

# 33500F Series High Power DC Electronic Load



2.4KW/3.6KW

- ▶ 33521F ▶ 33511F
- ▶ 33531F ▶ 33541F



5.4KW

- ▶ 33512F ▶ 33532F
- ▶ 33542F



7.2KW

- ▶ 33513F



9KW

- ▶ 33514F



10.8KW

- ▶ 33515F



12.6KW

- ▶ 33516F



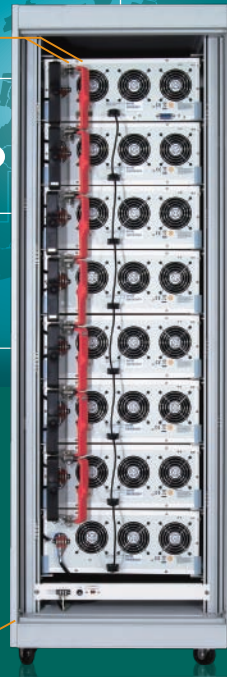
14.4KW

- ▶ 33517F

## Rear Panel of 33500F Series 14.4KW Load

Load input Bus-Bar

System Cabinet



### Feature

- ▶ 5 digit V/A/W Meter
- ▶ High-speed measurement and communication transmission
- ▶ Large LCD Display \ setting values can be adjusted by rotary knob or push button
- ▶ Voltage, Current and Watt value can be displayed simultaneously
- ▶ OCP, OPP test function automatically
- ▶ 150 sets Store/Recall memory
- ▶ Power ON status can be set
- ▶ CC, CR, CV, CP, Dynamic and Short operation mode
- ▶ SHORT time setting
- ▶ Protections against V,I,W, and °C
- ▶ Voltage meter display the polarity positive ("+") or negative ("-") is selectable
- ▶ Optional Interface: GPIB \ RS232 \ USB \ LAN

### Description

- ▶ 33500F Series has its own control and display panel, CC/CR/CV/CP/Dynamic modes, 150 sets Store/Recall memory which provides load set-up more efficiently, also can be remote controlled via GPIB \ RS232 \ USB and LAN interface.
- ▶ SHORT time setting and SHORT\_VH, SHORT\_VL setting function, also can measure Short Voltage and Current  
Dynamic can be simulated under CC, CP mode. The current Rise/Fall slew rate can be adjusted individually and there is an external signal input for a Arbitrary Waveform to simulate load current.
- ▶ Single key for OCP \ OPP test function will be more efficiency and accuracy on OCP \ OPP testing.
- ▶ Programmable Load ON/OFF voltage, GO/NG meter check, Voltage meter display "+" or "-" is selectable and 150 sets Store/Recall larger memory is much advance feature for each different application.
- ▶ 150 sets test parameter and status storage function, user can recall the storage memory real time in accordance with the auto sequence requirement.

### Application

- ▶ Voltage/Current source
- ▶ SMPS transient response
- ▶ CV/Current limit testing and battery emulation
- ▶ Battery charger
- ▶ Battery discharge
- ▶ R&D Quality Control
- ▶ ATE system
- ▶ Production testing

# Specifications

Model	33521F	33511F	33531F	33541F
Power	2400W	3600W	3600W	3600W
Current	0~480A	0~240A	0~480A	0~720A
Voltage	0~60V	0~60V	0~60V	0~60V
Min.Operation Voltage	0.7V @ 480A	0.6V @ 240A	0.7V @ 480A	0.7V @ 720A
<b>Constant Current Mode</b>				
Range *1	0~48A/480A	0~24A/240A	0~48A/480A	0~72A/720A
Resolution	0.8mA/8mA	0.4mA/4mA	0.8mA/8mA	1.2mA/12mA
Accuracy	±0.1% OF(Setting+Range)			
<b>Constant Resistance Mode</b>				
Range	0.002~0.125~7.5KΩ	0.0041~0.25~15KΩ	0.002~0.125~7.5KΩ	0.00138~0.0833~5KΩ
Resolution	0.002mΩ / 0.1333mS	0.0041mΩ/0.066mS	0.002mΩ/0.133mS	0.00138mΩ/0.2mS
Accuracy	±0.2% OF (Setting + Range)			
<b>Constant Voltage Mode</b>				
Range	6V/60V			
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.05% OF (Setting+Range)			
<b>Constant Power Mode</b>				
Range	240W/2400W	360W/3600W	360W/3600W	360W/3600W
Resolution	4mW/40mW	6mW/60mW	6mW/60mW	6mW/60mW
Accuracy	±0.5% OF (Setting+Range)			
<b>Dynamic Mode –CC</b>				
<b>Timing</b>				
Thigh & Tlow	0.050~9.999 / 99.99 / 999.9 / 9999mS			
Resolution	0.001 / 0.01 / 0.1 / 1mS			
Accuracy	1uS/10uS/100uS/1mS + 50ppm			
Slew rate	0.032A ~ 2A/uS 0.32A ~ 20A/uS	0.016A~1A/uS 0.16A~10A/uS	0.016A~1A/uS 0.16A~10A/uS	0.048A~3A/uS 0.48A~30A/uS
Resolution	0.008/0.08A/uS	0.004/0.04A/uS	0.004/0.04A/uS	0.012/0.12A/uS
Accuracy	(5% of setting) ± 10 uS			
Min. Rise Time	24uS(typical)			
<b>Current</b>				
Range	48A / 480A	24A/240A	48A/480A	72A/720A
Resolution	0.8mA / 8mA	0.4mA/4mA	0.8mA/8mA	1.2mA/12mA
Accuracy	±0.1% OF (Setting+Range)			
<b>Measurement</b>				
<b>Voltage Read Back</b>				
Range (5 Digital)	0~6V/60V	0~6V/60V	0~6V/60V	0~6V/60V
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.025% OF(Reading+Range)			
<b>Current Read Back</b>				
Range (5 Digital)	0~48A/480A	0~24A/240A	0~48A/480A	0~72A/720A
Resolution	0.8mA/8mA	0.4mA/4mA	0.8mA/8mA	1.2mA/12mA
Accuracy	±0.1% OF(Reading+Range)			
<b>Power Read Back</b>				
Range (5 Digital)	0~2400W	0~2400W	0~3600W	0~3600W
Resolution	0.04W	0.04W	0.06W	0.06W
Accuracy	±0.125% OF(Reading+Range)			
<b>Protections</b>				
Over Power	105% of Rated Power			
Over Current	105% of Rated Current			
Over Voltage	105% of Rated Voltage			
Over Temp.	Yes			
<b>Others</b>				
<b>Load ON Voltage</b>				
Range	0.1~25.0V			
Resolution	0.1V			
Accuracy	1% of Setting + 0.25V			
<b>Load OFF Voltage</b>				
Range	0~25V			
Resolution	Same as Voltage Meter			
Accuracy	Same as Voltage Meter			
<b>General</b>				
<b>Short Circuit</b>				
Current	480A	240A	480A	720A
Temperature Coefficient	100ppm/°C(typical)			
Power consumption	200Wmax	200Wmax	200Wmax	200Wmax
Operating Temperature *2	0~40°C			
Dimension (HxWxD)	889 x596 x600 mm	889 x596 x600 mm	889 x596 x600 mm	889 x596 x600 mm
Weight	72.8 kg	81.2 kg	81.2 kg	81.2 kg
Safety & EMC	CE			



Note \*1 : The range is automatically or forcing to range II only in CC Mode

■ AC Power : 115V/230 Vac ±10% · 50/60Hz

Note \*2 : Operating temperature range is 0~40°C, all specification apply for 25°C±5°C

■ Cooling : Advanced Fan Cooled

Data Subject Change without Notice

# Specifications

Model	33512F	33532F	33542F	33513F
Power	5400W	5400W	5400W	7200W
Current	0~360A	0~720A	0~1000A	0~480A
Voltage	0~60V	0~60V	0~60V	0~60V
Min.Operation Voltage	0.6V @ 360A	0.7V @ 720A	0.7V @ 1000A	0.6V @ 480A
<b>Constant Current Mode</b>				
Range *1	0~36A/360A	0~72A/720A	0~100.2A/1000.2A	0~48A/480A
Resolution	0.6mA/6mA	1.2mA/12mA	1.67mA/16.7mA	0.8mA/8mA
Accuracy	±0.1% OF(Setting+Range)			
<b>Constant Resistance Mode</b>				
Range	0.0027~0.167~10KΩ	0.00138~0.0833~5KΩ	0.001~0.06~3.6KΩ	0.002~0.125~7.5KΩ
Resolution	0.0028mΩ/0.1mS	0.0028mΩ/0.1mS	0.001mΩ/0.277mS	0.002mΩ/0.13mS
Accuracy	±0.2% OF (Setting + Range)			
<b>Constant Voltage Mode</b>				
Range	6V/60V			
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.05% OF (Setting+Range)			
<b>Constant Power Mode</b>				
Range	540W/5400W	540W/5400W	540W/5400W	720W/7200W
Resolution	9mW/90mW	9mW/90mW	9mW/90mW	12mW/120mW
Accuracy	±0.5% OF (Setting+Range)			
<b>Dynamic Mode –CC</b>				
Timing				
Thigh & Tlow	0.050~9.999 / 99.99 / 999.9 / 9999mS			
Resolution	0.001 / 0.01 / 0.1 / 1mS			
Accuracy	1uS/10uS/100uS/1mS + 50ppm			
Slew rate	0.024A~1.5A/uS 0.24A~15A/uS	0.048A~3A/uS 0.48A~30A/uS	0.0664A~4.15A/uS 0.664A~41.5A/uS	0.032A~2A/uS 0.32A~20A/uS
Resolution	0.006/0.06A/uS	0.012/0.12A/uS	0.0166/0.166A/uS	0.008/0.08A/uS
Accuracy	(5% of setting) ± 10 uS			
Min. Rise Time	24uS(typical)			
Current				
Range	36A/360A	72A/720A	100.2A/1000.2A	48A/480A
Resolution	0.6mA/6mA	1.2mA/12mA	1.67mA/16.7mA	0.8mA/8mA
Accuracy	±0.1% OF(Setting+Range)			
<b>Measurement</b>				
<b>Voltage Read Back</b>				
Range (5 Digital)	0~6V/60V	0~6V/60V	0~6V/60V	0~6V/60V
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.025% OF(Reading+Range)			
<b>Current Read Back</b>				
Range (5 Digital)	0~36A/360A	0~72A/720A	0~100.2A/1000.2A	0~48A/480A
Resolution	0.6mA/6mA	1.2mA/12mA	1.67mA/16.7mA	0.8mA/8mA
Accuracy	±0.1% OF(Reading+Range)			
<b>Power Read Back</b>				
Range (5 Digital)	0~5400W	0~5400W	0~5400W	0~7200W
Resolution	0.09W	0.09W	0.09W	0.12W
Accuracy	±0.125% OF(Reading+Range)			
<b>Protections</b>				
Over Power	105% of Rated Power			
Over Current	105% of Rated Current			
Over Voltage	105% of Rated Voltage			
Over Temp.	Yes			
<b>Others</b>				
<b>Load ON Voltage</b>				
Range	0.1~25.0V			
Resolution	0.1V			
Accuracy	1% of Setting + 0.25V			
<b>Load OFF Voltage</b>				
Range	0~25V			
Resolution	Same as Voltage Meter			
Accuracy	Same as Voltage Meter			
<b>General</b>				
<b>Short Circuit</b>				
Current	360A	720A	1000.2A	480A
Temperature Coefficient	100ppm/°C(typical)			
Power consumption	300Wmax	300Wmax	300Wmax	400Wmax
Operating Temperature *2	0~40°C			
Dimension (HxWxD)	889 x596 x600 mm	889 x596 x600 mm	889 x596 x600 mm	1556 x596 x600 mm
Weight	104.8 kg	104.8 kg	104.8 kg	161.4 kg
Safety & EMC	CE			



Note \*1 : The range is automatically or forcing to range II only in CC Mode

Note \*2 : Operating temperature range is 0~40°C, all specification apply for 25°C±5°C

■ AC Power : 115V/230 Vac ±10% · 50/60Hz

■ Cooling : Advanced Fan Cooled

Data Subject Change without Notice

# Specifications

Model	33514F	33515F	33516F	33517F
Power	9000W	10800W	12600W	14400W
Current	0~600A	0~720A	0~840A	0~960A
Voltage	0~60V	0~60V	0~60V	0~60V
Min.Operation Voltage	0.6V @ 600A	0.6V @ 720A	0.6V @ 840A	0.6V @ 960A
<b>Constant Current Mode</b>				
Range *1	0~60A/600A	0~72A/720A	0~84A/840A	0~96A/960A
Resolution	1mA/10mA	1.2mA/12mA	1.4mA/14mA	1.6mA/16mA
Accuracy	±0.1% OF(Setting+Range)			
<b>Constant Resistance Mode</b>				
Range	0.0017~0.1~6KΩ	0.00138~0.083~5KΩ	0.0012~0.0714~4284Ω	0.001~0.0625~3750Ω
Resolution	0.0016mΩ/0.016mS	0.0014mΩ/0.2mS	0.0003mΩ/0.23mS	0.001mΩ/0.267mS
Accuracy	±0.2% OF (Setting + Range)			
<b>Constant Voltage Mode</b>				
Range	6V/60V			
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.05% OF (Setting+Range)			
<b>Constant Power Mode</b>				
Range	900W/9000W	1080W/10800W	1260W/12600W	1440W/14400W
Resolution	15mW/150mW	18mW/180mW	21mW/210mW	24mW/240mW
Accuracy	±0.5% OF (Setting+Range)			
<b>Dynamic Mode –CC</b>				
<b>Timing</b>				
Thigh & Tlow	0.050~9.999 / 99.99 / 999.9 / 9999mS			
Resolution	0.001 / 0.01 / 0.1 / 1mS			
Accuracy	1uS/10uS/100uS/1mS + 50ppm			
Slew rate	0.04A~2.5A/uS 0.4A~25A/uS	0.048A~3A/uS 0.48A~30A/uS	0.056A~3.5A/uS 0.56A~35A/uS	0.064A~4A/uS 0.64A~40A/uS
Resolution	0.01/0.1A/uS	0.012/0.12A/uS	0.014/0.14A/uS	0.016/0.16A/uS
Accuracy	(5% of setting) ± 10 uS			
Min. Rise Time	24uS(typical)			
<b>Current</b>				
Range	60A/600A	72A/720A	84A/840A	96A/960A
Resolution	1mA/10mA	1.2mA/12mA	1.4mA/14mA	1.6mA/16mA
Accuracy	±0.1% OF(Setting+Range)			
<b>Measurement</b>				
<b>Voltage Read Back</b>				
Range (5 Digital)	0~6V/60V	0~6V/60V	0~6V/60V	0~6V/60V
Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
Accuracy	±0.025% OF(Reading+Range)			
<b>Current Read Back</b>				
Range (5 Digital)	0~60A/600A	0~72A/720A	0~84A/840A	0~96A/960A
Resolution	1mA/10mA	1.2mA/12mA	1.4mA/14mA	1.6mA/16mA
Accuracy	±0.1% OF(Reading+Range)			
<b>Power Read Back</b>				
Range (5 Digital)	0~9000W	0~10800W	0~12600W	0~14400W
Resolution	0.15W	0.18W	0.21W	0.24W
Accuracy	±0.125% OF(Reading+Range)			
<b>Protections</b>				
Over Power	105% of Rated Power			
Over Current	105% of Rated Current			
Over Voltage	105% of Rated Voltage			
Over Temp.	Yes			
<b>Others</b>				
<b>Load ON Voltage</b>				
Range	0.1~25.0V			
Resolution	0.1V			
Accuracy	1% of Setting + 0.25V			
<b>Load OFF Voltage</b>				
Range	0~25V			
Resolution	Same as Voltage Meter			
Accuracy	Same as Voltage Meter			
<b>General</b>				
<b>Short Circuit</b>				
Current	600A	720A	840A	960A
Temperature Coefficient	100ppm/°C(typical)			
Power consumption	500Wmax	600Wmax	700Wmax	800Wmax
Operating Temperature *2	0~40°C			
Dimension (HxWxD)	1556 x596 x600 mm	1556 x596 x600 mm	1556 x 596 x 600 mm	1778 x596 x600 mm
Weight	185 kg	208.6 kg	232.2 kg	268.8 kg
Safety & EMC	CE			



Note \*1 : The range is automatically or forcing to range II only in CC Mode

■ AC Power : 115V/230 Vac ±10% · 50/60Hz

Note \*2 : Operating temperature range is 0~40°C, all specification apply for 25°C±5°C

■ Cooling : Advanced Fan Cooled

Data Subject Change without Notice

## Order Information



▶ **33521F**

60V , 480A , 2400W



▶ **33511F**

60V , 240A , 3600W



▶ **33531F**

60V , 480A , 3600W



▶ **33541F**

60V , 720A , 3600W



▶ **33512F**

60V , 360A , 5400W



▶ **33532F**

60V , 720A , 5400W



▶ **33542F**

60V , 1000A , 5400W



▶ **33513F**

60V , 480A , 7200W



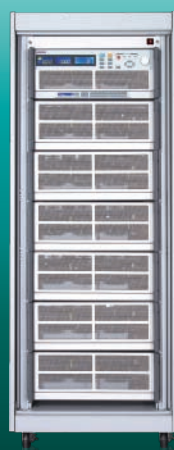
▶ **33514F**

60V , 600A , 9000W



▶ **33515F**

60V , 720A , 10800W



▶ **33516F**

60V , 840A , 12600W



▶ **33517F**

60V , 960A , 14400W

Optional Interface : 1 GPIB Card 2 RS232 Card 3 USB Card 4 LAN Card

**PRODIGIT**  
INSTRUMENT PROFESSIONAL

**Prodigit Electronics Co., Ltd.**

8F., No.88, Baojhong Rd., Sindian City, Taipei County 231, Taiwan (R.O.C.)

TEL : 886-2-2918-2620

FAX : 886-2-2912-9870

http : //www.prodigit.com.tw

e-mail : sales@prodigit.com.tw

Data Subject to Change without Notice