

## Chapter5 Specifications

### Specifications

Model		IT8511+	
Rated value (0~40 °C)	Input voltage	0~120V	
	Input current	0~3A	0~30A
	Input power	150W	
	Minimum operation value	0.14V at 3A	1.4V at 30A
CV mode	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$
CC mode	Range	0~3A	0~30A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$
CR mode *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	150W	
	Resolution	10mW	
	Accuracy	$\pm(0.1\%+0.2\%FS)$	
<b>Dynamic mode</b>			
Dynamic mode	CC mode		
	T1&T2	20uS~3600S /Res:1 uS	
	Accuracy	2uS±100ppm	
	Rising/Falling slope *4	0.0001~0.2A/uS	0.001~1.5A/uS
	Minimum rise time *5	≅10uS	≅10uS
<b>Measuring range</b>			
Readback voltage	Range	0~18V	0~120V
	Resolution	0.1 mV	1 mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~3A	0~30A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	150W	
	Resolution	10mW	
	Accuracy	$\pm(0.1\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection	≅160W		
OCP Protection	≅3.3A	≅33A	
OVP Protection	≅125V		
OTP Protection	≅85°C		
<b>Specification</b>			
Short	Current( CC )	≅3.3/3A	≅33/30A

	Voltage( CV )	0V	0V
	Resistance( CR )	≈45mΩ	≈45mΩ
<b>Input Impedance</b>	150KΩ		
<b>Dimension</b>	214.5mm*88.2mm*354.6mm		

- \*1 The voltage/current input is no less than 10% FS
- \*2 The scope of read-back resistance is:  $1/(1/R+(1/R)*0.01\%+0.08), 1/(1/R-(1/R)*0.01\%-0.08)$
- \*3 The voltage/current input is no less than 10% FS
- \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.
- \*5 Minimum rise time: 10%-90% current rise time

Model		IT8512+	
<b>Rated value</b> ( 0~40 °C)	Input voltage	0~120V	
	Input current	0~3A	0~30A
	Input power	300W	
	Minimum operation value	0.12V at 3A	1.2V at 30A
<b>CV mode</b>	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	±(0.05%+0.02%FS)	±(0.05%+0.025%FS)
<b>CC mode</b>	Range	0~3A	0~30A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
<b>CR mode</b> *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
<b>CP mode</b> *3	Range	300W	
	Resolution	10mW	
	Accuracy	±(0.1%+0.2%FS)	
Dynamic mode			
<b>Dynamic mode</b>	CC mode		
	T1&T2	20uS~3600S /Res:1 uS	
	Accuracy	2uS±100ppm	
	Rising/Falling slope *4	0.0001~0.2A/uS	0.001~1.5A/uS
	Minimum rise time *5	≈10uS	≈10uS
Measuring range			
<b>Readback voltage</b>	Range	0~18V	0~120V
	Resolution	0.1 mV	1 mV
	Accuracy	±(0.025%+0.025%FS)	±(0.025%+0.025%FS)
<b>Readback current</b>	Range	0~3A	0~30A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	
<b>Readback power</b>	Range	300W	
	Resolution	10mW	
	Accuracy	±(0.1%+0.2%FS)	
Protection range			
<b>OPP Protection</b>	≈320W		
<b>OCP Protection</b>	≈3.3A	≈33A	
<b>OVP Protection</b>	≈125V		

OTP Protection	≒85°C		
<b>Specification</b>			
Short	Current( CC )	≒3.3/3A	≒33/30A
	Voltage( CV )	0V	0V
	Resistance( CR )	≒40mΩ	≒40mΩ
Input Impedance	150KΩ		
Dimension	214.5mm*88.2mm*354.6mm		

- \*1 The voltage/current input is no less than 10% FS  
 \*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08),1/(1/R-(1/R)*0.01\%-0.08))$   
 \*3 The voltage/current input is no less than 10% FS  
 \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.  
 \*5 Minimum rise time: 10%-90% current rise time

Model		IT8511A+		IT8512A+	
Rated value (0~40 °C)	Input voltage	0~150V		0~150V	
	Input current	0~3A	0~30A	0~3A	0~30A
	Input power	150W		300W	
	Minimum operation value	0.25V at 3A	2.5V at 30A	0.14V at 3A	1.4V at 30A
CV mode	Range	0.1~18V	0.1~150V	0.1~18V	0.1~150V
	Resolution	1mV	10mV	1mV	10mV
	Accuracy	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$
CC mode	Range	0~3A	0~30A	0~3A	0~30A
	Resolution	0.1mA	1mA	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$
CR mode *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit		16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	150W		300W	
	Resolution	10mW		10mW	
	Accuracy	$\pm(0.1\%+0.1\%FS)$		$\pm(0.1\%+0.1\%FS)$	
<b>Dynamic mode( CC mode )</b>					
T1&T2		20uS~3600S /Res:1 uS		20uS~3600S /Res:1 uS	
Accuracy		2uS±100ppm		2uS±100ppm	
Rising/Falling slope *4		0.0001~0.2 A/uS	0.001~1.5A/uS	0.0001~0.2A/uS	0.001~1.5A/uS
Minimum rise time *5		≒10uS	≒10uS	≒10uS	≒10uS
<b>Measuring range</b>					
Readback voltage	Range	0~18V	0~150V	0~18V	0~150V
	Resolution	0.1 mV	1 mV	0.1 mV	1 mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~3A	0~30A	0~3A	0~30A
	Resolution	0.1mA	1mA	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$		$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	150W		300W	
	Resolution	10mW		10mW	
	Accuracy	$\pm(0.1\%+0.1\%FS)$		$\pm(0.1\%+0.1\%FS)$	

Protection range					
OPP Protection	≈160W			≈320W	
OCP Protection	≈3.3A	≈33A	≈3.3A	≈33A	
OVP Protection	≈160V			≈160V	
OTP Protection	≈85°C			≈85°C	
Specification					
Short	Current( CC )	≈3.3/3A	≈33/30A	≈3.3/3A	≈33/30A
	Voltage( CV )	0V	0V	0V	0V
	Resistance( CR )	≈80mΩ	≈80mΩ	≈40mΩ	≈40mΩ
Input Impedance	150KΩ			150KΩ	
Dimension	214.5mm*88.2mm*354.6mm			214.5mm*88.2mm*354.6mm	

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08), 1/(1/R-(1/R)*0.01\%-0.08))$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8511B+			
Rated value ( 0~40 °C)	Input voltage	0~500V			
	Input current	0~3A		0~10A	
	Input power	150W			
	Minimum operation value	1.2V at 3A		4V at 10A	
CV mode	Range	0.1~50V		0.1~500V	
	Resolution	1mV		10mV	
	Accuracy	±(0.05%+0.05%FS)		±(0.05%+0.05%FS)	
CC mode	Range	0~3A		0~10A	
	Resolution	0.1mA		1mA	
	Accuracy	±(0.05%+0.05%FS)		±(0.05%+0.05%FS)	
CR mode *1	Range	0.5Ω~10Ω		10Ω~7.5KΩ	
	Resolution	16bit			
	Accuracy	0.01%+0.08S *2		0.01%+0.0008S	
CP mode *3	Range	150W			
	Resolution	10mW			
	Accuracy	0.1%+0.2%FS			
Dynamic mode					
Dynamic mode	CC mode				
	T1&T2	20uS~3600S /Res:1 uS			
	Accuracy	2uS±100ppm			
	Rising/Falling slope *4	0.0001~0.2A/uS		0.001~0.8A/uS	
	Minimum rise time *5	≈10uS		≈10uS	
Measuring range					
Readback voltage	Range	0~50V		0~500V	
	Resolution	1 mV		10 mV	
	Accuracy	±(0.025%+0.025%FS)		±(0.025%+0.025%FS)	
Readback current	Range	0~3A		0~10A	
	Resolution	0.1mA		1mA	
	Accuracy	±(0.05%+0.05%FS)			

Readback power	Range	150W	
	Resolution	10mW	
	Accuracy	±(0.1%+0.2%FS)	
<b>Protection range</b>			
OPP Protection	≒160W		
OCP Protection	≒3.3A	≒11A	
OVP Protection	≒530V		
OTP Protection	≒85°C		
<b>Specification</b>			
Short	Current( CC )	≒3.3/3A	≒11/10A
	Voltage( CV )	0V	0V
	Resistance( C R )	≒400mΩ	≒400mΩ
Input Impedance	1MΩ		
Dimension	214.5mm*88.2mm*354.6mm		

- \*1 The voltage/current input is no less than 10% FS
- \*2 The scope of read-back resistance is:  $1/(1/R+(1/R)*0.01\%+0.08), 1/(1/R-(1/R)*0.01\%-0.08)$
- \*3 The voltage/current input is no less than 10% FS
- \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.
- \*5 Minimum rise time: 10%-90% current rise time

Model		IT8512B+	
Rated value (0~40 °C)	Input voltage	0~500V	
	Input current	0~3A	0~15A
	Input power	300W	
	Minimum operation value	0.6V at 3A	3V at 15A
CV mode	Range	0.1~50V	0.1~500V
	Resolution	1mV	10mV
	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
CC mode	Range	0~3A	0~15A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
CR mode *1	Range	0.3Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	300W	
	Resolution	10mW	
	Accuracy	0.1%+0.2%FS	
<b>Dynamic mode</b>			
Dynamic mode	CC mode		
	T1&T2	20uS~3600S /Res:1 uS	
	Accuracy	2uS±100ppm	
	Rising/Falling slope *4	0.0001~0.2A/uS	0.001~0.8A/uS
	Minimum rise time *5	≒10uS	≒10uS
<b>Measuring range</b>			
Readback voltage	Range	0~50V	0~500V
	Resolution	1 mV	10 mV

	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~3A	0~15A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	300W	
	Resolution	10mW	
	Accuracy	$\pm(0.1\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection	$\approx 320W$		
OCP Protection	$\approx 3.3A$	$\approx 16A$	
OVP Protection	$\approx 530V$		
OTP Protection	$\approx 85^{\circ}C$		
<b>Specification</b>			
Short	Current( CC )	$\approx 3.3/3A$	$\approx 16/15A$
	Voltage( CV )	0V	0V
	Resistance( CR )	$\approx 180m\Omega$	$\approx 180m\Omega$
Input Impedance	1M $\Omega$		
Dimension	214.5mm*88.2mm*354.6mm		

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08),1/(1/R-(1/R)*0.01\%-0.08))$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8512C+	
Rated value (0~40 °C)	Input voltage	0~120V	
	Input current	0~6A	0~60A
	Input power	300W	
	Minimum operation value	0.25V at 6A	2.5V at 60A
CV mode	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$
CC mode	Range	0~6A	0~60A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.1\%FS)$
CR mode *1	Range	0.05 $\Omega$ ~10 $\Omega$	10 $\Omega$ ~7.5K $\Omega$
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	300W	
	Resolution	10mW	
	Accuracy	$\pm(0.1\%+0.3\%FS)$	
<b>Dynamic mode</b>			
Dynamic mode	CC mode		
	T1&T2	20uS~3600S /Res:1 uS	
	Accuracy	2uS $\pm$ 100ppm	
	Rising/Falling slope *4	0.0001~0.3A/uS	0.001~3A/uS

	Minimum rise time *5	$\approx 10\mu\text{S}$	$\approx 10\mu\text{S}$
<b>Measuring range</b>			
Readback voltage	Range	0~18V	0~120V
	Resolution	0.1 mV	1 mV
	Accuracy	$\pm(0.025\%+0.025\%\text{FS})$	$\pm(0.025\%+0.025\%\text{FS})$
Readback current	Range	0~6A	0~60A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.05\%\text{FS})$	$\pm(0.05\%+0.1\%\text{FS})$
Readback power	Range	300W	
	Resolution	10mW	
	Accuracy	$\pm(0.1\%+0.3\%\text{FS})$	
<b>Protection range</b>			
OPP Protection		$\approx 320\text{W}$	
OCP Protection		$\approx 6.5\text{A}$	$\approx 65\text{A}$
OVP Protection		$\approx 125\text{V}$	
OTP Protection		$\approx 85^\circ\text{C}$	
<b>Specification</b>			
Short	Current( CC )	$\approx 6.5/6\text{A}$	$\approx 65/60\text{A}$
	Voltage( CV )	0V	0V
	Resistance( C R )	$\approx 40\text{m}\Omega$	$\approx 40\text{m}\Omega$
Input Impedance		150K $\Omega$	
Dimension		214.5mm*88.2mm*354.6mm	

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08), 1/(1/R-(1/R)*0.01\%-0.08))$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8512H+	
Rated value (0~40 °C)	Input voltage	0~800V	
	Input current	0~1A	0~5A
	Input power	300W	
	Minimum operation value	1.4V at 1A	7V at 5A
CV mode	Range	0.1~80V	0.1~800V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.05\%\text{FS})$	$\pm(0.05\%+0.05\%\text{FS})$
CC mode	Range	0~1A	0~5A
	Resolution	0.1mA	1mA
	Accuracy	$\pm(0.05\%+0.1\%\text{FS})$	$\pm(0.05\%+0.05\%\text{FS})$
CR mode *1	Range	2 $\Omega$ ~10 $\Omega$	10 $\Omega$ ~7.5K $\Omega$
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	300W	
	Resolution	10mW	
	Accuracy	0.2%+0.2%FS	
<b>Dynamic mode</b>			

<b>Dynamic mode</b>	CC mode		
	T1&T2	20uS~3600S /Res:1 uS	
	Accuracy	2uS±100ppm	
	Rising/Falling slope *4	0.0001~0.04A/uS	0.001~0.2A/uS
	Minimum rise time *5	≈20uS	≈20uS
<b>Measuring range</b>			
<b>Readback voltage</b>	Range	0~80V	0~800V
	Resolution	1 mV	10 mV
	Accuracy	±(0.025%+0.025%FS)	
<b>Readback current</b>	Range	0~1A	0~5A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	
<b>Readback power</b>	Range	300W	
	Resolution	10mW	
	Accuracy	±(0.2%+0.2%FS)	
<b>Protection range</b>			
<b>OPP Protection</b>	≈320W		
<b>OCP Protection</b>	≈1.1A	≈5.5A	
<b>OVP Protection</b>	≈850V		
<b>OTP Protection</b>	≈85°C		
<b>Specification</b>			
<b>Short</b>	Current( CC )	≈1.1/1A	≈5.5/5A
	Voltage( CV )	0V	0V
	Resistance( C R )	≈1.4Ω	
<b>Input Impedance</b>	2MΩ		
<b>Dimension</b>	214.5mm*88.2mm*354.6mm		

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08),1/(1/R-(1/R)*0.01\%-0.08))$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8513A+	
<b>Rated value</b> (0~40 °C)	Input voltage	0~150V	
	Input current	0~6A	0~60A
	Input power	400W	
	Minimum operation value	0.25V at 6A	2.5V at 60A
<b>CV mode</b>	Range	0.1~18V	0.1~150V
	Resolution	1mV	10mV
	Accuracy	±(0.05%+0.02%FS)	±(0.05%+0.025%FS)
<b>CC mode</b>	Range	0~6A	0~60A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
<b>CR mode</b> *1	Range	0.1Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	



	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
<b>CP mode</b> *3	Range	400W	
	Resolution	10mW	
	Accuracy	±(0.2%+0.2%FS)	
<b>Dynamic mode</b>			
<b>Dynamic mode</b>	CC mode		
	T1&T2	100uS~3600S /Res:1 uS	
	Accuracy	10Us+100ppm	
	Rising/Falling slope *4	0.001~0.15A/uS	0.01~1 A/uS
	Minimum rise time *5	≅50uS	≅60uS
<b>Measuring range</b>			
<b>Readback voltage</b>	Range	0~18V	0~150V
	Resolution	0.1 mV	1mV
	Accuracy	±(0.025%+0.025%FS)	±(0.025%+0.025%FS)
<b>Readback current</b>	Range	0~6A	0~60A
	Resolution	0.1mA	1mA
	Accuracy	±(0.05%+0.05%FS)	
<b>Readback power</b>	Range	400W	
	Resolution	10mW	
	Accuracy	±(0.2%+0.2%FS)	
<b>Protection range</b>			
<b>OPP Protection</b>	≅420W		
<b>OCP Protection</b>	≅6.6A	≅66A	
<b>OVP Protection</b>	≅165V		
<b>OTP Protection</b>	≅85°C		
<b>Specification</b>			
<b>Short</b>	Current( CC )	≅6.6/6A	≅66/60A
	Voltage( CV )	≅0V	
	Resistance( C R )	≅30mΩ	
<b>Input Impedance</b>	≅280KΩ		
<b>Dimension</b>	214.5mm*88.2mm*453.5mm		

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.01\%+0.08), 1/(1/R-(1/R)*0.01\%-0.08))$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8513B+	
<b>Rated value</b> ( 0~40 °C)	Input voltage	0~500V	
	Input current	0~3A	0~30A
	Input power	600W	
	Minimum operation value	0.3V at 3A	3V at 30A
<b>CV mode</b>	Range	0.1~50V	0.1~500V
	Resolution	1mV	10mV
	Accuracy	±(0.05%+0.05%FS)	±(0.05%+0.05%FS)
<b>CC mode</b>	Range	0~3A	0~30A

	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$
CR mode *1	Range	0.Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.02%+0.08S *2	0.02%+0.0008S
CP mode *3	Range	600W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Dynamic mode</b>			
Dynamic mode	CC mode		
	T1&T2	100uS~3600S /Res:1 uS	
	Accuracy	10uS±100ppm	
	Rising/Falling slope *4	0.001~0.05A/uS	0.01~0.5A/uS
	Minimum rise time *5	≈60uS	≈60uS
<b>Measuring range</b>			
Readback voltage	Range	0~50V	0~500V
	Resolution	1 mV	10mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~3A	0~30A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	600W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection	≈650W		
OCP Protection	≈3.3A	≈33A	
OVP Protection	≈530V		
OTP Protection	≈85°C		
<b>Specification</b>			
Short	Current( CC )	≈3.4/3A	≈34/30A
	Voltage( CV )	0V	0V
	Resistance( C R )	≈100mΩ	≈100mΩ
Input Impedance	1MΩ		
Weight	436.5mm*88.2mm*463.5mm		

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $1/(1/R+(1/R)*0.02\%+0.08)$ ,  $1/(1/R-(1/R)*0.02\%-0.08)$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

\*5 Minimum rise time: 10%-90% current rise time

Model		IT8513C+	
Rated value (0~40 °C)	Input voltage	0~120V	
	Input current	0~12A	0~120A
	Input power	600W	

	Minimum operation value	0.2V at 12A	2V at 120A
CV mode	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$
CC mode	Range	0~12A	0~120A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.1\%FS)$
CR mode *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.01%+0.08S *2	0.01%+0.0008S
CP mode *3	Range	600W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Dynamic mode</b>			
Dynamic mode		CC mode	
	T1&T2	100uS~3600S /Res:1 uS	
	Accuracy	10uS±100ppm	
	Rising/Falling slope *4	0.001~0.2A/uS	0.01~1.6A/uS
	Minimum rise time *5	≈60uS	≈60uS
<b>Measuring range</b>			
Readback voltage	Range	0~18V	0~120V
	Resolution	0.1 mV	1mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~12A	0~120A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.1\%FS)$
Readback power	Range	600W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection		≈620W	
OCP Protection		≈13A	≈130A
OVP Protection		≈125V	
OTP Protection		≈95°C	
<b>Specification</b>			
Short	Current( CC )	≈13/12A	≈130/120A
	Voltage( CV )	0V	0V
	Resistance( CR )	≈15mΩ	≈15mΩ
Input Impedance		150KΩ	
Weight		7.1KG	
Dimension		214.5mm*88.2mm*453.5mm	

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $1/(1/R+(1/R)*0.01\%+0.08)$ ,  $1/(1/R-(1/R)*0.01\%-0.08)$

\*3 The voltage/current input is no less than 10% FS

\*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.

**\*5 Minimum rise time: 10%-90% current rise time**

Model		IT8514C+	
Rated value (0~40 °C)	Input voltage	0~120V	
	Input current	0~24A	0~240A
	Input power	1500W	
	Minimum operation value	0.25V at 24A	2.5V at 240A
CV mode	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.02\%FS)$	$\pm(0.05\%+0.025\%FS)$
CC mode	Range	0~24A	0~240A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.1\%+0.1\%FS)$	
CR mode *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.02%+0.08S *2	0.02%+0.0008S
CP mode *3	Range	1500W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Dynamic mode</b>			
CC mode			
T1&T2	100uS~3600S /Res:1 uS		
Accuracy	10uS±100ppm		
Rising/Falling slope *4	0.001~0.3A/uS	0.01~3.2A/uS	
Minimum rise time *5	≈60uS	≈60uS	
<b>Measuring range</b>			
Readback voltage	Range	0~18V	0~120V
	Resolution	0.1 mV	1mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	
Readback current	Range	0~24A	0~240A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	1500W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection	≈1550W		
OCP Protection	≈26.7A	≈267A	
OVP Protection	≈125V		
OTP Protection	≈85°C		
<b>Specification</b>			
Short	Current( CC )	≈26.7/24A	≈267/240A
	Voltage( CV )	0V	0V
	Resistance( CR )	≈8mΩ	≈8mΩ
Input Impedance	150KΩ		
Dimension	436.5mm*88.2mm*463.5mm		

\*1 The voltage/current input is no less than 10% FS

\*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.02\%+0.08), 1/(1/R-(1/R)*0.02\%-0.08))$

- \*3 The voltage/current input is no less than 10% FS
- \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.
- \*5 Minimum rise time: 10%-90% current rise time

Model		IT8514B+	
Rated value ( 0~40 °C)	Input voltage	0~500V	
	Input current	0~6A	0~60A
	Input power	1500W	
	Minimum operation value	0.3V at 6A	3V at 60A
CV mode	Range	0.1~50V	0.1~500V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$
CC mode	Range	0~6A	0~60A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	$\pm(0.05\%+0.05\%FS)$
CR mode *1	Range	0.05 $\Omega$ ~10 $\Omega$	10 $\Omega$ ~7.5K $\Omega$
	Resolution	16bit	
	Accuracy	0.02%+0.08S *2	0.02%+0.0008S
CP mode *3	Range	1500W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Dynamic mode</b>			
Dynamic mode	CC mode		
	T1&T2	100uS~3600S /Res:1 uS	
	Accuracy	10uS $\pm$ 100ppm	
	Rising/Falling slope *4	0.001~0.15A/uS	0.01~0.8A/uS
	Minimum rise time *5	$\approx$ 60uS	$\approx$ 60uS
<b>Measuring range</b>			
Readback voltage	Range	0~50V	0~500V
	Resolution	0.1 mV	1mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
Readback current	Range	0~6A	0~60A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.05\%+0.05\%FS)$	
Readback power	Range	1500W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Protection range</b>			
OPP Protection	$\approx$ 1550W		
OCP Protection	$\approx$ 6.7A	$\approx$ 67A	
OVP Protection	$\approx$ 530V		
OTP Protection	$\approx$ 85°C		
<b>Specification</b>			
Short	Current( CC )	$\approx$ 6.7/6A	$\approx$ 67/60A
	Voltage( CV )	0V	0V
	Resistance( C R )	$\approx$ 50m $\Omega$	$\approx$ 50m $\Omega$

<b>Input Impedance</b>	1MΩ
<b>Dimension</b>	436.5mm*88.2mm*463.5mm

- \*1 The voltage/current input is no less than 10% FS
- \*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.02\%+0.08), 1/(1/R-(1/R)*0.02\%-0.08))$
- \*3 The voltage/current input is no less than 10% FS
- \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.
- \*5 Minimum rise time: 10%-90% current rise time

Model		IT8516C+	
<b>Rated value</b> (0~40 °C)	Input voltage	0~120V	
	Input current	0~24A	0~240A
	Input power	3000W	
	Minimum operation value	0.15V at 24A	1.5V at 240A
<b>CV mode</b>	Range	0.1~18V	0.1~120V
	Resolution	1mV	10mV
	Accuracy	$\pm(0.05\%+0.025\%FS)$	$\pm(0.05\%+0.025\%FS)$
<b>CC mode</b>	Range	0~24A	0~240A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.1\%+0.1\%FS)$	$\pm(0.1\%+0.1\%FS)$
<b>CR mode</b> *1	Range	0.05Ω~10Ω	10Ω~7.5KΩ
	Resolution	16bit	
	Accuracy	0.02%+0.08S *2	0.02%+0.0008S
<b>CP mode</b> *3	Range	3000W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Dynamic mode</b>			
<b>Dynamic mode</b>	CC mode		
	T1&T2	120uS~3600S /Res:1 uS	
	Accuracy	10uS+100ppm	
	Rising/Falling slope *4	0.001~0.25A/uS	0.01~2.5A/uS
	Minimum rise time *5	$\cong 70uS$	$\cong 70uS$
<b>Measuring range</b>			
<b>Readback voltage</b>	Range	0~18V	0~120V
	Resolution	0.1 mV	1mV
	Accuracy	$\pm(0.025\%+0.025\%FS)$	$\pm(0.025\%+0.025\%FS)$
<b>Readback current</b>	Range	0~24A	0~240A
	Resolution	1mA	10mA
	Accuracy	$\pm(0.1\%+0.1\%FS)$	
<b>Readback power</b>	Range	3000W	
	Resolution	10mW	
	Accuracy	$\pm(0.2\%+0.2\%FS)$	
<b>Protection range</b>			
<b>OPP Protection</b>	$\cong 3000W$		
<b>OCP Protection</b>	$\cong 26A$	$\cong 260A$	
<b>OVP Protection</b>	$\cong 125V$		
<b>OTP Protection</b>	$\cong 85^{\circ}C$		
<b>Specification</b>			

<b>Short</b>	Current( CC )	$\approx 26/24A$	$\approx 260/240A$
	Voltage( CV )	0V	0V
	Resistance( CR )	$\approx 6m\Omega$	$\approx 6m\Omega$
<b>Input Impedance</b>	$\approx 300K\Omega$		
<b>Dimension</b>	436.5mm*176mm*463.5mm		

- \*1 The voltage/current input is no less than 10% FS
- \*2 The scope of read-back resistance is:  $(1/(1/R+(1/R)*0.02\%+0.08), 1/(1/R-(1/R)*0.02\%-0.08))$
- \*3 The voltage/current input is no less than 10% FS
- \*4 Ascending/descending slope: 10%-90% current ascending slope from 0 to maximum current.
- \*5 Minimum rise time: 10%-90% current rise time

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

## Supplementary Characteristics

- Memory capacity: 100 registers  
Suggested calibration frequency: Once a year
- AC input level (A transfer switch is selectable on the rear panel)  
Option Opt.1: 220V  $\pm 10\%$  50Hz/60Hz  
Option Opt.2: 110V  $\pm 10\%$  50Hz/60Hz
- Cooling type  
Intelligent fans
- Fans working principle:  
Fans running speed is determined by radiator temperature. When temperature reaches 40°C, fans start to work and intelligently adjust its speed with temperature variation.