SCE Model 3000 Power Supply

The SCE 3000 series power supply is a small, modular 400Hz AC to DC supply which outputs +12V @ 2.0A.

The unit is conservatively designed and rated with a minimum MTBF of 300,000 hours under Naval, Sheltered conditions at 50ºC per MIL-HDBK-217E. The supply follows the design guidelines in NAVMAT P-4855, and is derated per AS4613 class A.

The supply is equivalent to Abbott Transistor Laboratories W series, with significantly improved performance.

SPECIFICATIONS

Electrical

Input:

- Voltage, 105VAC - 135VAC, 350Hz to 450Hz single phase
  Current

Output:

- Voltage, +12VDC
- Current, 2.0Amp
- Regulation, +0.1% line, <+20mV load
- Transient, 50% to 100% load step: 3% maximum excursion, with recovery to regulation limits in under 100µsec.
- Ripple, 0.2% p-p maximum
- Efficiency, >45% at full load over entire input range
- Temperature Coef., <0.015%/ºC variation over full -55ºC to +90ºC range

Environmental

- Operating Temperatures -54ºC to +90ºC
- Humidity, per MIL-STD-810E method 507.3 proc III
- Salt Fog, per MIL-STD-810E method 509.3 proc I
- Altitude, per MIL-STD-810E method 500.3 proc II
- Shock, per MIL-STD-810E method 516.4 proc I,III
- Temp. Shock, per MIL-STD-810E method 503.3
- Burn-In, Each supply is subjected to 10 temperature cycles from -54ºC to 70ºC, for a total of 60 hours of testing.
- Vibration, Unit is vibrated for 10 minutes at 6.3 G's per NAVMAT P-9492.
  Protection Circuits

- Current Limit, Foldback type with automatic recovery, will operate into a short circuit with no damage. Unit will meet tracking specifications during current limit.
- Isolation Input, case and outputs are isolated from each other to 700VDC, with 500M ohms minimum resistance
- EMI, Meets MIL-STD-461B Class A1 (airborne equipment)