SCE Model 4000 Power Supply

This high voltage power supply is one of several developed by SCE to be form-fit-function equivalent to units built by Venus Electronics (NY), now part of Eldec (WA).

This particular unit is equivalent to the old Venus LH20, except for customer requested modifications.

Topology is self-oscillating push-pull converter. The transformer output feeds a x5 multiplier to produce 20KV.

Since our customer required operation only to 0ºC, we potted this unit with urethane rather than silicone. Although urethane exhibits poor performance at very low temperatures, its bond strength - and therefore its susceptibility to fractures on separation - is much better than silicone at more moderate temperatures.

SPECIFICATIONS

Electrical

Input:

- Voltage 28VDC Input voltage may vary ±10% without affecting output
- Current 325mA max at no load
  1.2A max at full load

Output:
(Anode):

- Voltage 20KV adjustable from 19.6 to 20.4 KV
- Current 500µA output
- Regulation ±1% load, ±1% line
- Ripple 0.1% (20V) p-p, maximum
- Test Point 1000:1 test output divider provided
- Remote Programming Remote input (0-13V) can control the output voltage from 20KV down to less than 2000V

Protection Circuits

- Output Overload Supply protected against excessive load on output
- Short Circuit Protected against output shorts for an indefinite time
- Reverse Polarity Inputs protected against reverse polarity

Environmental

- Operating Temperature 0°C to +50ºC
- Humidity To 100% (fully sealed construction)
- Shock 40 G's (per MIL-STD-810E, Proc I)
- Vibration Per MIL-STD-167-1, Type I

Construction: Sealed aluminum case, machined from solid billet

- Size 4.9" x 3.1" x 2"
- Weight 45 oz. , max.
- Connectors Output: LGH1 type (AMP) Input: Hermetic feedthrough solder terminals
- Marking Photo anodized aluminum label/cover
- Potting Vacuum filled urethane