

# Model 4302 OVP Source for Power Supply Test Systems



Fast Over-Voltage-Protection Testing of DC Power Supplies

## Features

- Lower cost, smaller size, and increased throughput
- Supported by NHR Test Systems utilizing a 4300 Chassis\*
- Time-Efficient OVP testing of UUT outputs
- Ideal for parallel UUT testing applications
- Pre-programmed with highly-efficient test routines
- Installs in a single-slot of the Model 4300 chassis
- 3 Voltage Ranges – 6, 30 & 120V

## Applications

The Model 4302 OVP Source is a single-purpose, programmable source designed for use within NHR Test Systems that utilize the Model 4300 chassis. The 4302 provides performing very fast Over-Voltage-Protection testing of all UUT outputs thereby further extending the significant parallel testing throughput benefits provided by test systems such as the S600 Series.



Model 4302

## Time-Efficient OVP Testing

Traditional OVP testing can be excruciatingly time consuming due to its iterative step-and-measure sequencing. The 4302 replaces that technique by providing an automated set-and-measure “on the fly” technique. All the user has to do is fill in the blanks within one of *emPower's*<sup>™</sup> OVP test routines, **Fig. 1**. In this manner, a single 4302 can be used to rapidly test multiple UUTs and not impact the lowest-test-cost advantages of parallel testing offered by NHR testers.

## Pre-Programmed Test Routines

There are a number of ways to test OVP depending on how the over-voltage protection circuit was designed. In addition to the Input Current Drop Test Routine shown in **Fig. 1**, NHR provides Test Routines for Input Current as well as Latching and Digital State types of OVP tests.

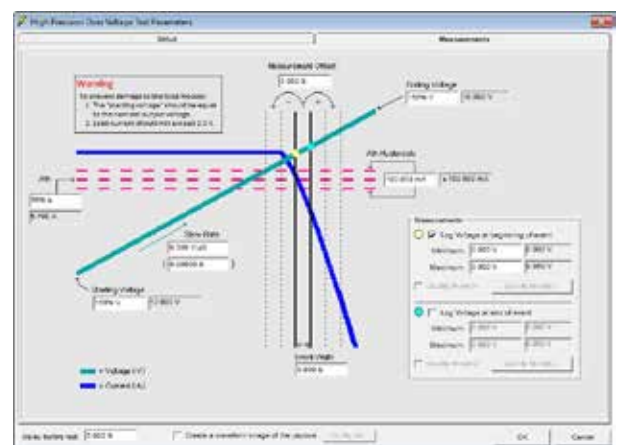
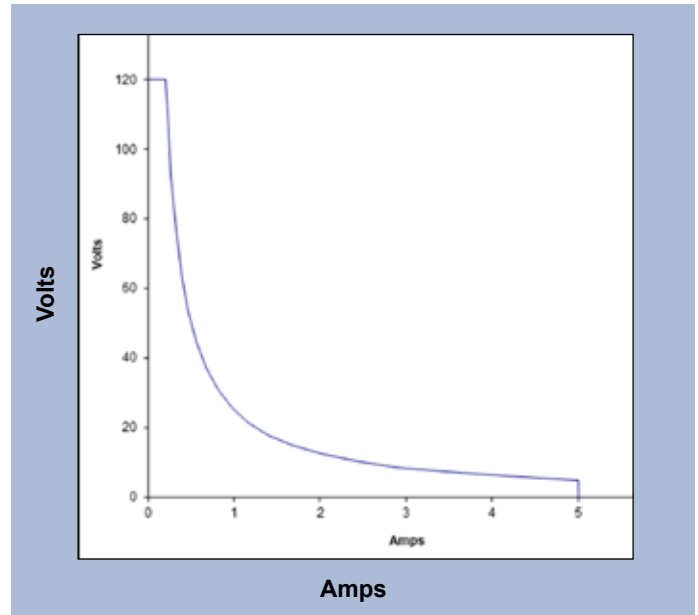


Figure 1: Input Current Drop

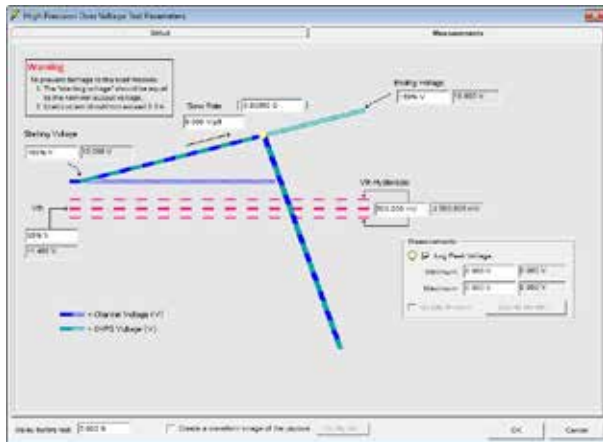
\* Requires one slot in a 4300 chassis and *emPower* version 11.3

# Model 4302 OVP Source Specifications

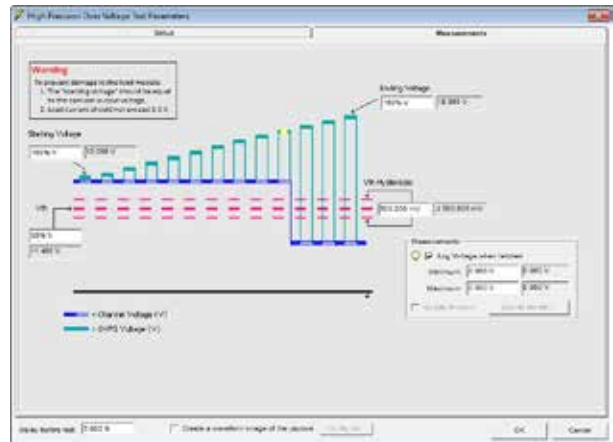
Programming Capability	
Voltage Ranges	0-6VDC (5A Max & 25W Max) 0-30VDC (4.16A Max & 25W Max) 0-120VDC (0.833A Max & 25W Max)
Set Accuracy	0.5% of set + 0.5% of range
Resolution	0.025% of range
Slew Rate	10mS to 60s (20µS resolution)
Macro Test Profiles	
Settings	100
Delay	10mS to 60s
Timing Accuracy	1% + 1mS
Modes	Single Sequence or Continuous
Test, Measurement	
Voltage Range	±6VDC, ±30VDC, ±120VDC
Accuracy	0.05% of reading + 0.05% of range
Resolution	16 Bits
Physical	
Voltage Range	1 Slot in 4300 Chassis
Weight	5 lbs. (2¼ kg)
Isolation	±500VDC outputs to chassis
Operating Temperature	0-35°C



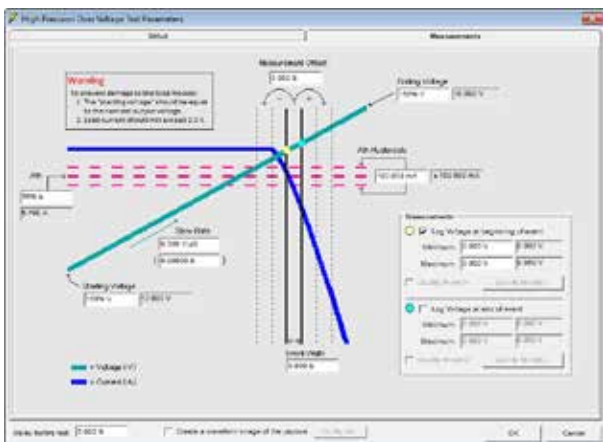
Operating Envelope



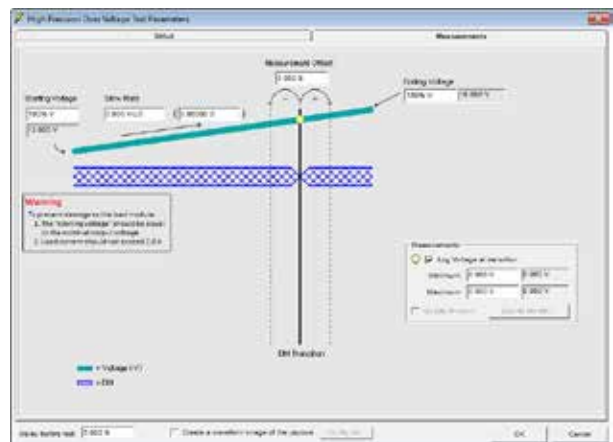
emPower Test Routine - Crowbar



emPower Test Routine - Latching



emPower Test Routine - Input Current Drop



emPower Test Routine - DIN Change