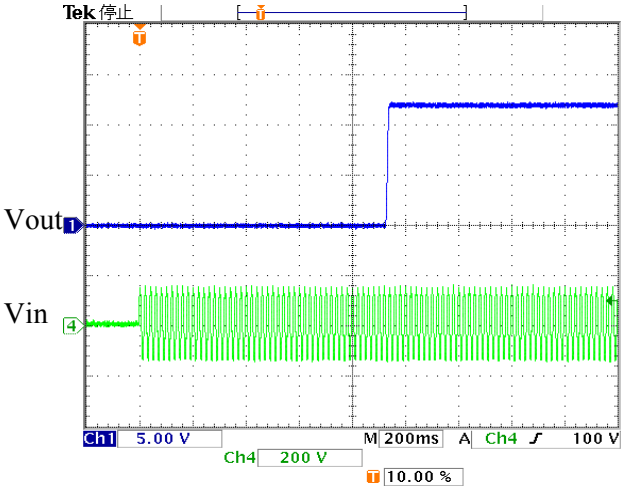
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 948 ms



Input Voltage : 100 VAC
Output Current : 0 %

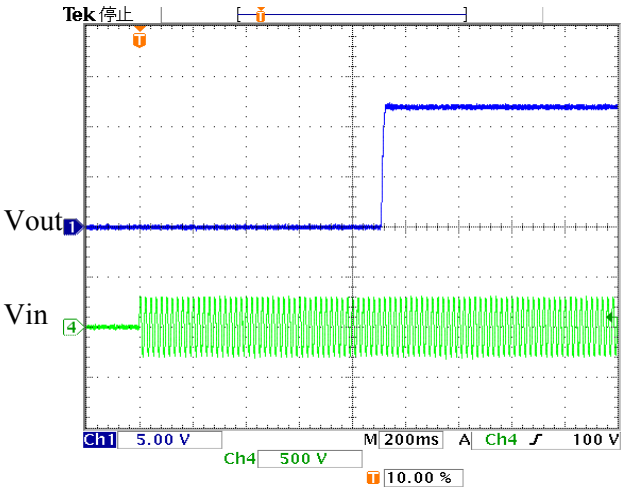
Vin : 200 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 940 ms

MODEL	LFS50A-12

Output Rise Waveform and Start Time

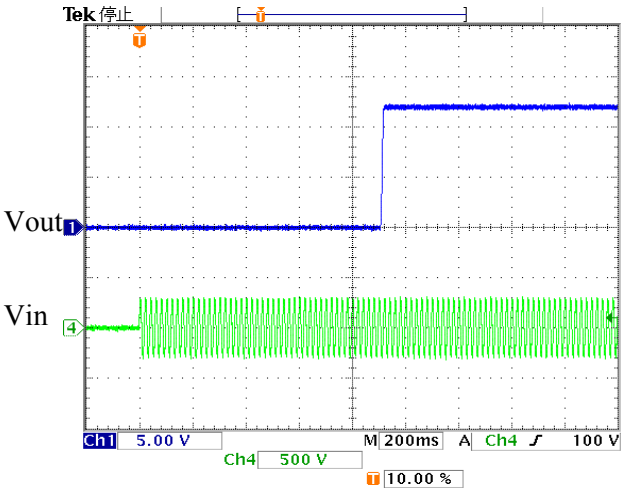
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 928 ms



Input Voltage : 200 VAC
Output Current : 0 %

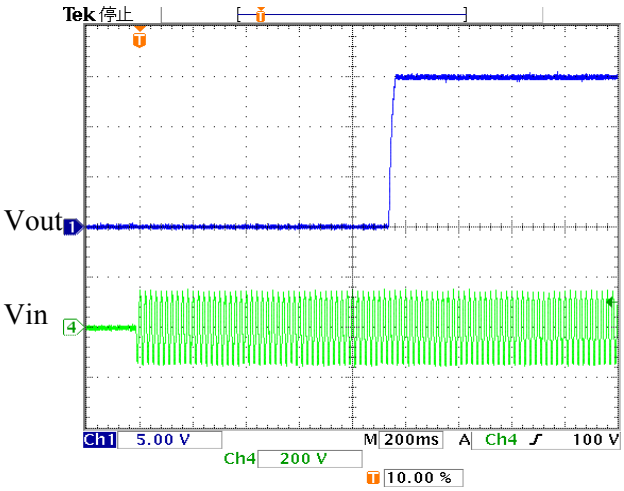
Vin : 500 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 916 ms

MODEL	LFS50A-15

Output Rise Waveform and Start Time

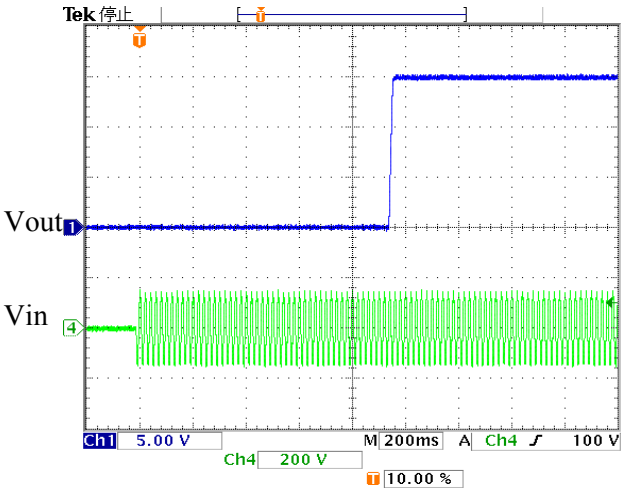
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 964 ms



Input Voltage : 100 VAC
Output Current : 0 %

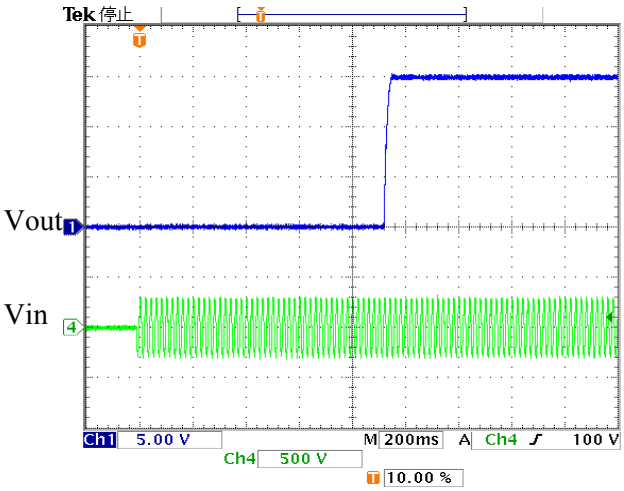
Vin : 200 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 952 ms

MODEL	LFS50A-15

Output Rise Waveform and Start Time

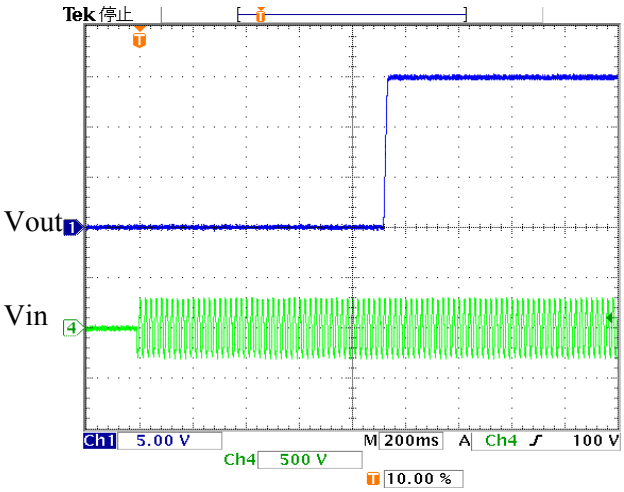
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 948 ms



Input Voltage : 200 VAC
Output Current : 0 %

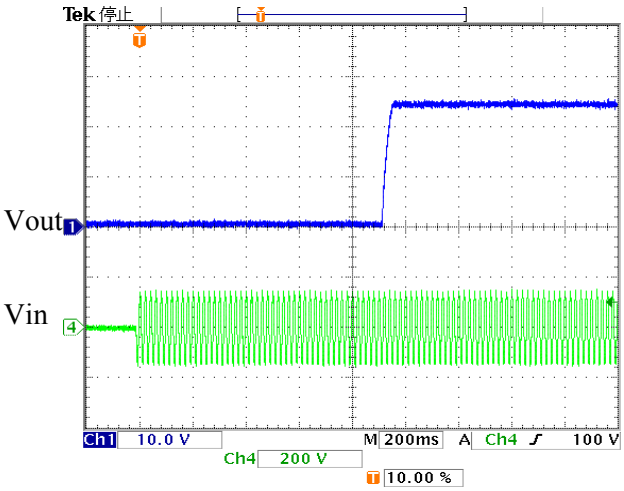
Vin : 500 VAC/DIV
Vout : 5 VDC/DIV
TIME : 200 ms/DIV

Start Time : 932 ms

MODEL	LFS50A-24

Output Rise Waveform and Start Time

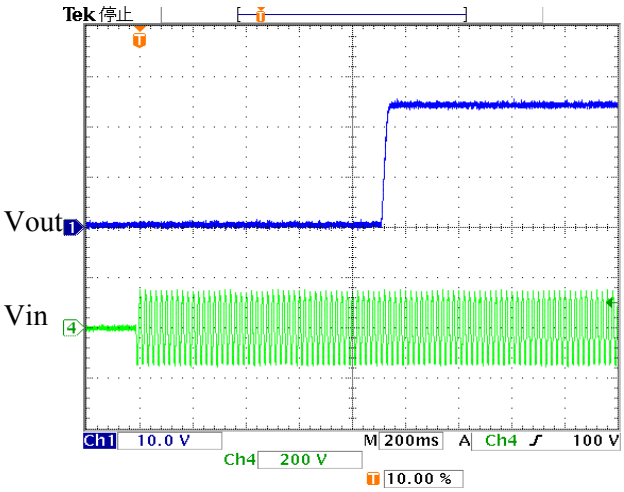
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 948 ms



Input Voltage : 100 VAC
Output Current : 0 %

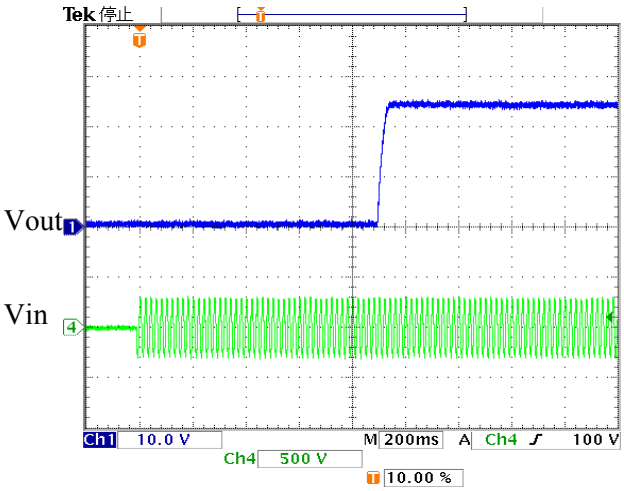
Vin : 200 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 940 ms

MODEL	LFS50A-24

Output Rise Waveform and Start Time

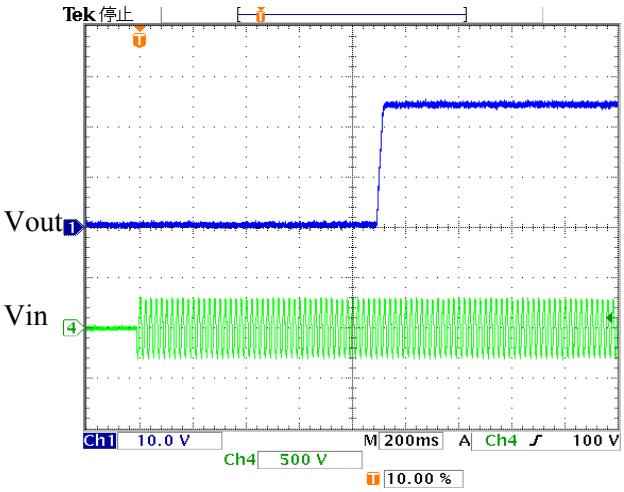
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 928 ms



Input Voltage : 200 VAC
Output Current : 0 %

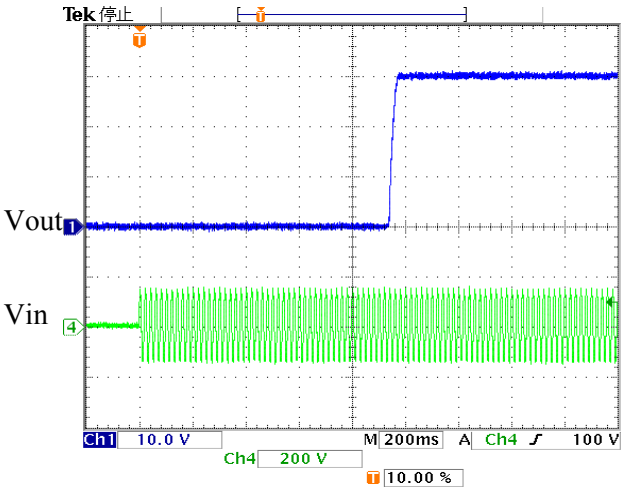
Vin : 500 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 916 ms

MODEL	LFS50A-30

Output Rise Waveform and Start Time

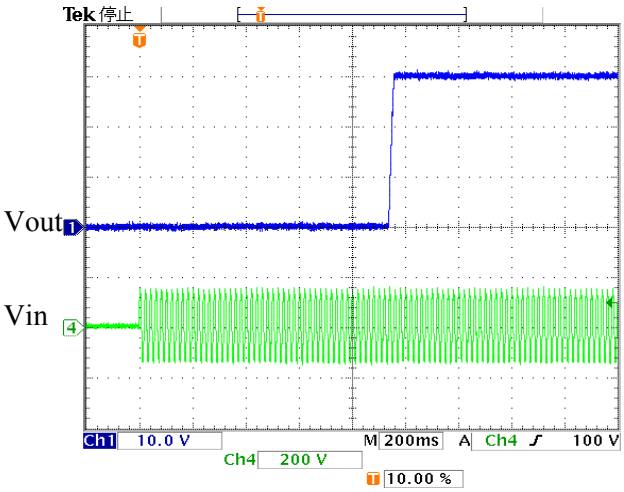
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 984 ms



Input Voltage : 100 VAC
Output Current : 0 %

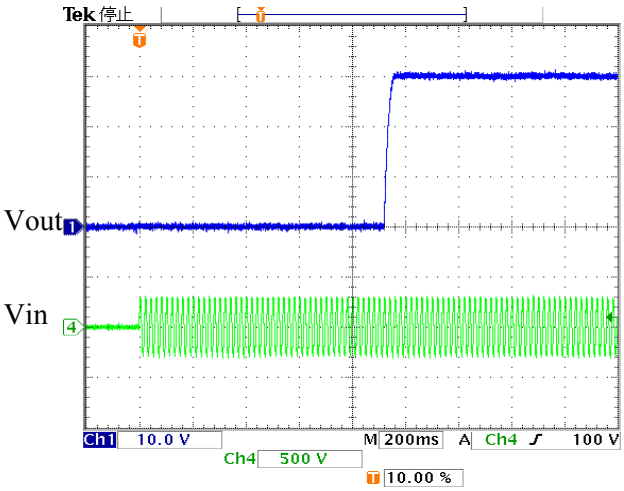
Vin : 200 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 968 ms

MODEL	LFS50A-30

Output Rise Waveform and Start Time

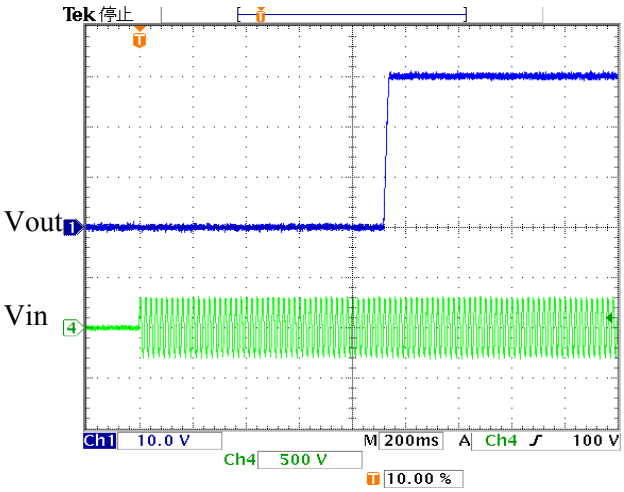
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 972 ms



Input Voltage : 200 VAC
Output Current : 0 %

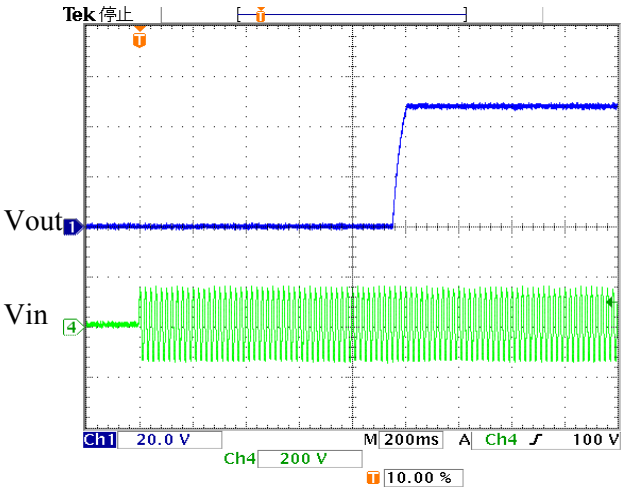
Vin : 500 VAC/DIV
Vout : 10 VDC/DIV
TIME : 200 ms/DIV

Start Time : 948 ms

MODEL	LFS50A-48

Output Rise Waveform and Start Time

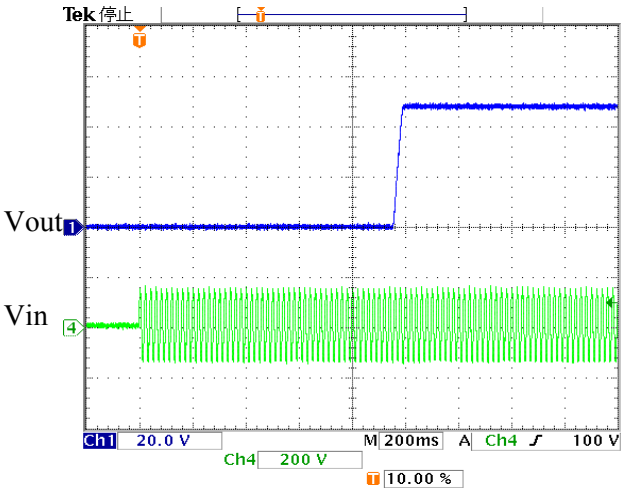
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 20 VDC/DIV
TIME : 200 ms/DIV

Start Time : 1000 ms



Input Voltage : 100 VAC
Output Current : 0 %

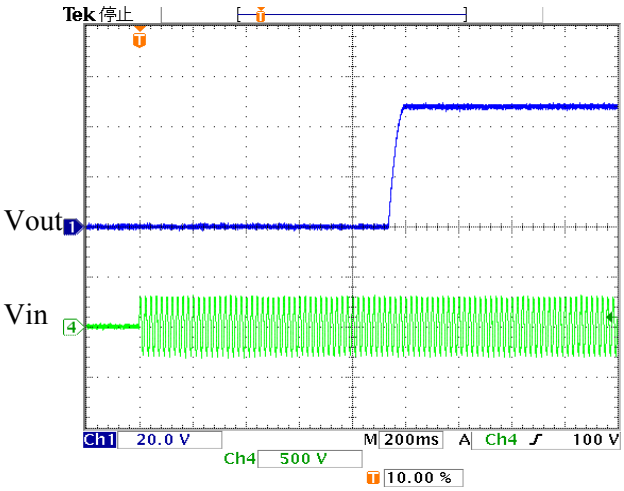
Vin : 200 VAC/DIV
Vout : 20 VDC/DIV
TIME : 200 ms/DIV

Start Time : 992 ms

MODEL	LFS50A-48

Output Rise Waveform and Start Time

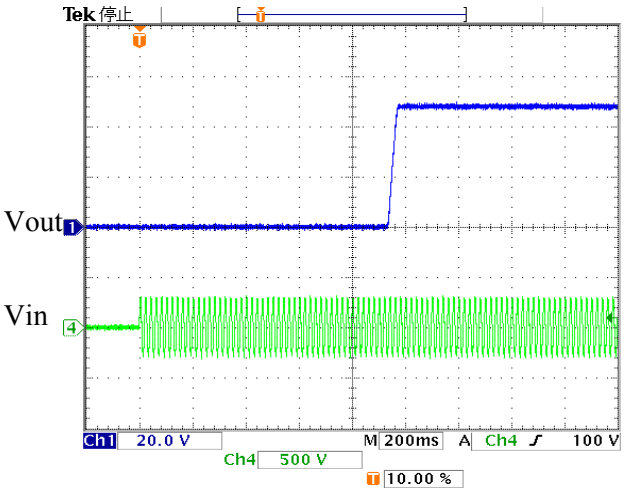
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %

Vin : 500 VAC/DIV
Vout : 20 VDC/DIV
TIME : 200 ms/DIV

Start Time : 1000 ms



Input Voltage : 200 VAC
Output Current : 0 %

Vin : 500 VAC/DIV
Vout : 20 VDC/DIV
TIME : 200 ms/DIV

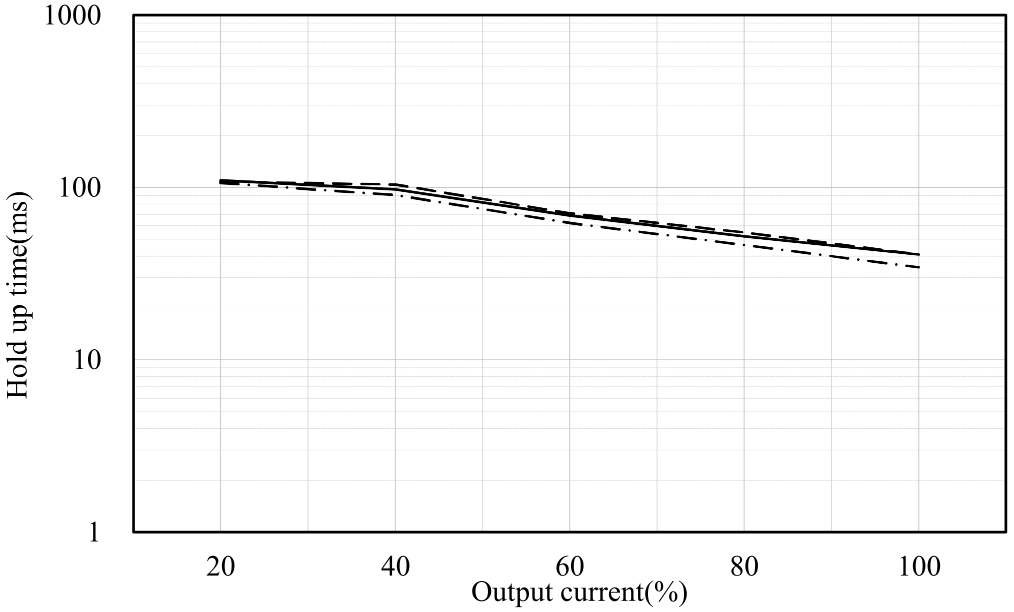
Start Time : 968 ms

MODEL	LFS50A-5

Hold up time charactcristics

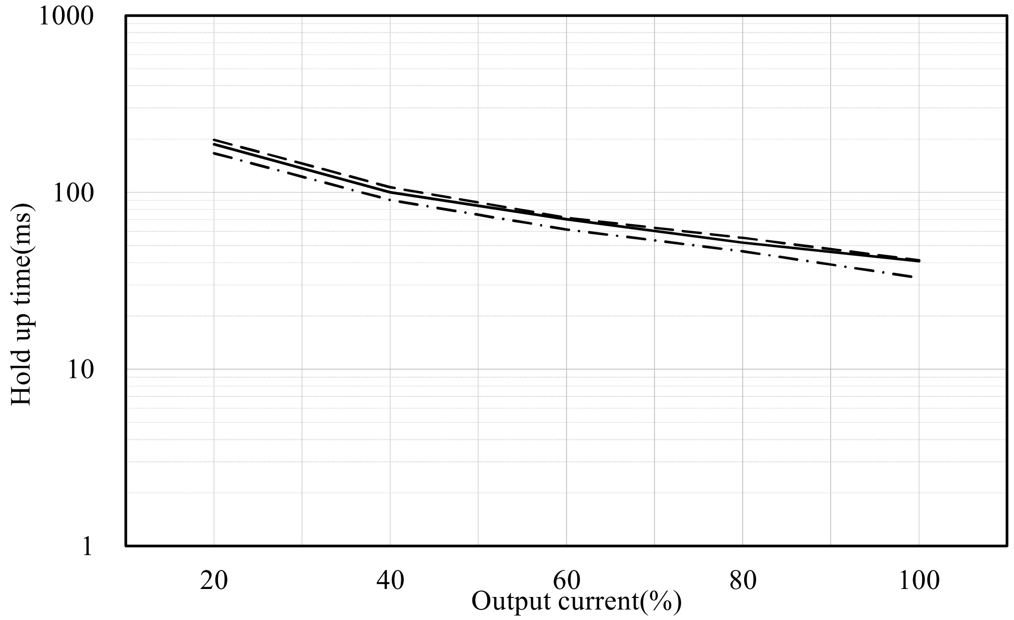
Input Voltage : 100 VAC

conditions Ta : 25℃ ———
: -10℃ _._._._.
: 60℃ ---------



Input Voltage : 200 VAC

conditions Ta : 25℃ ———
: -10℃ _._._._.
: 60℃ ---------

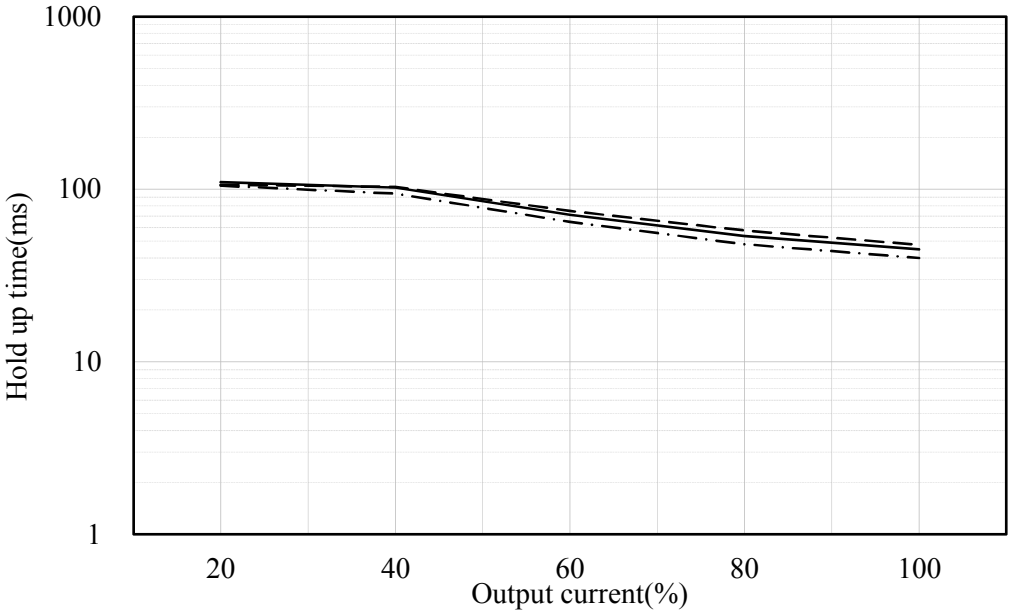


MODEL	LFS50A-12

Hold up time charactcristics

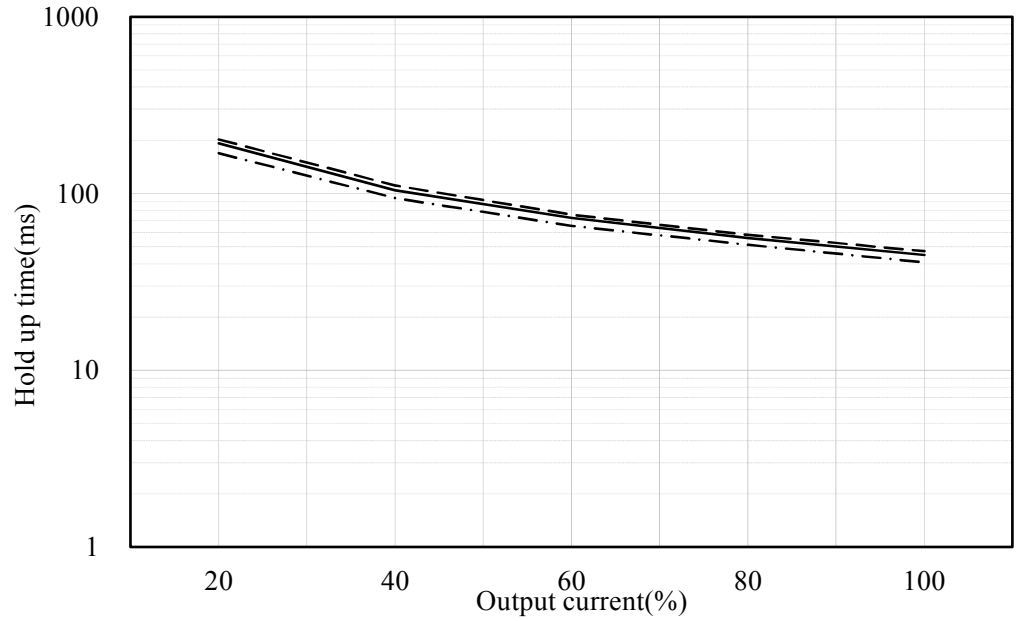
Input Voltage : 100 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -



Input Voltage : 200 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -

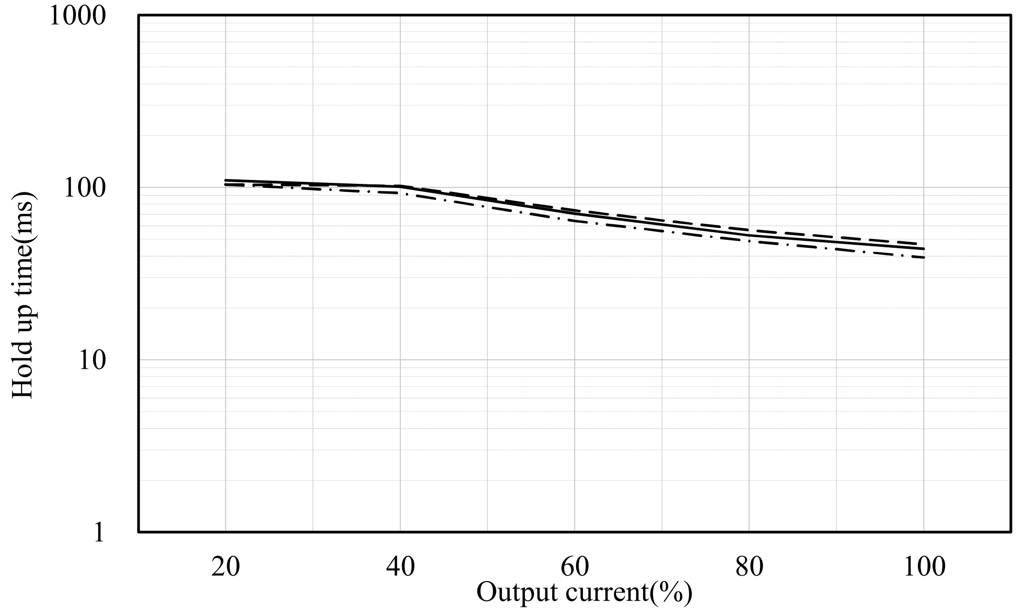


MODEL	LFS50A-15

Hold up time charactcristics

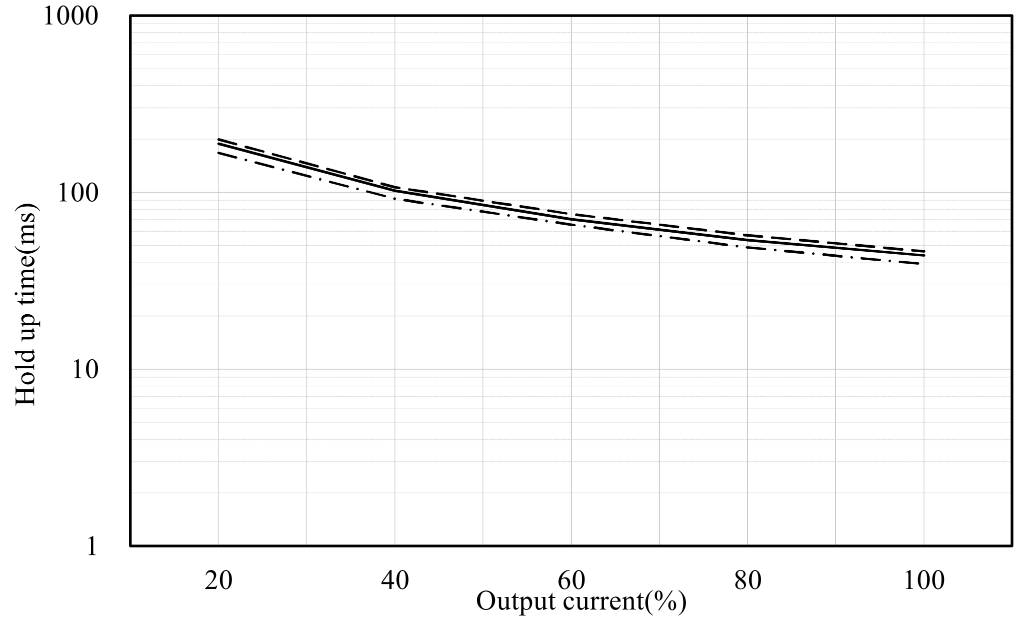
Input Voltage : 100 VAC

conditions Ta : 25℃ ———
: -10℃ –·–·–·
: 60℃ - - - - -



Input Voltage : 200 VAC

conditions Ta : 25℃ ———
: -10℃ –·–·–·
: 60℃ - - - - -

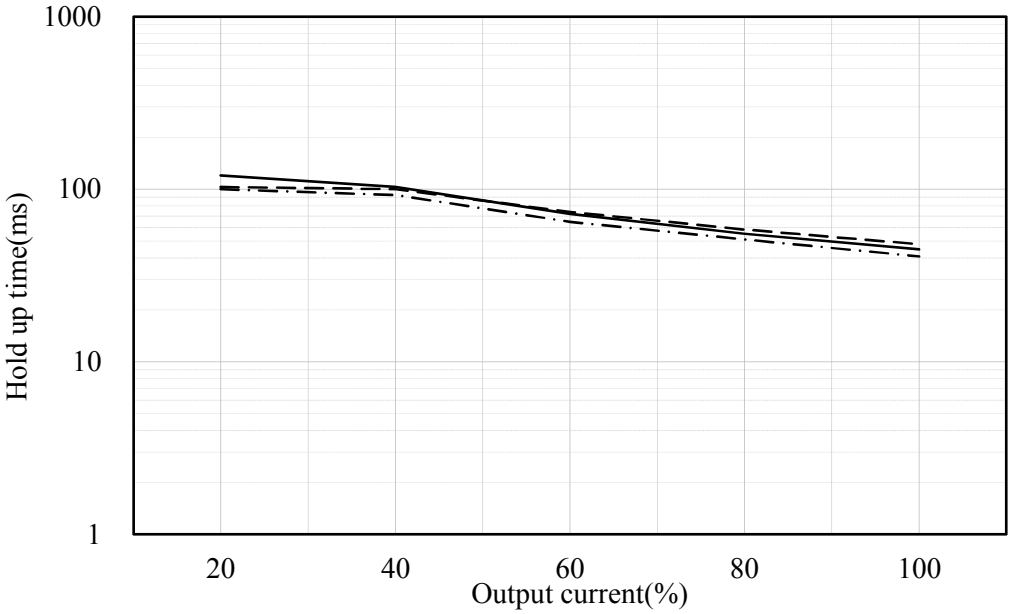


MODEL	LFS50A-24

Hold up time charactcristics

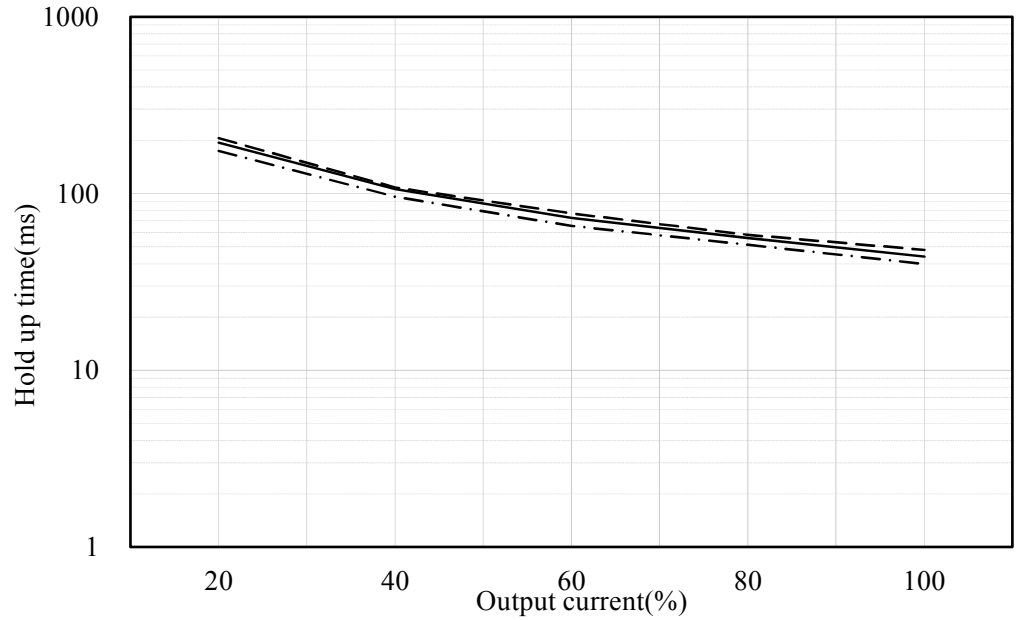
Input Voltage : 100 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -



Input Voltage : 200 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -

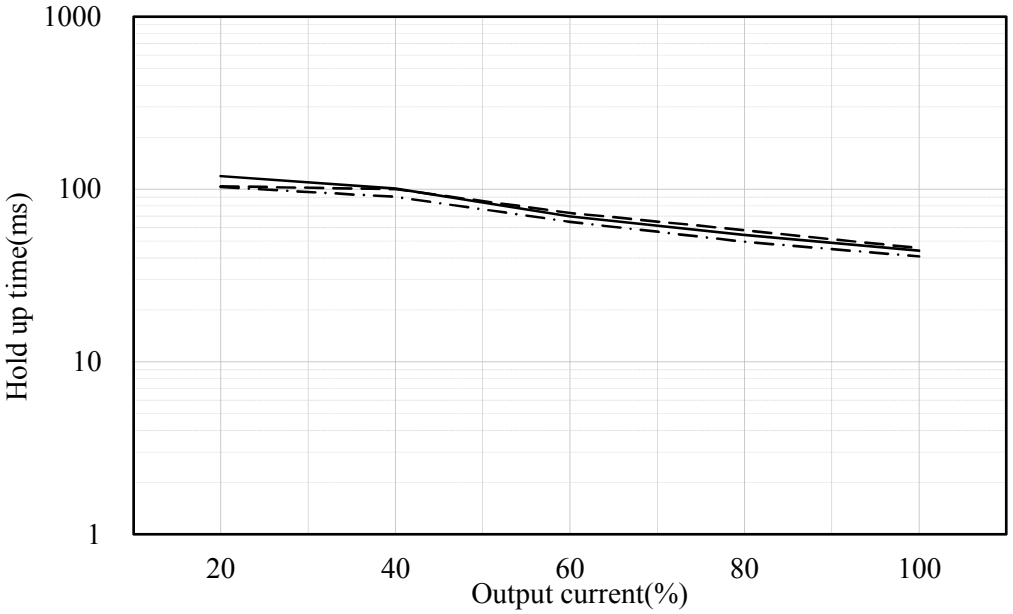


MODEL	LFS50A-30

Hold up time charactcristics

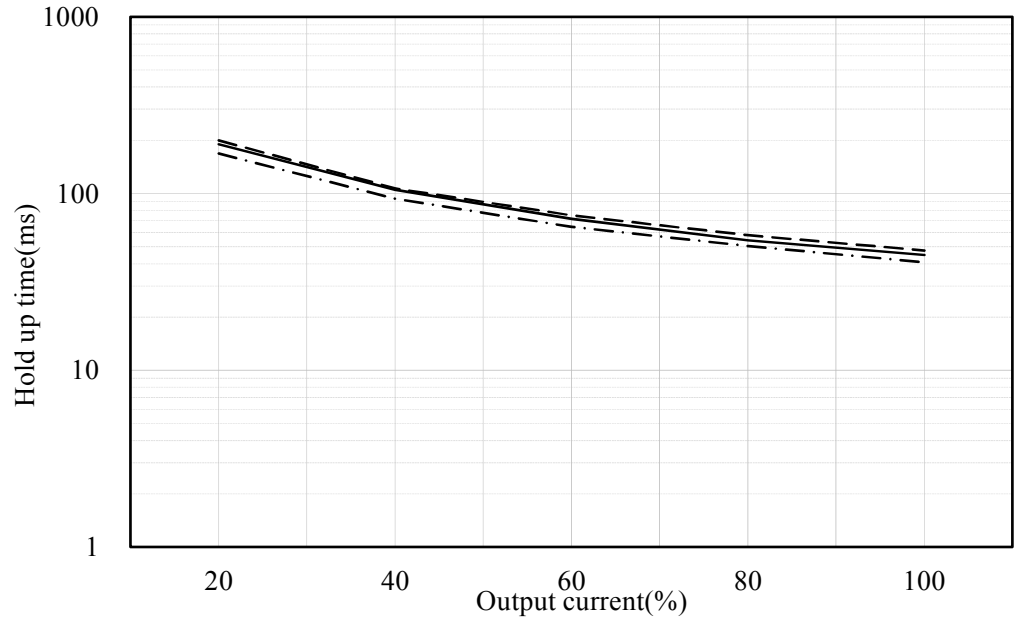
Input Voltage : 100 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -



Input Voltage : 200 VAC

conditions Ta : 25℃ ——————
: -10℃ _·_·_·_·_·_
: 60℃ - - - - - - - - -

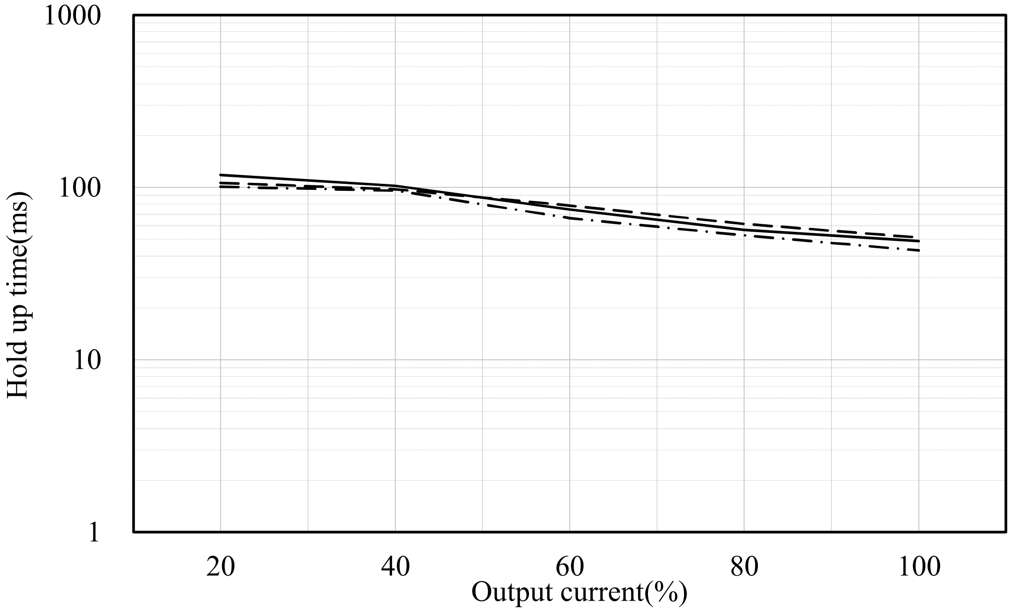


MODEL	LFS50A-48

Hold up time charactcristics

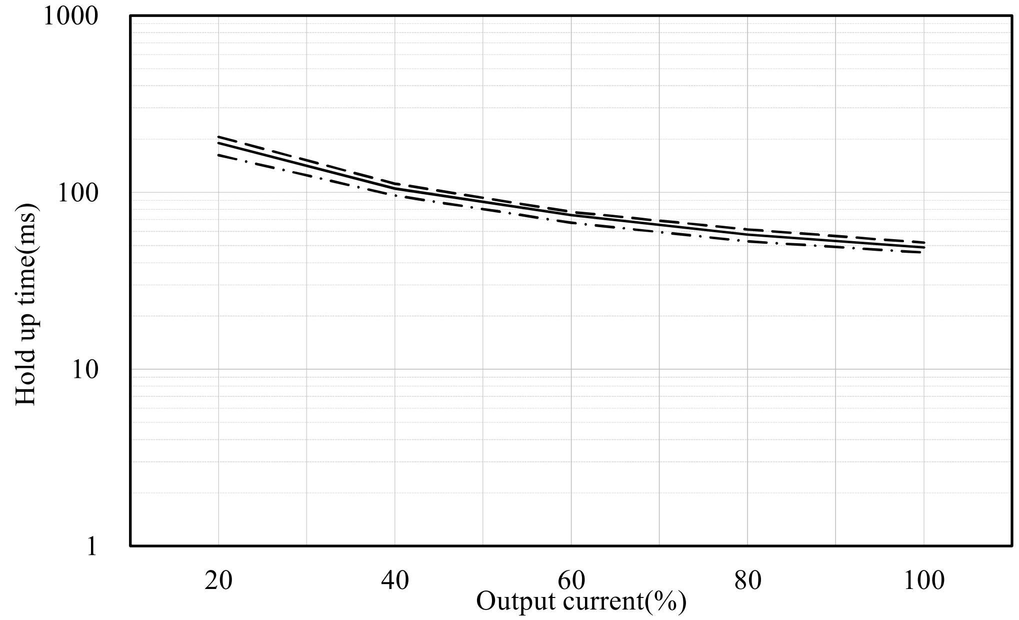
Input Voltage : 100 VAC

conditions Ta : 25℃ ————
: -10℃ _._._._.
: 60℃ ---------



Input Voltage : 200 VAC

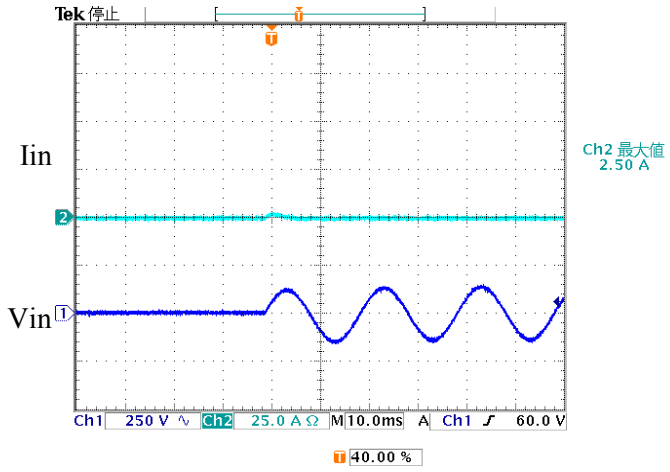
conditions Ta : 25℃ ————
: -10℃ _._._._.
: 60℃ ---------



MODEL	LFS50A-12

Inrush Current Characteristics

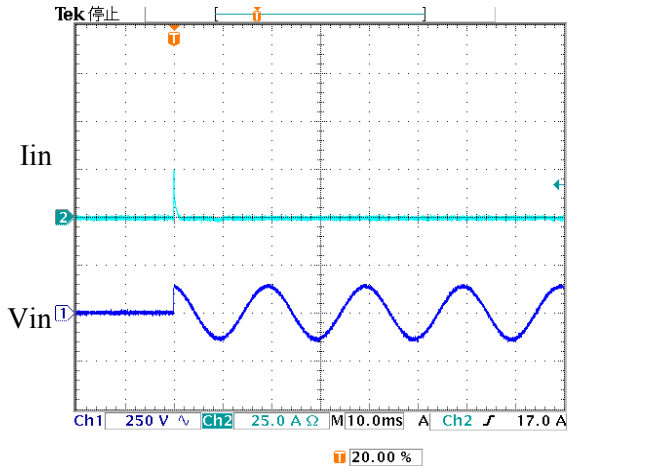
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 100 %
Switch on phase angle : φ=0°

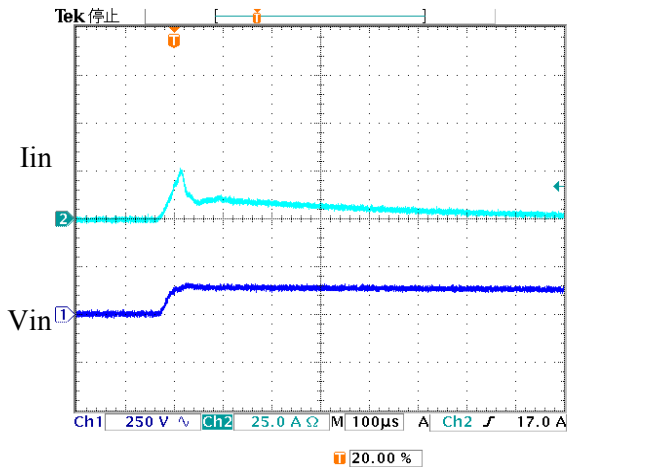
Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 10 ms/DIV

Imax : 2.5 A



Input Voltage : 100 VAC
Output Current : 100 %
Switch on phase angle : φ=90°

Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 10 ms/DIV



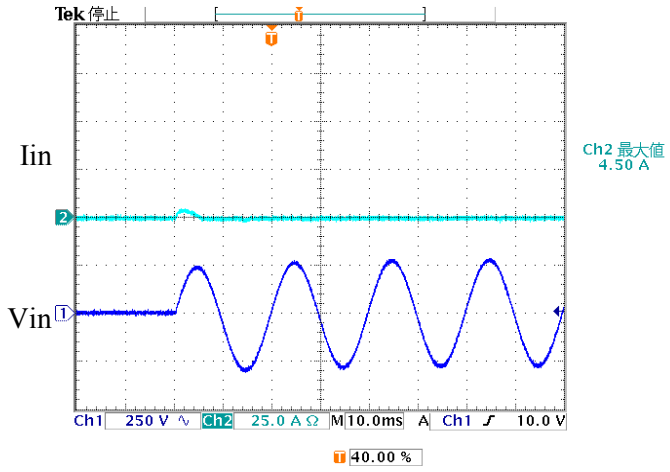
Input Voltage : 100 VAC
Output Current : 100 %
Switch on phase angle : φ=90°

Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 100 µs/DIV

MODEL	LFS50A-12

Inrush Current Characteristics

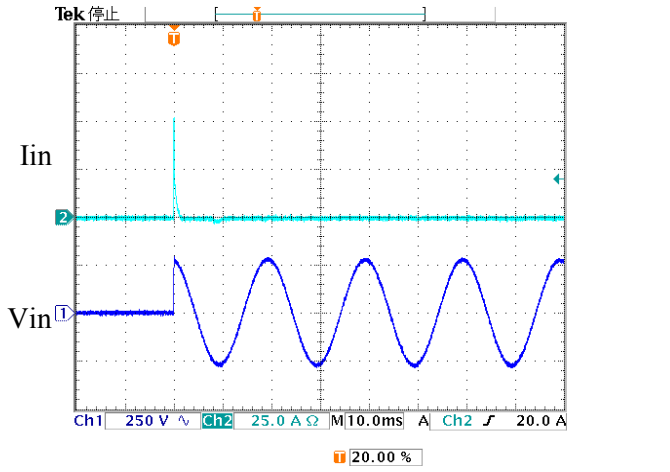
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 100 %
Switch on phase angle : φ=0°

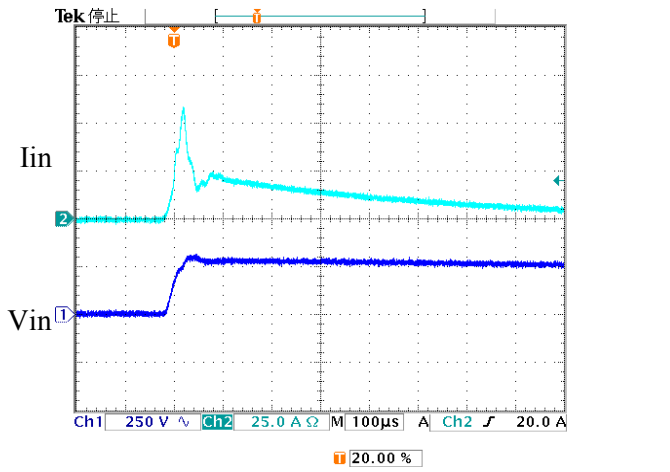
Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 10 ms/DIV

Imax : 4.5 A



Input Voltage : 200 VAC
Output Current : 100 %
Switch on phase angle : φ=90°

Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 10 ms/DIV



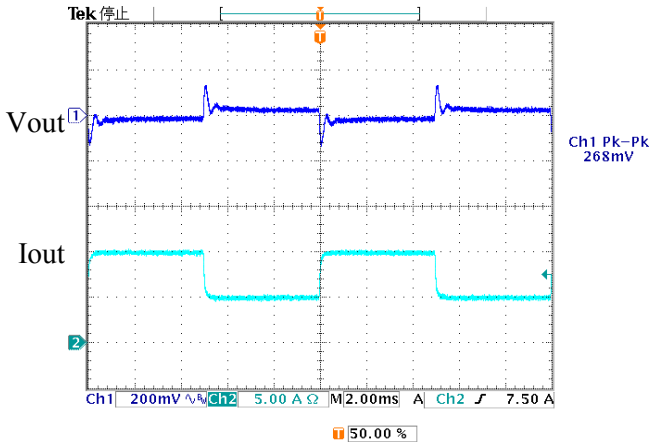
Input Voltage : 200 VAC
Output Current : 100 %
Switch on phase angle : φ=90°

Iin : 25 A/DIV
Vin : 250 VAC/DIV
TIME : 100 µs/DIV

MODEL	LFS50A-5

Dynamic Load Response Characteristics

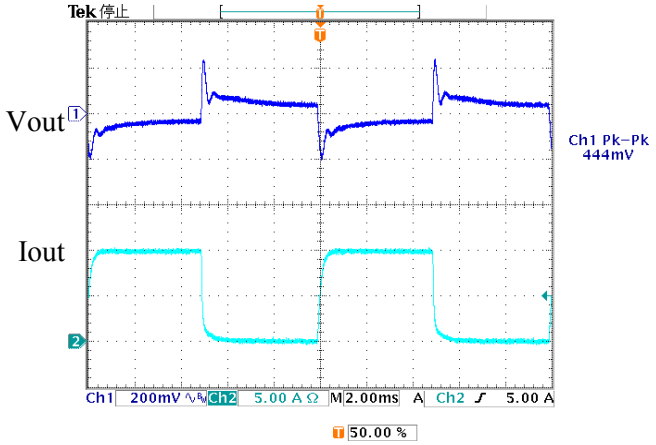
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 5.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 268 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

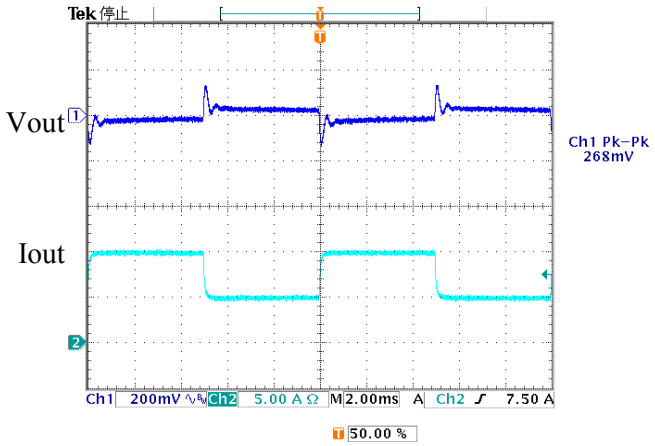
Vout : 200 mVAC/DIV
Iout : 5.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 444 mV

MODEL	LFS50A-5

Dynamic Load Response Characteristics

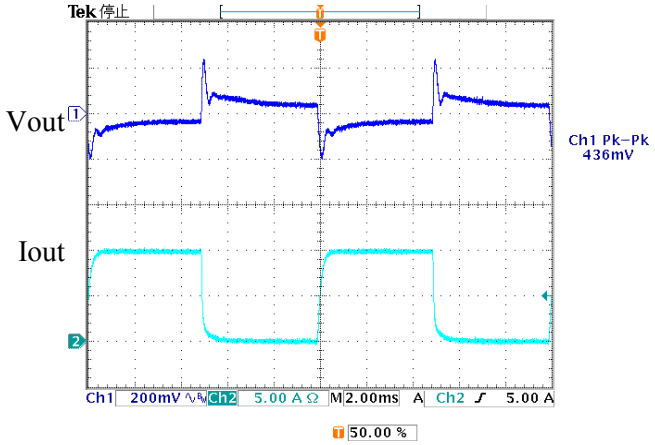
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 5.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 268 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

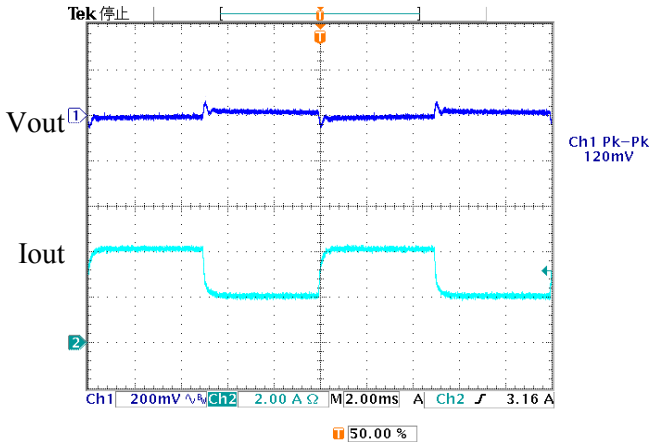
Vout : 200 mVAC/DIV
Iout : 5.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 436 mV

MODEL	LFS50A-12

Dynamic Load Response Characteristics

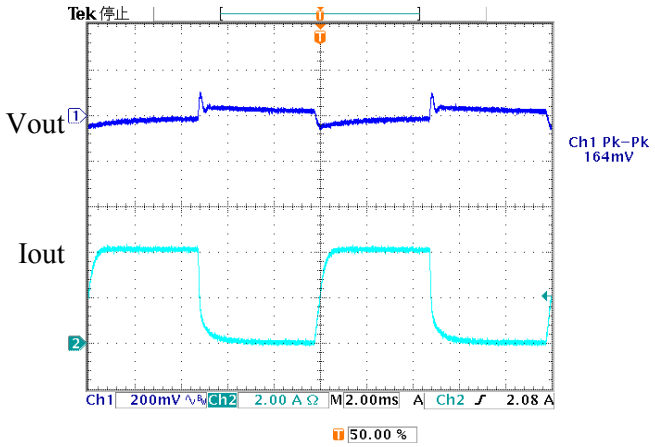
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 2.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 120 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

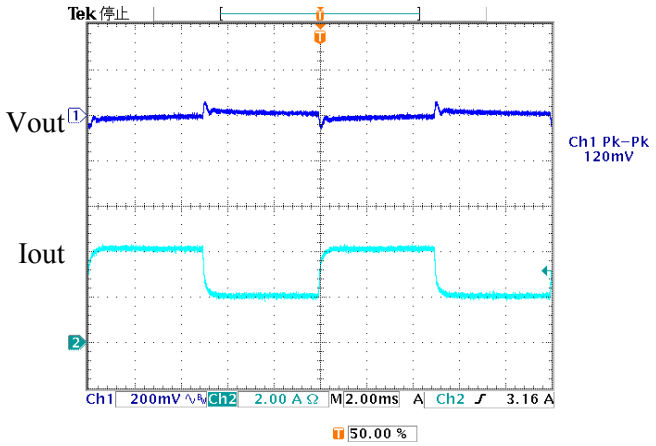
Vout : 200 mVAC/DIV
Iout : 2.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 164 mV

MODEL	LFS50A-12

Dynamic Load Response Characteristics

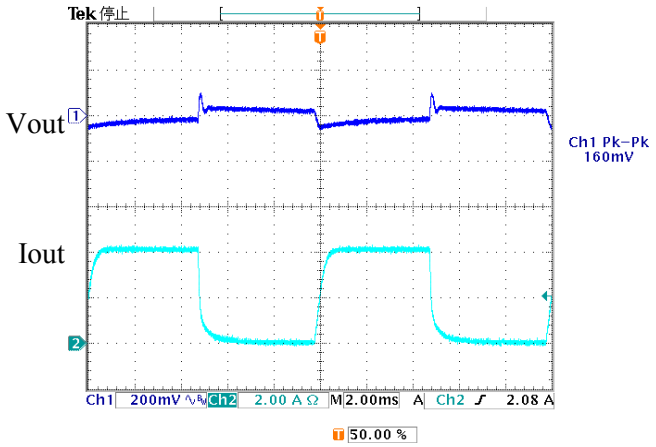
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 2.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 120 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

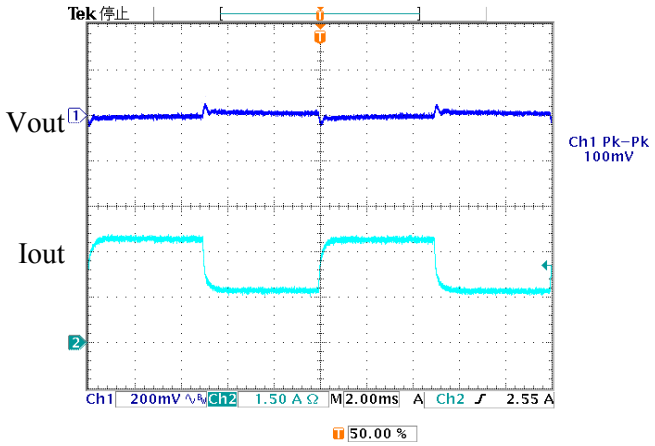
Vout : 200 mVAC/DIV
Iout : 2.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 160 mV

MODEL	LFS50A-15

Dynamic Load Response Characteristics

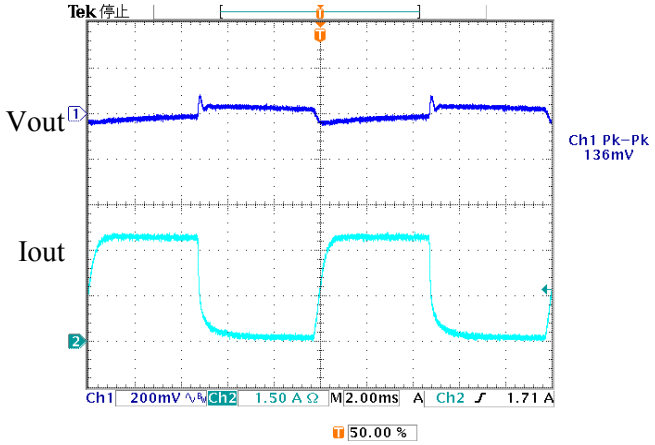
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 100 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

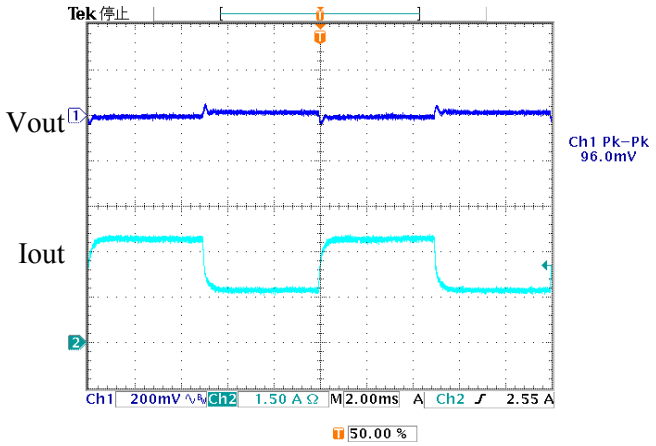
Vout : 200 mVAC/DIV
Iout : 1.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 136 mV

MODEL	LFS50A-15

Dynamic Load Response Characteristics

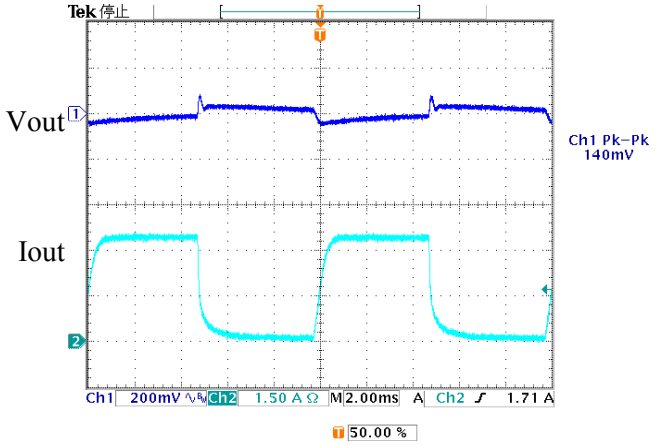
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 96 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

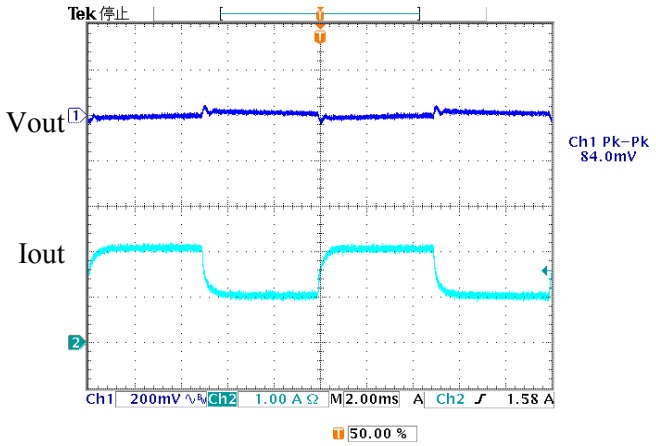
Vout : 200 mVAC/DIV
Iout : 1.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 140 mV

MODEL	LFS50A-24

Dynamic Load Response Characteristics

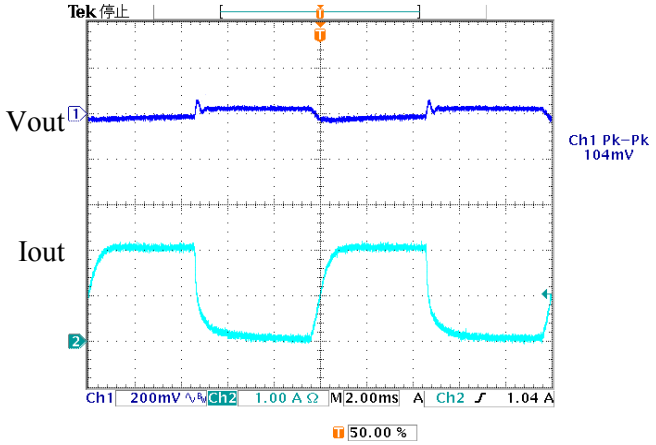
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 84 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

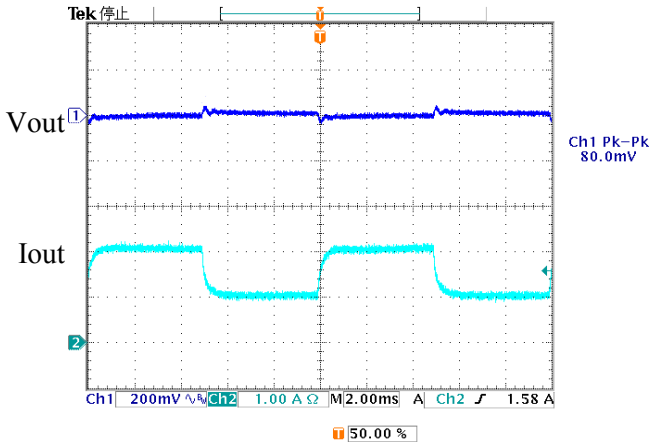
Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 104 mV

MODEL	LFS50A-24

Dynamic Load Response Characteristics

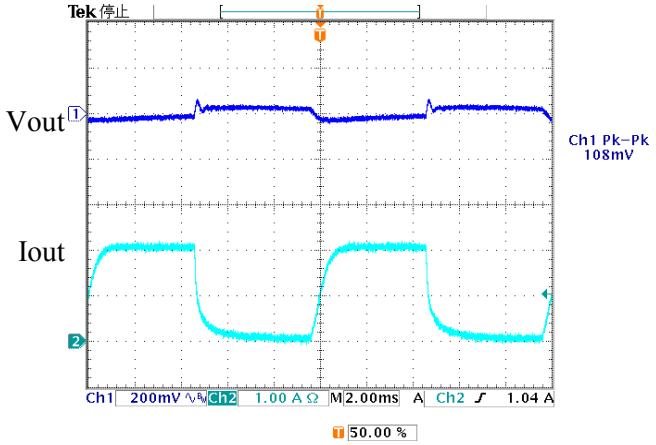
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 80 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

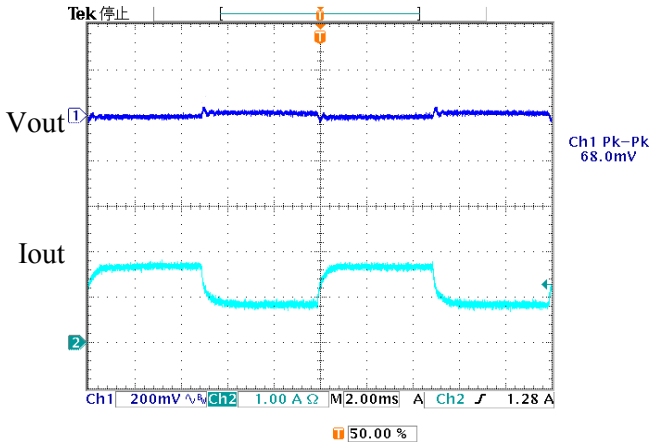
Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 108 mV

MODEL	LFS50A-30

Dynamic Load Response Characteristics

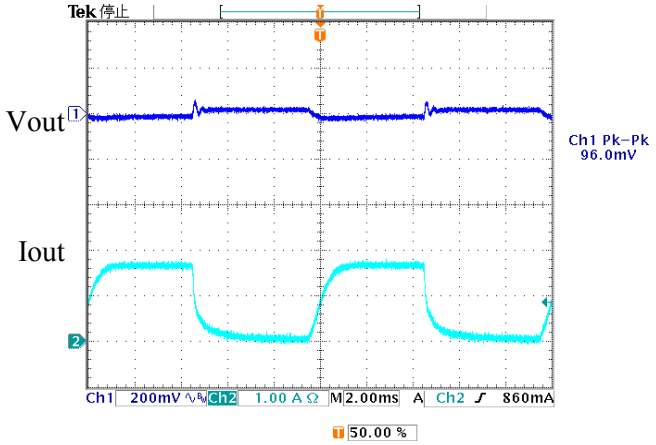
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 68 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

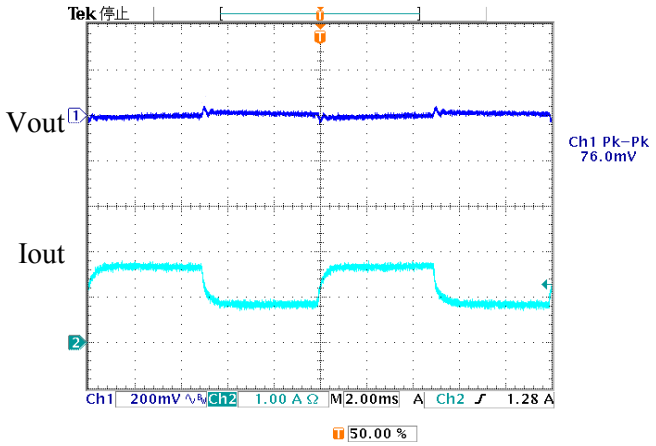
Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 96 mV

MODEL	LFS50A-30

Dynamic Load Response Characteristics

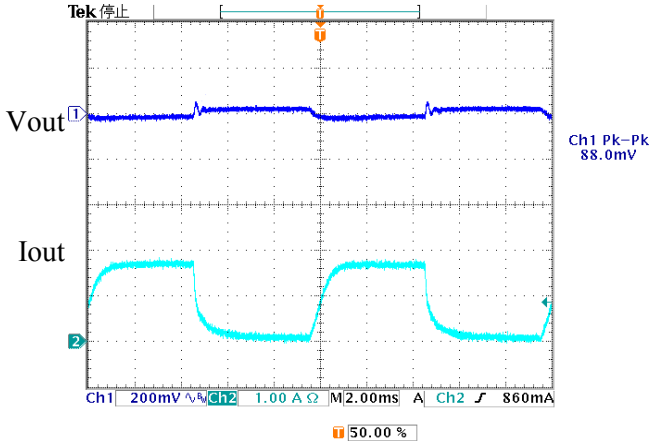
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 76 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

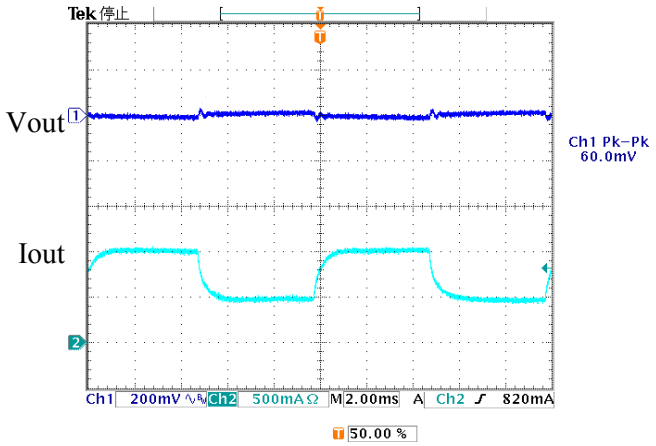
Vout : 200 mVAC/DIV
Iout : 1.0 A/DIV
TIME : 2 ms/DIV

Vp-p : 88 mV

MODEL	LFS50A-48

Dynamic Load Response Characteristics

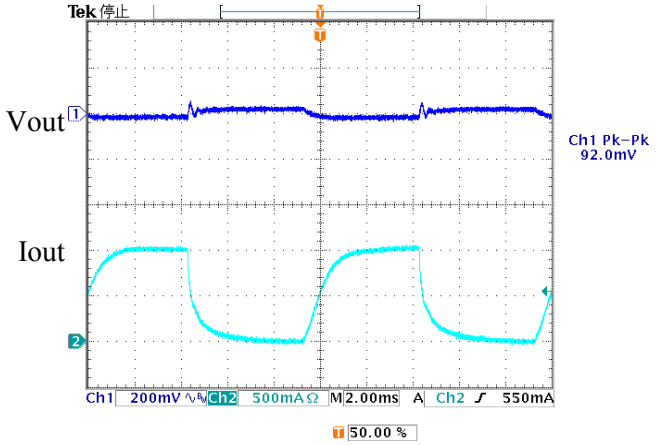
Ta : 25℃



Input Voltage : 100 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 0.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 60 mV



Input Voltage : 100 VAC
Output Current : 0 ⇔ 100 %

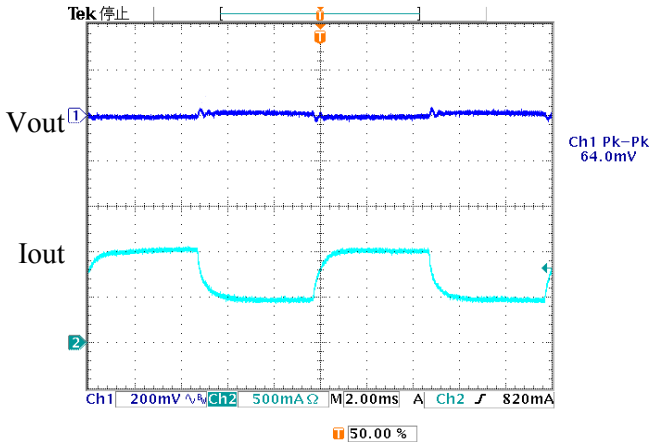
Vout : 200 mVAC/DIV
Iout : 0.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 92 mV

MODEL	LFS50A-48

Dynamic Load Response Characteristics

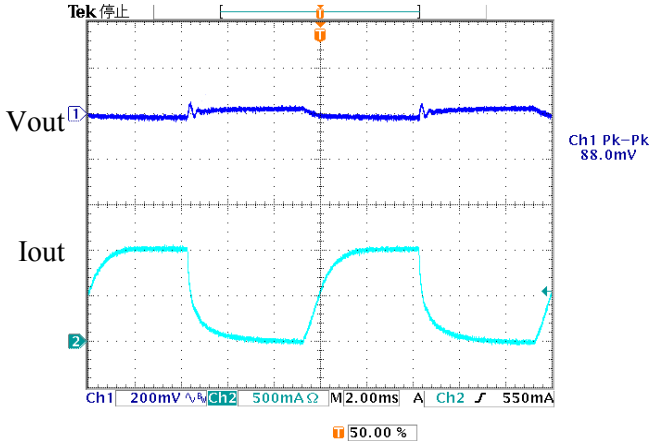
Ta : 25℃



Input Voltage : 200 VAC
Output Current : 50 ⇔ 100 %

Vout : 200 mVAC/DIV
Iout : 0.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 64 mV



Input Voltage : 200 VAC
Output Current : 0 ⇔ 100 %

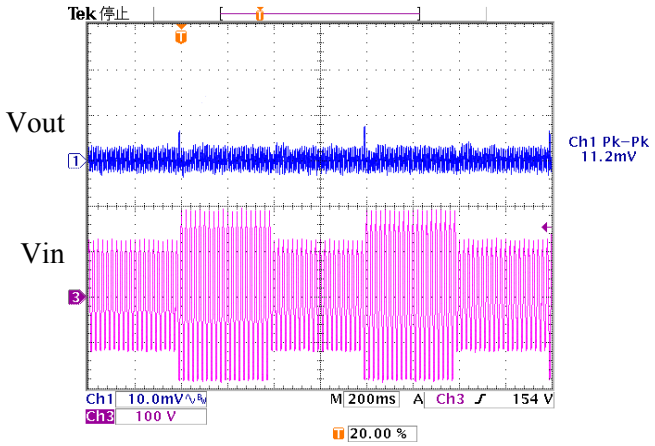
Vout : 200 mVAC/DIV
Iout : 0.5 A/DIV
TIME : 2 ms/DIV

Vp-p : 88 mV

MODEL	LFS50A-5

Dynamic Line Response Characteristics

Ta : 25℃

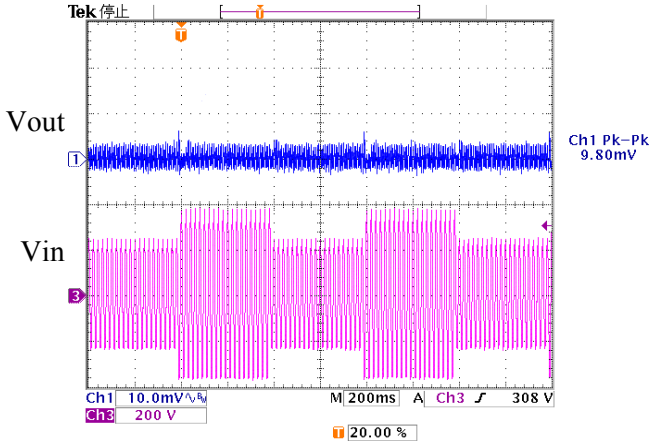


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 11.2 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

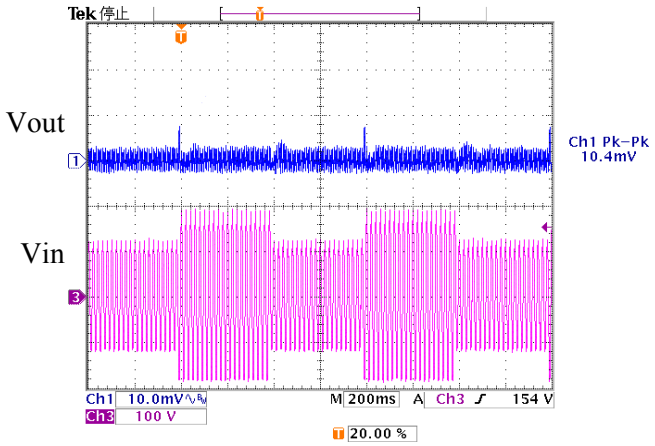
normal / event duration : 400 ms

Vp-p : 9.8 mV

MODEL	LFS50A-12

Dynamic Line Response Characteristics

Ta : 25℃

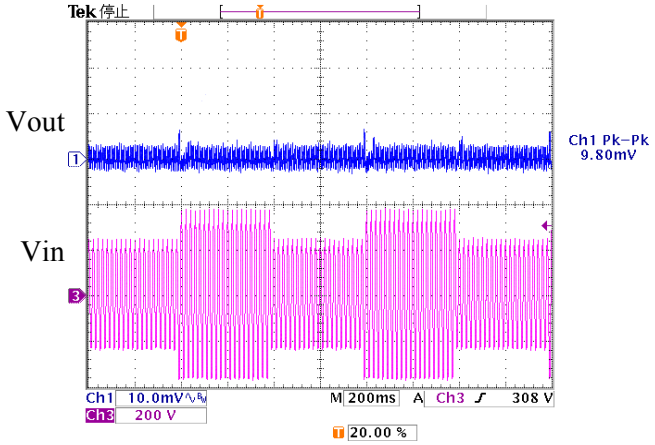


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 10.4 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

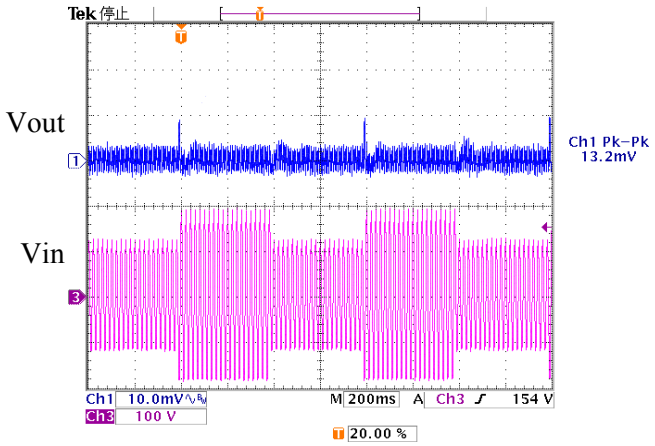
normal / event duration : 400 ms

Vp-p : 9.8 mV

MODEL	LFS50A-15

Dynamic Line Response Characteristics

Ta : 25℃

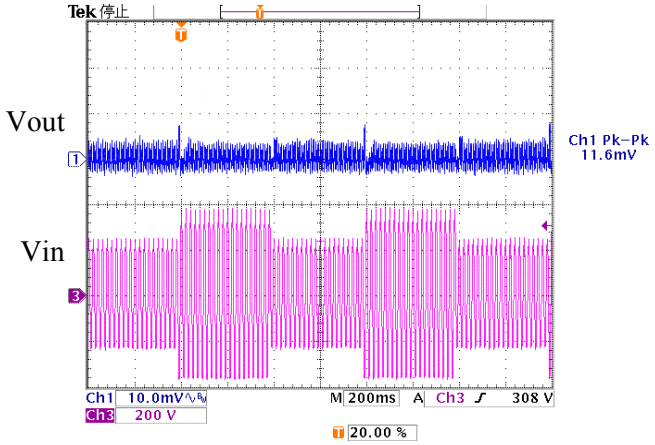


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 13.2 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

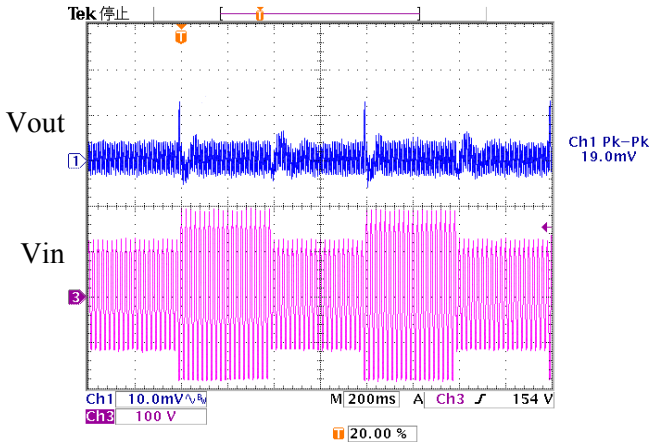
normal / event duration : 400 ms

Vp-p : 11.6 mV

MODEL	LFS50A-24

Dynamic Line Response Characteristics

Ta : 25℃

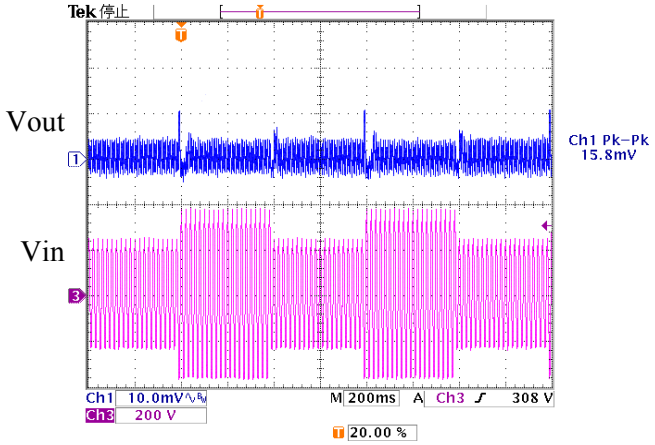


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 19.0 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

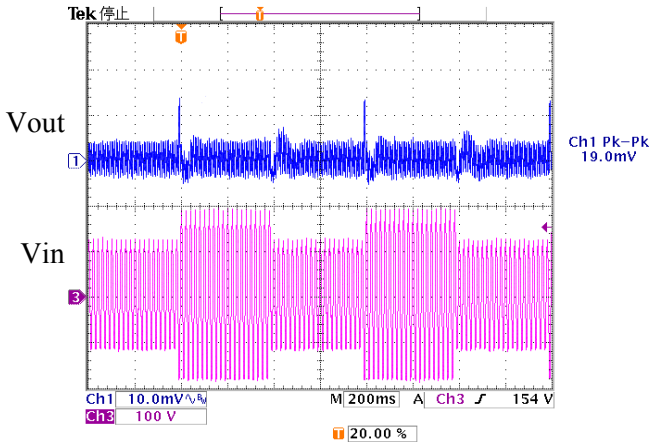
normal / event duration : 400 ms

Vp-p : 15.8 mV

MODEL	LFS50A-30

Dynamic Line Response Characteristics

Ta : 25℃

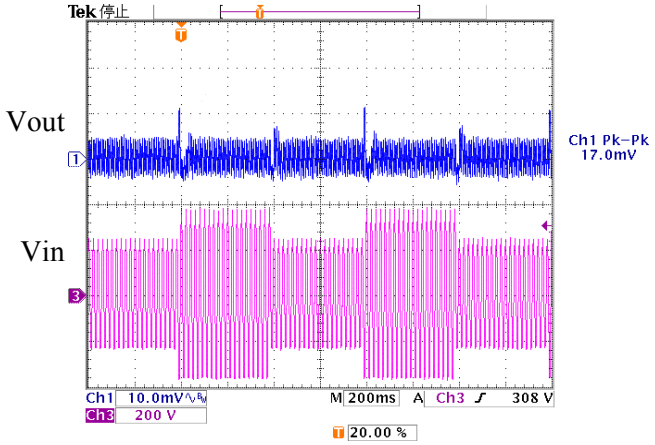


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 19.0 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

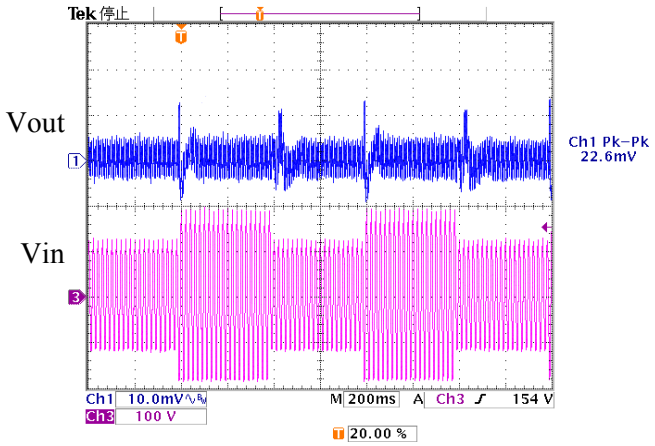
normal / event duration : 400 ms

Vp-p : 17.0 mV

MODEL	LFS50A-48

Dynamic Line Response Characteristics

Ta : 25℃

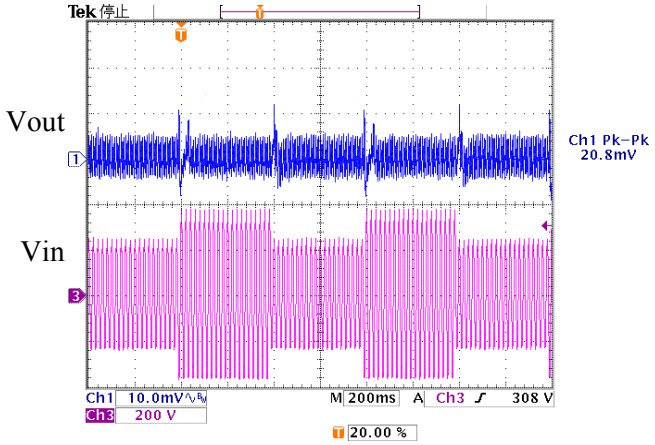


Input Voltage : 85 ⇔ 132 VAC
Output Current : 100 %

Vin : 100 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 22.6 mV



Input Voltage : 170 ⇔ 264 VAC
Output Current : 100 %

Vin : 200 VAC/DIV
Vout : 10 mVAC/DIV
TIME : 200 ms/DIV

normal / event duration : 400 ms

Vp-p : 20.8 mV

MODEL	LFS50A-30

Leakage Current Characteristics

Measurement Condition

Input Voltage : 85 - 264VAC

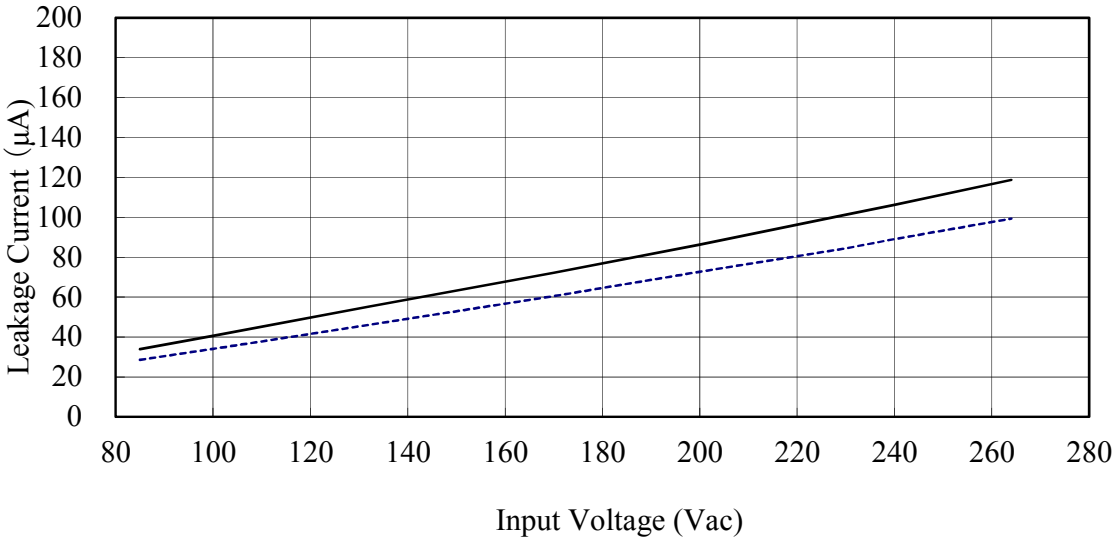
Output Current : 0% load

Ta : 25℃

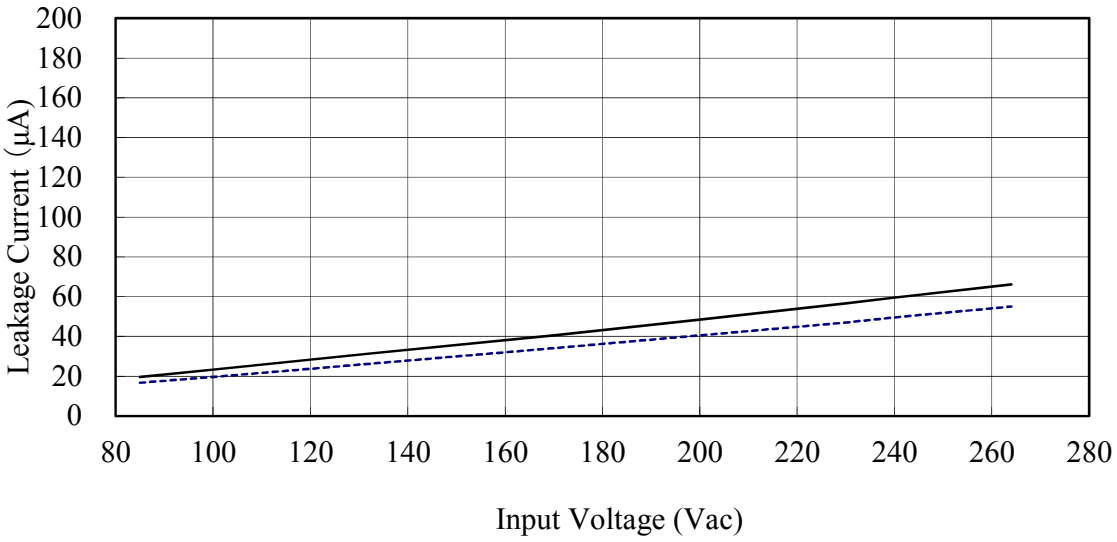
f : 50Hz -------

f : 60Hz ———

■L-FG



■N-FG



Measurement Position