Chapter5 Specifications

5.1 Specifications

Model		IT6831A V1.1
Rated Value (0～40 ℃)	**Voltage**	0～18V
	Current	0～10A
	Power	180W
Load regulation ±(%of Output+Offset)	**Voltage**	≤0.01%+6mV
	Current	≤0.1%+5mA
Line regulation ±(%of Output+Offset)	**Voltage**	≤0.02%+6mV
	Current	≤0.1%+5mA
Programming Resolution	**Voltage**	1mV
	Current	0.1mA(＜10A)/1mA(≥10A)
Readback resolution	**Voltage**	1mV
	Current	0.1mA(＜10A)/1mA(≥10A)
Programming accuracy 12 month (25℃±5℃) ±(%of Output+Offset)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+12mA
Readback accuracy 12 month (25℃±5℃) ±(%of Output+Offset)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+12mA
Ripple (20Hz -20MHz)	**Voltage**	≦4mVp-p and 1.5mVrms
	Current	≤7mArms
Setup Temperature Coefficient (%of Output/℃+Offset)	**Voltage**	0.01%+3mV
	Current	0.01%+2mA
Read Back Temperature Coefficient (%of Output/℃+Offset)	**Voltage**	0.01%+3mV
	Current	0.01%+2mA
Rising slope (no load)	**Voltage**	≤100mS
Rising slope (full load)	**Voltage**	≤100mS
descending slope (no load)	**Voltage**	≤200mS
descending slope (full load)	**Voltage**	≤100mS
Transient response time	≤100uS **(Typical)**	
	50%-100% Freq=1K 75mV	
AC Input	**Voltage**1	110V±10%
	Voltage3	220V±10%
	Frequency	47HZ-63HZ
Setup stability-8h (%of Output +Offset)	**Voltage**	≦0.02%+3mV
	Current	≦0.1%+2mA
Readback stability-8h (%of Output +Offset)	**Voltage**	≦0.02%+3mV
	Current	≦0.1%+2mA
Fuse specification	6.3A(110V)/3.15A(220V)	
Remote Sense Compensation Voltage	1V	

Command Response Time	20mS **(Typical)**
Power Factor	0.7 **(Typical)**
Max.Current	4.5A(110V)/2.2A(220V)
Maximum input apparent power	750VA
Storage temperature	-10℃~70℃
Protection	OVP/OTP
Interface	USB/RS232
Isolation (output to ground)	200V
Operation Environment	0~40℃
Dimension **(mm)**	214.5mmW*88.2mmH*354.6mmD
Weight	7.2Kg

Model		**IT6832A**	**IT6833A**
Output Ratings	**Voltage / Current**	0-32V/0-6A	0-72V/0-3A
Load regulation	**Voltage**	≤0.01％+5mV	≤0.01％+4mV
	Current	≤0.01％+3mA	≤0.01％+2mA
Line regulation	**Voltage**	≤0.01％+5mV	≤0.01％+4mV
	Current	≤0.01％+3mA	≤0.01％+2mA
Programming Resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Readback resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+8mA	≤0.1％+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+8mA	≤0.1％+5mA
Ripple&Noise (20HZ-20M)	**Normal mode Voltage**	≤4mVp-p and 1mVrms	≤4mVp-p and 1mVrms
	Normal mode Current	＜6mArms	＜5mArms
	Common mode Current	＜1.5uArms	＜1.5uArms
Transient response time (Recover to 75mV)	50%-100% load	100us	100us
voltage settling time	rise 10%-90%	＜100ms	＜150ms
	fall 10%-90%	＜350ms	＜550ms

Model		IT6832A	IT6833A
Dimension (mm)		214.5mmW*88.2mmH*354.6mmD	
Weight		7.4Kg	

Model		IT6835A
Rated Value (0～40 ℃)	Voltage	0～50V
	Current	0～4A
	Power	200W
Load regulation ±(%of Output+Offset)	Voltage	≤0.01%+5mV
	Current	≤0.1%+3mA
Line regulation ±(%of Output+Offset)	Voltage	≤0.02%+5mV
	Current	≤0.1%+3mA
Programming Resolution	Voltage	1mV
	Current	1mA
Readback resolution	Voltage	1mV
	Current	1mA
Programming accuracy 12 month (25℃±5℃) ±(%of Output+Offset)	Voltage	≤0.04%+8mV
	Current	≤0.1%+8mA
Readback accuracy 12 month (25℃±5℃) ±(%of Output+Offset)	Voltage	≤0.04%+8mV
	Current	≤0.1%+8mA
Ripple (20Hz -20MHz)	Voltage	≦3mVp-p and 1mVrms
	Current	≤6mArms
Setup Temperature Coefficient (%of Output/℃+Offset)	Voltage	0.01%+3mV
	Current	0.01%+2mA
Read Back Temperature Coefficient (%of Output/℃+Offset)	Voltage	0.01%+3mV
	Current	0.01%+2mA
Rising slope (no load)	Voltage	≤100mS
Rising slope (full load)	Voltage	≤100mS
descending slope (no load)	Voltage	≤550mS
descending slope (full load)	Voltage	≤100mS
Transient response time	≤50uS (Typical)	
	50%-100% Freq=1K 75mV	
AC Input	Voltage1	110V±10%
	Voltage3	220V±10%
	Frequency	47HZ-63HZ
Setup stability-8h (%of Output +Offset)	Voltage	≦0.02%+3mV
	Current	≦0.1%+2mA
Readback stability-8h (%of Output +Offset)	Voltage	≦0.02%+3mV
	Current	≦0.1%+2mA
Remote Sense Compensation Voltage	1V	
Command Response Time	20mS (Typical)	

Fuse specification	**6.3A(110V)/3.15A(220V)**
Power Factor	**0.7 (Typical)**
Maximum input apparent power	**750VA**
Storage temperature	**-10℃~70℃**
Protection	**OVP/OTP**
Interface	**USB/RS232**
Isolation (output to ground)	**200V**
Operation Environment	**0~40℃**
Dimension **(mm)**	**214.5mmW*88.2mmH*354.6mmD**
Weight	**7.2Kg**

Model		**IT6861A**	**IT6862A**	**IT6863A**
Output Ratings	**Dual range output**	0-20V,5A/0-8V,9A	0-32V,3A/0-12V,6A	0-72V,1.5A/0-32V,3A
Load regulation	**Voltage**	≤0.01％+4mV	≤0.01％+3mV	≤0.01％+3mV
	Current	≤0.01％+2mA	≤0.01％+2mA	≤0.01％+2mA
Line regulation	**Voltage**	≤0.01％+4mV	≤0.01％+3mV	≤0.01％+3mV
	Current	≤0.01％+2mA	≤0.01％+2mA	≤0.01％+2mA
Programming Resolution	**Voltage**	1mV	1mV	1mV
	Current	0.1mA	0.1mA	0.1mA
Readback resolution	**Voltage**	1mV	1mV	1mV
	Current	0.1mA	0.1mA	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA	≤0.1％+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA	≤0.1％+5mA
Ripple (20HZ-20M)	**Voltage**	≤3mVp-p	≤4mVp-p	≤3mVp-p
	Current	≤9mArms	＜7mArms	＜6mArms
Transient response time	**Recover to 75mV (50%~100%load)**	＜50uS	＜50uS	＜50uS
Rise time	**10%-90%**	<90ms	<90ms	<90ms
Fall time	**90%-10%**	<150ms	<200ms	<250ms
Sample Rate		10HZ/S	10HZ/S	10HZ/S
Protection		OTP;OVP	OTP;OVP	OTP;OVP
Dimension(mm)		214.5mmW*88.2mmH*354.6mmD		
Weight		8.5Kg		

Model		**IT6872A**
Output Ratings	**Dual range output**	0-35V,4A /0-15V,7A

Load regulation	**Voltage**	≤0.01％+5mV
	Current	≤0.01％+3mA
Line regulation	**Voltage**	≤0.01％+5mV
	Current	≤0.01％+3mA
Programming Resolution	**Voltage**	1mV
	Current	0.1mA
Readback resolution	**Voltage**	1mV
	Current	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV
	Current	≤0.1％+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV
	Current	≤0.1％+5mA
Ripple&Noise (20HZ-20M)	**Normal mode Voltage**	≤3mVp-p /1mVrms
	Normal mode Current	<6mArms
	Common mode Current	<1.5uArms
Transient response time	**Recover to 75mV (50%~100%load)**	<50us
Rise time	**10%-90%**	<90ms
Fall time	**90%-10%**	<350ms
Dimension(mm)		214.5mmW*88.2mmH*354.6mmD
Weight		7.1Kg

Model	**IT6873A**	
Output Ratings (0 °C~40 °C)	**Voltage**	H:0-75V L:0-32V
	Current	H:0-2A L:0-4A
	Power	H:150W L:128W
Load regulation ±(％of output+offset)	**Voltage**	≤0.01%+4mV
	Current	≤0.01%+2mA
Line regulation ±(％of output+offset)	**Voltage**	≤0.01%+4mV
	Current	≤0.01%+2mA

Programming Resolution	**Voltage**	1mV
	Current	0.1mA
Readback resolution	**Voltage**	1mV
	Current	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+5mA
Ripple (20Hz ~20MHz)	**Voltage**	≤3mVp-p/1mVrms
	Current	≤6mArms
Rise time	**Voltage**	≤120mS(10%-90%)
Fall time	**Voltage**	≤450m(90%-10%)
Transient response time	**Voltage**	50us (50%-100% load Recover to 75mV)
Sample rate	10HZ/S	
Protection	OTP;OVP	
Dimension (mm)	214.5mmW×88.2mmH×354.6mmD	
Weight	8.5Kg	

Model		**IT6874A**
Output Ratings (0 °C~40 °C)	**Voltage**	H:0-150V L:0-60V
	Current	H:0-1.2A L:0-2A
	Power	H:180W L:120W
Load regulation ±(%of	**Voltage**	≤0.01%+4mV

output+offset)	Current	≤0.01%+2mA
Line regulation ±(%of output+offset)	Voltage	≤0.01%+4mV
	Current	≤0.01%+2mA
Programming Resolution	Voltage	1mV(<100V) 10mV(≧100V)
	Current	0.1mA
Readback resolution	Voltage	1mV(<100V) 10mV(≧100V)
	Current	0.1mA
Programming accuracy 12 month (25℃±5℃)	Voltage	≤0.05%+20mV
	Current	≤0.1%+5mA
Readback accuracy 12 month (25℃±5℃)	Voltage	≤0.05%+20mV
	Current	≤0.1%+5mA
Ripple (20Hz ~20MHz)	Voltage	≤5mVp-p/1.5mVrms
	Current	≤6mArms
Rise time	Voltage	≤150ms(10%-90%)
Fall time	Voltage	≤2.5s(90%-10%)
Transient response time	Voltage	100us (50%-100% load Recover to 75mV)
Sample rate	10HZ/S	
Protection	OTP;OVP	
Dimension (mm)	214.5mmW×88.2mmH×354.6mmD	
Weight	8.5Kg	

Model		IT6832B	IT6833B
Output Ratings	Voltage / Current	0-32V/0-6A	0-72V/0-3A
Load regulation	Voltage	≦0.01％+5mV	≦0.01％+4mV

	Current	≦0.01%+3mA	≦0.01%+2mA
Line regulation	**Voltage**	≦0.01%+5mV	≦0.01%+4mV
	Current	≦0.01%+3mA	≦0.01%+2mA
Programming Resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Readback resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≦0.04%+8mV	≦0.04%+8mV
	Current	≦0.1%+8mA	≦0.1%+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≦0.04%+8mV	≦0.04%+8mV
	Current	≦0.1%+8mA	≦0.1%+5mA
Ripple&Noise (20HZ-20M)	**Normal mode Voltage**	≦4mVp-p and 1mVrms	≦4mVp-p and 1mVrms
	Normal mode Current	＜6mArms	＜5mArms
	Common mode Current	＜1.5uArms	＜1.5uArms
Transient response time (Recover to 75mV)	50%-100% load	100us	100us
Voltage settling time	rise 10%-90%	＜100ms	＜150ms
	fall 10%-90%	＜350ms	＜550ms
Dimension (mm)	214.5mmW*88.2mmH*354.6mmD		
Weight	7.1Kg		7.7Kg

Model		**IT6835B**
Rated Value (0～40 ℃)	**Voltage**	0～50V
	Current	0～4A
	Power	200W
Load regulation ±(%of Output+Offset)	**Voltage**	≤0.01%+5mV
	Current	≤0.1%+3mA
Line regulation ±(%of Output+Offset)	**Voltage**	≤0.02%+5mV
	Current	≤0.1%+3mA
Programming Resolution	**Voltage**	1mV
	Current	1mA
Readback resolution	**Voltage**	1mV
	Current	1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+8mA

±(%of Output+Offset)		
Readback accuracy 12 month (25℃±5℃) ±(%of Output+Offset)	**Voltage**	≤0.04%+8mV
	Current	≤0.1%+8mA
Ripple (20Hz -20MHz)	**Voltage**	≦3mVp-p and 1mVrms
	Current	≤6mArms
Setup Temperature Coefficient (%of Output/℃ +Offset)	**Voltage**	0.01%+3mV
	Current	0.01%+2mA
Read Back Temperature Coefficient (%of Output/℃ +Offset)	**Voltage**	0.01%+3mV
	Current	0.01%+2mA
Rising slope (no load)	**Voltage**	≤100mS
Rising slope (full load)	**Voltage**	≤100mS
descending slope (no load)	**Voltage**	≤550mS
descending slope (full load)	**Voltage**	≤100mS
Transient response time	≤50uS **(Typical)**	
	50%-100% Freq=1K 75mV	
AC Input	**Voltage**1	110V±10%
	Voltage3	220V±10%
	Frequency	47HZ-63HZ
Setup stability-8h (%of Output +Offset)	**Voltage**	≦0.02%+3mV
	Current	≦0.1%+2mA
Readback stability-8h (%of Output +Offset)	**Voltage**	≦0.02%+3mV
	Current	≦0.1%+2mA
Remote Sense Compensation Voltage	1V	
Command Response Time	20mS **(Typical)**	
Fuse specification	6.3A(110V)/3.15A(220V)	
Power Factor	0.7 **(Typical)**	
Maximum input apparent power	750VA	
Storage temperature	-10℃~70℃	
Protection	OVP/OTP	
Interface	GPIB/USB/RS232	
Isolation (output to ground)	200V	
Operation Environment	0~40℃	
Dimension **(mm)**	214.5mmW*88.2mmH*354.6mmD	
Weight	7.2Kg	

Model		IT6861B	IT6862B	IT6863B
Output	**Dual range**	0-20V,5A/0-8V,9A	0-32V,3A/0-12V,6A	0-72V,1.5A/0-32V,3A

Ratings	**output**			
Load regulation	**Voltage**	≤0.01％+4mV	≤0.01％+3mV	≤0.01％+3mV
	Current	≤0.01％+2mA	≤0.01％+2mA	≤0.01％+2mA
Line regulation	**Voltage**	≤0.01％+4mV	≤0.01％+3mV	≤0.01％+3mV
	Current	≤0.01％+2mA	≤0.01％+2mA	≤0.01％+2mA
Programming Resolution	**Voltage**	1mV	1mV	1mV
	Current	0.1mA	0.1mA	0.1mA
Readback resolution	**Voltage**	1mV	1mV	1mV
	Current	0.1mA	0.1mA	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA	≤0.1％+5mA
Readback accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA	≤0.1％+5mA
Ripple (20HZ-20M)	**Voltage**	≤3mVp-p	≤4mVp-p	≤3mVp-p
	Current	≤9mArms	≤7mArms	≤6mArms
Transient response time	**Recover to 75mV (50%~100%load)**	＜50uS	＜50uS	＜50uS
Rise time	**Voltage**	≤90mS(10%-90%)	≤90mS(10%-90%)	≤90mS(10%-90%)
Fall time	**Voltage**	≤150m(90%-10%)	≤200m(90%-10%)	≤250m(90%-10%)
Sample rate		10HZ/S	10HZ/S	10HZ/S
Protection		OTP;OVP	OTP;OVP	OTP;OVP
Dimension (mm)		214.5mmW*88.2mmH*354.6mmD		
Weight		8.5Kg		

Model		**IT6872B**	**IT6873B**
Output Ratings	**Dual range output**	0-35V,4A /0-15V,7A	0-75V,2A /0-32V,4A
Load regulation	**Voltage**	≤0.01％+5mV	≤0.01％+4mV
	Current	≤0.01％+3mA	≤0.01％+2mA
Line regulation	**Voltage**	≤0.01％+5mV	≤0.01％+4mV
	Current	≤0.01％+3mA	≤0.01％+2mA
Programming Resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Readback resolution	**Voltage**	1mV	1mV
	Current	0.1mA	0.1mA
Programming accuracy 12 month (25℃±5℃)	**Voltage**	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA
Readback accuracy 12 month	**Voltage**	≤0.04％+8mV	≤0.04％+8mV
	Current	≤0.1％+5mA	≤0.1％+5mA

(25℃±5℃)			
Ripple&Noise	Normal mode Voltage	≤3mVp-p /1mVrms	≤3mVp-p /1mVrms
	Normal mode Current	<6mArms	<6mArms
	Common mode Current	<1.5uArms	<1.5uArms
Transient response time	Recover to 75mV (50%~100%load)	<50us	<50us
Rise time	10%-90%	<90ms	<120ms
Fall time	90%-10%	<350ms	<450ms

Model		IT6874B
Output Ratings (0 °C~40 °C)	Voltage	H:0-150V L:0-60V
	Current	H:0-1.2A L:0-2A
	Power	H:180W L:120W
Load regulation ±(%of output+offset)	Voltage	≤0.01%+4mV
	Current	≤0.01%+2mA
Line regulation ±(%of output+offset)	Voltage	≤0.01%+4mV
	Current	≤0.01%+2mA
Programming Resolution	Voltage	1mV(<100V) 10mV(≧100V)
	Current	0.1mA
Readback resolution	Voltage	1mV(<100V) 10mV(≧100V)
	Current	0.1mA
Programming accuracy 12 month (25℃±5℃)	Voltage	≤0.05%+20mV
	Current	≤0.1%+5mA
Readback accuracy 12 month (25℃±5℃)	Voltage	≤0.05%+20mV
	Current	≤0.1%+5mA
Ripple (20Hz ~20MHz)	Voltage	≤5mVp-p/1.5mVrms

	Current	≤6mArms
Rise time	**Voltage**	≤150ms(10%-90%)
Fall time	**Voltage**	≤2.5s(90%-10%)
Transient response time	**Voltage**	100us (50%-100% load Recover to 75mV)
Sample rate	10HZ/S	
Protection	OTP;OVP	
Dimension (mm)	214.5mmW×88.2mmH×354.6mmD	
Weight	8.5Kg	

The above specifications may be subject to change without prior notice.

5.2 Supplementary Characteristics

Memory capacity:9*8 registeres

Suggested calibration frequency:Once a year

AC input level(A transfer switch is selectable on the rear panel)

Option Opt.01: 220VAC ± 10%, 47 to 63 Hz

Option Opt.02: 110 VAC ± 10%, 47 to 63 Hz

Cooling type

Intelligent fans