

Smart DUT Power Solutions

Most Test Engineers would agree, the first step to testing an electronic assembly is to apply DUT power (device under test). But that is often, *easier said than done*. The primary concern is safety, and the question is - does the DUT have short-circuits that could cause damage to the DUT, the adjoining test equipment or injury to the Test Operator? Overton Instruments have developed a unique & extensive collection of Smart DUT Power Solutions to address those and many of other challenges.



DUT Power Module Series

These DUT power solutions are based on a series of standard Power Bricks (which are built onto a compact PCB), and can be externally controlled by a Host PC (via USB). Designed for embedded operation, the diagram on the top-right shows a typical application for the DUT Power Modules. Thru a series of PC commands, DUT power can be switched On/Off, both the voltage & current load can be measured, and a virtual circuit-breaker can be set to prevent a current overload condition. If your DUT requires DC power, then its likely we have a solution for it.

Intelligent Power Switches

These modules are designed for system-level applications that require the delivery of bulk (DC and/or AC) power. As shown in the center-right diagram, the IPS-MATE/DC and IPS-MATE/AC instruments are used to support a custom Burn-In test system. The AC source is used to power the heating elements within the temperature chamber, and the DC source is used to power multiple sub-assemblies (the DUT's). Both modules are connected to a 2-port USB Hub, which allows the modules to be externally controlled by a Host PC. During the test process, the Host PC can command the modules to switch On/Off, measure load current, and set a virtual circuit breaker (to prevent overcurrent conditions).

DUT Smart Power Sequence Module

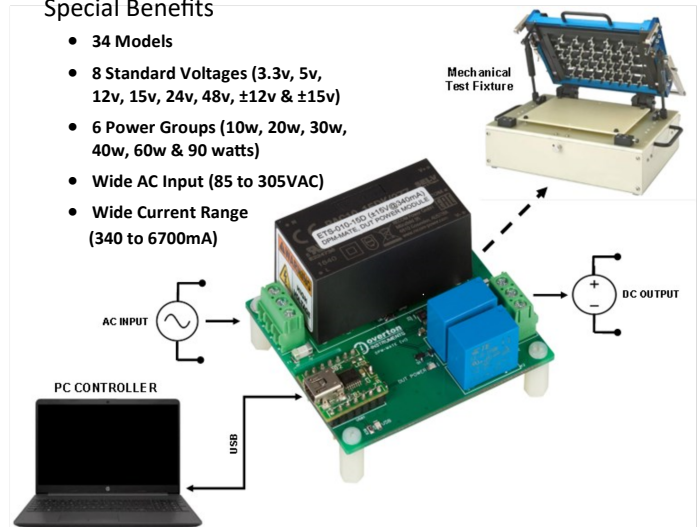
In this final example, DUT power delivery is taken to the next level. Before DUT power is applied, this module can perform 2 critical checks, 1) discharge residual current from the DUT by briefly shorting the input power rail pins, and 2) check for a 'short' on the DUT power rails. If either of those checks fail, then DUT power is NOT applied. The diagram on the right shows the DUT Smart Power Sequence Module supporting a complete PCB Functional Test operation. The 4-port USB Hub is used to allow a Host PC to control the DUT Power Module and 3 other test instruments. A COM-MATE module allows RS-232 data communications between the DUT & the PC. The MUX-MATE (signal multiplexer), and DMM are used to complete the Functional Test process by verifying "key" voltage and frequency measurements.

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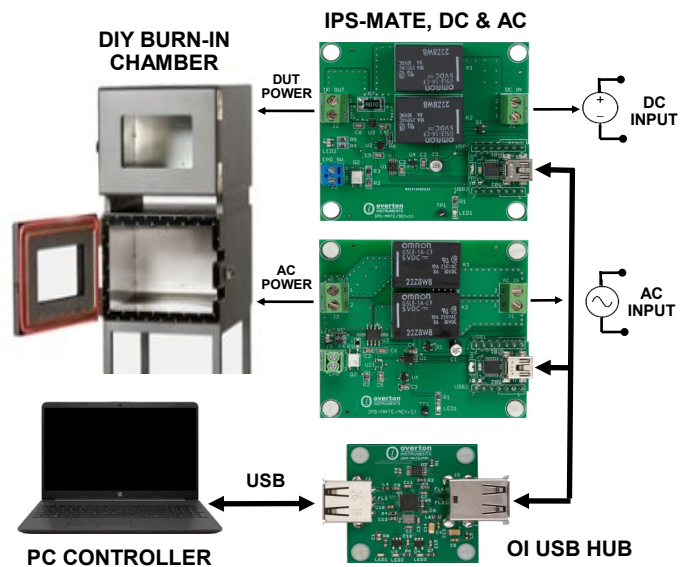
DUT Power Module Series

Special Benefits

- 34 Models
- 8 Standard Voltages (3.3v, 5v, 12v, 15v, 24v, 48v, $\pm 12v$ & $\pm 15v$)
- 6 Power Groups (10w, 20w, 30w, 40w, 60w & 90 watts)
- Wide AC Input (85 to 305VAC)
- Wide Current Range (340 to 6700mA)



Intelligent Power Switch Modules



DUT Smart Power Sequence Module

