

**High voltage power amplifier shall meet the following specifications:**

1. One channel, non-inverting, four quadrant V-I output stage
2. Output voltage: 0 to  $\pm 20$  kV DC or peak AC.
3. Output current: 0 to  $\pm 20$  mA DC or peak AC.
4. Input Voltage: 0 to  $\pm 10$  V DC or peak AC via BNC connector
5. DC gain (fixed) 2000V/V
6. Input Impedance: 25 kohm
7. Output offset voltage:  $< \pm 2$  V.
8. Output noise:  $< 1.5$  V rms
9. Slew rate (10% to 90%):  $> 800$  V/ $\mu$ s.
10. Large Signal Bandwidth (1% distortion):  $> 5.2$  kHz.
11. Small signal bandwidth (-3dB) : DC-20 kHz
12. Automatic protection from overheating, over-current or voltage and output short circuit.
13. Adjustable output current limit or current trip
14. High-voltage on/off switch via local front panel or remote TTL input
15. Standard high-voltage output connector (Alden or equivalent)
16. Low-level proportional voltage and current monitor outputs via BNC connector
17. Digital front panel voltage and current displays
18. Line supply voltage: 110-120 VAC, 60 Hz
19. 19 Inch instrument rack mountable
20. Weight: less than 25 kg
21.  $> 1.5$  meter high voltage output cable with mating connector on one end and unterminated on other end