

Using Agilent 6690A Series System dc Power Supplies for Testing Data Storage Control Boards

Product Note 6690A-1



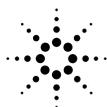
Minimize your testing downtime with this reliable, high power dc supply

- Low ripple & noise
- Fast up-and-down programming
- High accuracy current programming and read back
- Industry standard SCPI programming commands
- Analog programming
- Analog monitoring
- Full protection from overcurrent, overvoltage, overtemperature
- Remote sense
- Electronic calibration
- Standard 3-year warranty

With the increased demand for more capacity to store data at a faster rate and with zero tolerance for failures, the testing of data storage systems is increasingly more complex and time consuming. Because of these stringent demands, the boards controlling the data flow and the disc drives undergo a battery of tests from functional to long term environmental tests to weed out any weak components. To perform these tests, the power supply needs to be very reliable, otherwise long term tests may need to be repeated which can cause delays in shipment, customer dissatisfaction and increase the cost of testing.

The Agilent 6690A is designed specifically for this application. It is part of a new series of power supplies that is leveraged off one of a most reliable power supply series, the 6681A & 6682A. The 6690A provides the appropriate voltage and current ratings for testing data storage control boards. The power supplies can be connected in parallel for higher current, or in series for higher voltage requirements.

During their development phase, Agilent power supplies undergo a battery of environmental tests such as an 8-day temperature profile. Other tests include humidity, altitude, shock and vibration, ESD, ac line tests, EMC and RFI. The power supplies are designed with built-in margin so that they can meet their specifications over time, under all conditions, and also withstand peak stress.



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The design margins and the stringent environmental tests translate into reliable products. This means lower cost of ownership, minimum downtime and faster delivery of your systems to your customers.

Agilent Technologies' Test and Measurement Support, Services, and Assistance
 Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

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Get assistance with all your test and measurement needs at:
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Specifications

		Agilent Model Number		
Parameter		6690A	6691A	6692A
Output Ratings				
Voltage:		0 - 15 V	0 - 30 V	0 - 60 V
Current:*		0 - 440 A	0 - 220 A	0 - 110 A
*Derated linearly 1%/°C from 40°C to 55°C				
Programming Accuracy (@ 25 ±5°C)				
Voltage:	0.04% +	15 mV	30 mV	60 mV
Current:	0.1% +	230 mA	125 mA	65 mA
Ripple & Noise (from 20 Hz to 20 MHz with outputs ungrounded, or with either output terminal grounded)				
Constant Voltage:	rms	2.5 mV	2.5 mV	2.5 mV
Constant Voltage:	p-p	15 mV	25 mV	25 mV
Constant Current:**	rms	200 mA	50 mA	30 mA
**With load inductance >5µH				
Readback Accuracy (from front panel or over GPIB with respect to actual output @ 25 ±5°C)				
Voltage:	0.05% +	22.5 mV	45 mV	90 mV
±Current	0.1% +	300 mA	165 mA	80 mA
Load Regulation (change in output voltage or current for any load change within ratings)				
Voltage	0.002% +	650 µV	1.1 mV	2.2 mV
Current:	0.005% +	40 mA	17 mA	9 mA
Line Regulation (change in output voltage or current for any line change within ratings)				
Voltage:	0.002% +	650 µV	650 µV	650 µV
Current:	0.005% +	40 mA	17 mA	9 mA
Transient Response Time (for the output voltage to recover to within 150 mV following any step change from 100% to 50% or 50% to 100% of the rated output current): <900 µs				

For more information regarding Agilent's dc power supplies, visit our Web site at: <http://www.agilent.com/find/power>

