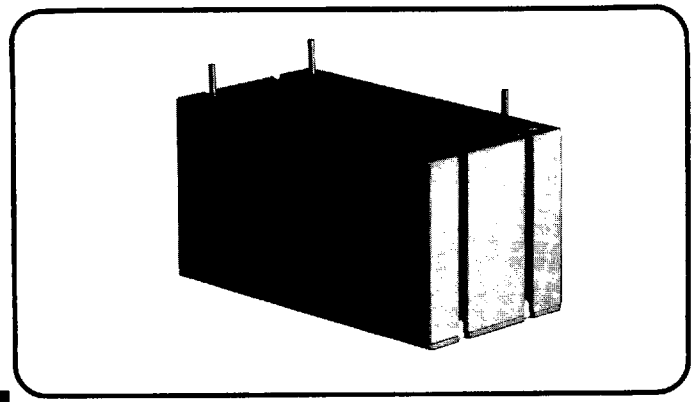
TS1000A Transnubber™

Features:

- **Suppresses the 2500 Volt Line Transients as Described in DOD-STD-1399.**
- **Provides Attenuation of Conducted Line Interference in the Frequency Range as Specified in CE01 per MIL-STD-461.**
- **Will Withstand Voltage Surge Conditions of MIL-STD-704A-D.**



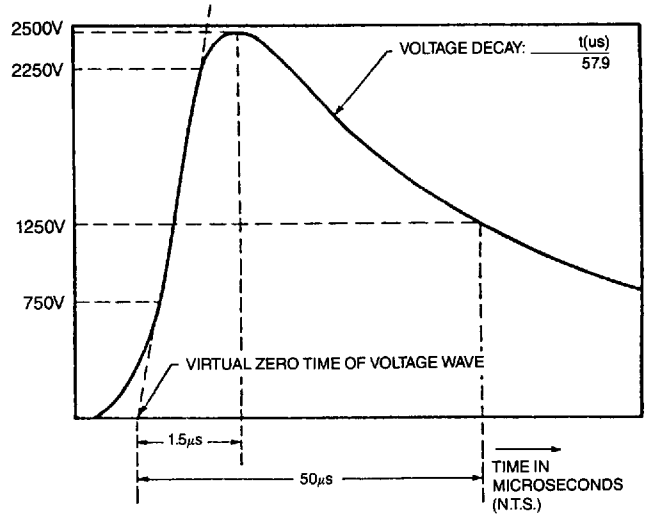
Transnubber

Sensitive solid state equipment can be disrupted or destroyed by voltage spikes and transients on AC power input lines. These microsecond pulses are effectively attenuated by Powercube's Transnubber. The Transnubber assures clean incoming AC power for power supplies in logic systems and control equipment commonly found on shipboard, aircraft, and other military end use systems.

Waveforms of the type shown in Figure 1 (DOD-STD-1399/300, up to 50 microseconds pulse width) are attenuated by 20dB minimum.

APPLICATIONS INFORMATION

1. An effective characteristic line impedance of 16 ohms is used for this unit application. Lower impedance levels will allow overstress conditions to occur to both the TS1000A and downline connected POWERCUBE power conversion modules during a transient strike which may result in out-of-spec performance or failure.
2. Other units available:
   TS1001 — 3 ϕ DELTA
   TS1002 — 3 ϕ WYE
3. For custom applications in use with other than POWERCUBE power conversion modules, be advised the TS1000A total input to output inductance is 625 μH maximum.
4. Other units for higher power AC, and for DC operation are available as custom designs. Consult POWERCUBE.



SPIKE VOLTAGE (SHORT TIME TRANSIENT) WAVE SHAPE
PER DOD-STD-1399/300 & /103

Figure 1

Transnubber™ is a trademark of Powercube.

POWERCUBE CORPORATION • EIGHT SUBURBAN PARK DRIVE, BILLERICA, MA 01821 • (508) 667-9500 • FAX 508-667-6280

Transnubber

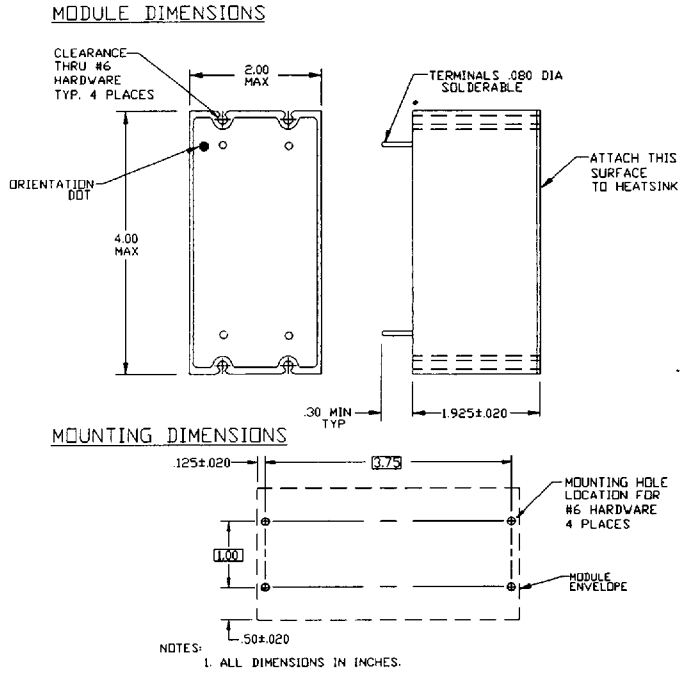
SPECIFICATIONS

Input Voltages:	95-135 VAC 1 ϕ
Input Frequency:	47-63 Hz
Input Current:	5 Amps maximum
Transient Suppression:	20 dB typical attenuation when subjected to the transient voltage waveform per figure 1. Note: Characteristic line impedence of 16 ohms.
Maximum Pulse Clamping Voltage:	220V
EMI Suppression:	When installed and wired properly the TS1000A will provide attenuation of differential mode conducted line interference in the frequency range as specified within MIL-STD-461B, CEO1.
MTBF:	Consult factory
Efficiency:	99% @ 5 Amps.
Overall Dimensions:	2″ x 4″ x 1.925″
Terminals:	Solderable per MIL-T-10727
Weight:	21.5 oz. (609.5 gms)
Operating Temperature:	−55°C to +100°C (case)
Storage Temperature:	−65°C to +125°C

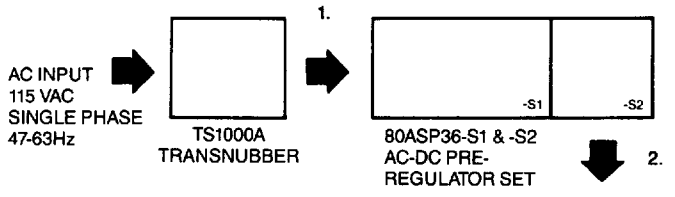
MEETS REQUIREMENTS OF:

Thermal Shock:	MIL-STD-202 Method-107D Cond B.
Humidity:	MIL-STD-810 Method 507.1, Procedure 1
Vibration:	MIL-STD-202 Method 204C Cond D and 214 Cond J (operating)
Shock:	MIL-STD-202 Method 213B Cond A (operating)
Acceleration:	MIL-STD-202 Method 212A Cond A 100G's (operating)
Pressure/Altitude:	MIL-STD-202 Method 105C Cond D (operating)
Sand/Dust:	MIL-STD-810 Method 510, Procedure 1
Salt Spray:	MIL-STD-202 Method 101D Cond B

DIMENSIONAL DRAWING



TYPICAL APPLICATION



NOTE:
1. DOD-STD-1399 SPIKE PROTECTED AC INPUT
2. MIL-STD-704A POSITIVE TRANSIENT CONDITIONED (NON-ISOLATED) DC OUTPUT

POWERCUBE CORPORATION • EIGHT SUBURBAN PARK DRIVE, BILLERICA, MA 01821 • (508) 667-9500 • FAX 508-667-6280