



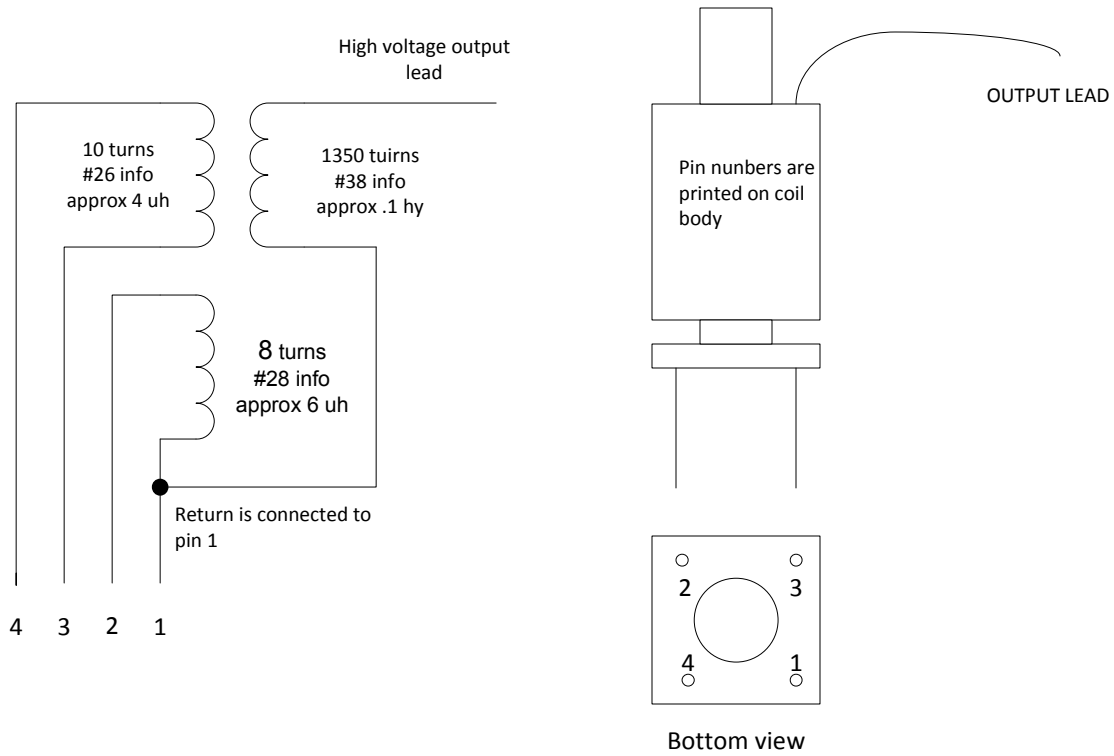
HIGH VOLTAGE HIGH FREQUENCY MINIATURE FERRITE TRANSFORMERS

<u>Page</u>	<u>Item</u>	<u>Output</u>	<u>Operating Frequency</u>
2	28K077	2kv 10ma	20-100kHz
3	28K077 as used in plasma light saber schematic		
4	28K077 as used in power supply schematic		
5	28K074	4kv 15ma	20-100kHz
6	28K074 specifications		
7	28K074 as used in low power electro-kinetic gun		
8-11	28K089	7kv 10ma	20-100kHz
9	28K089 specifications		
10	28K089 as used in neon power supply schematic		
11	28K089 as used in HV (35kV) power supply schematic		

See our website www.amazing1.com for current pricing and availability, or contact us for any larger volume quotes.

28K077 Spec Sheet

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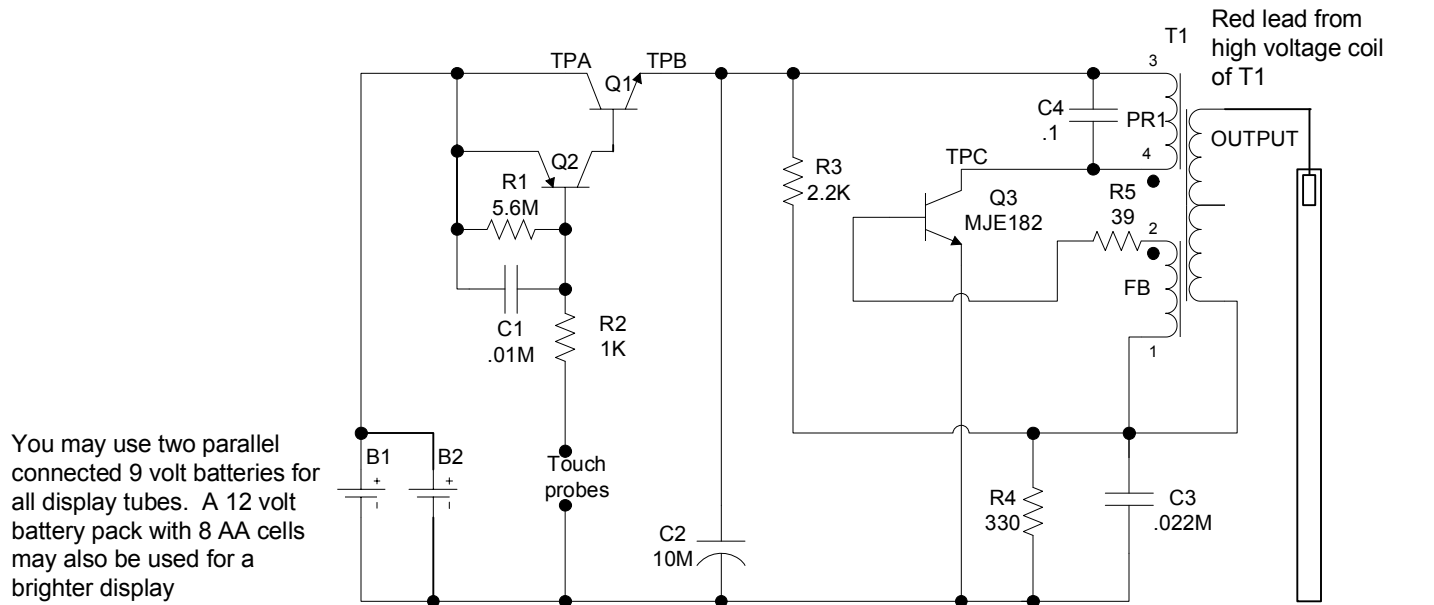
Insulate the secondary output winding for 6000 vac

Windings connected to the indicated pins

Contact us for volume requirements

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Email: tech@amazing1.com
Tel: 603 673 4730

Fig 21-1 Plasma light saber schematic

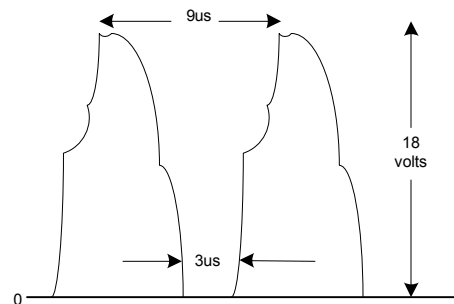


You may use two parallel connected 9 volt batteries for all display tubes. A 12 volt battery pack with 8 AA cells may also be used for a brighter display

It may be necessary to reduce the value of R2 to 100 k for decreasing the touch sensitivity. This will depend on humidity, skin resistance and other factors

T1 transformer winding data

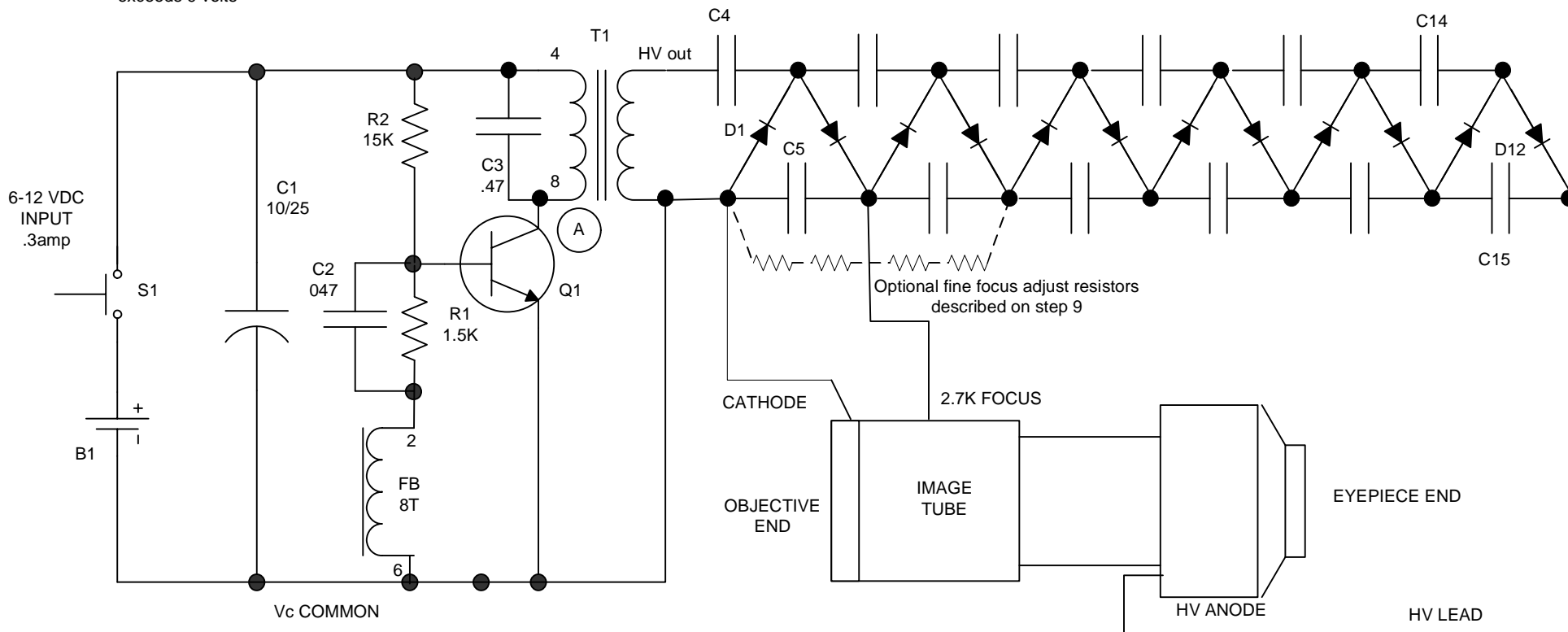
Output.....1350 turns
 Primary.....10 turns
 Feed back.....10 turns



Wave shape at TPC when connected to a 26" red neon tube fully lit.
 Connected to a 9 volt source and drawing .4 amps.
 Note input was adjusted to 7 volt before display started to break from end.

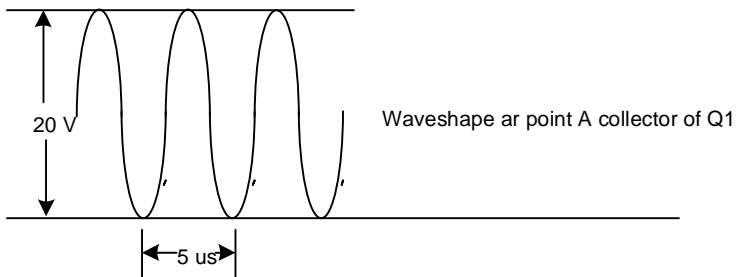
Fig 23-1 Power supply Schematic

Note that Q1 may require a heatsink if battery voltage exceeds 9 volts

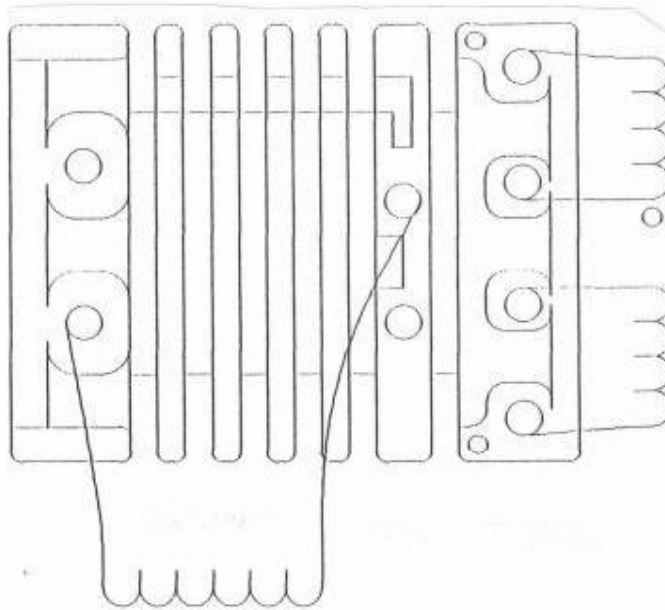


Note: If unit fails to oscillate, reverse connections 2 and 6 on T1

Output polarity may be reversed by simply reversing all diodes D1 thru 12.



Transformer #28K074 Specifications



Feedback 8 turns#30
approx 15 uh

Collector 8 turns#24
approx 15 uh

Output 1350 turns #38 approx .5 hy

Secondary insulated for 6 kv

Connect windings to the indicated pins

Gap core at 6 mils

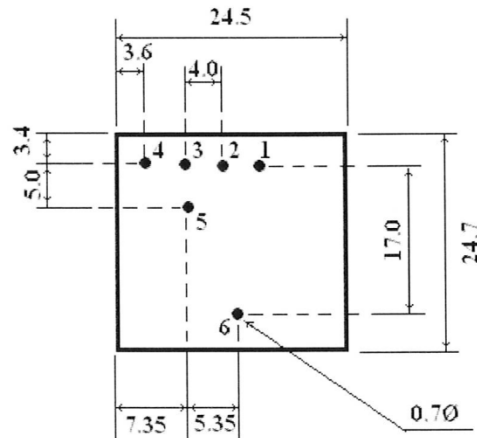
Open core and coil

These transformers are available to the OEM (original equipment manufacturer) for production pricing schedules. Contact us at tech@amazing1.com for more information

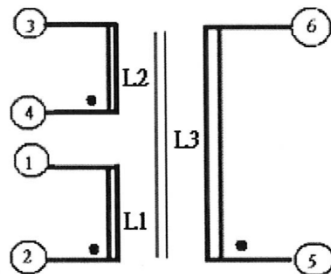
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SPECIFICATION

1. DIEMENSION



2. SCHEMATIC



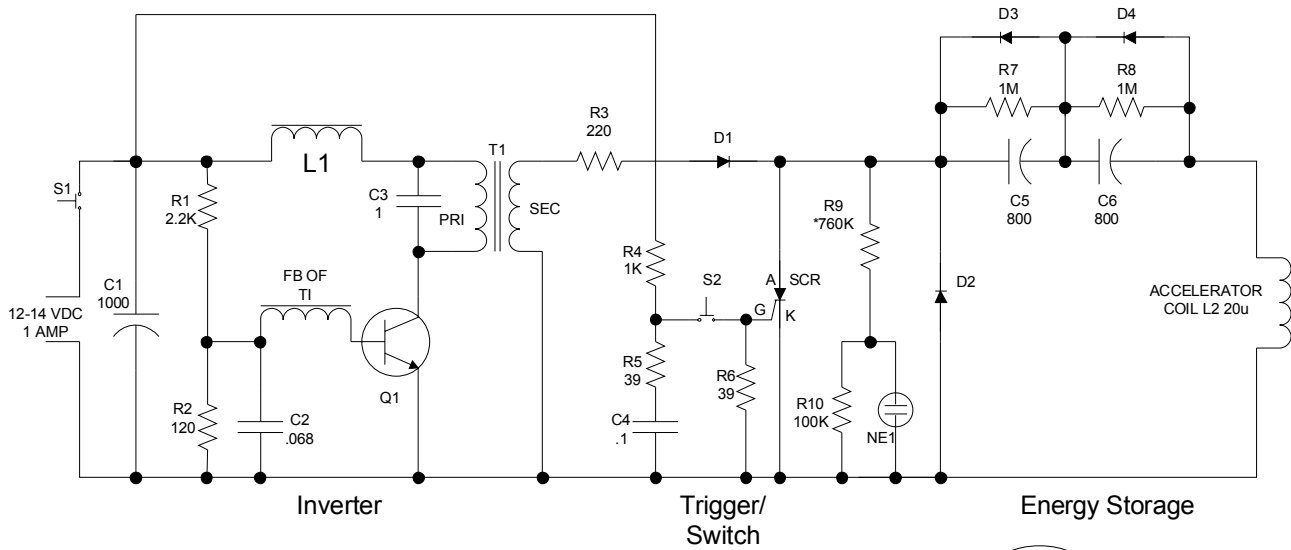
3. SPECIFICATION

MEAST. ITEM	DATA	TEST INSTRUMENT/CONDITION
INDUCTANCE L1	11.5uH ±15%	LCR METER (1KHz)
INDUCTANCE L2	12.0uH ±15%	LCR METER (1KHz)
INDUCTANCE L3	260mH ±15%	LCR METER (1KHz)
RESISTANCE L1	160mΩ ±15%	LCR METER (1KHz)
RESISTANCE L2	230mΩ ±15%	LCR METER (1KHz)
RESISTANCE L3	186Ω ±15%	LCR METER (1KHz)
L1 · L2 TO L3	3KVAC/ 1mA / 1MIN.	INSULATION/PUNCHER/TESTER

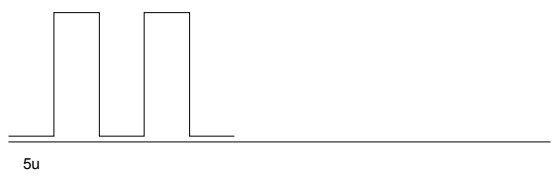
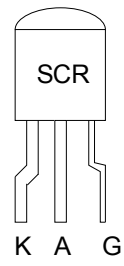
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APPROVAL	CHECKED	WRITER

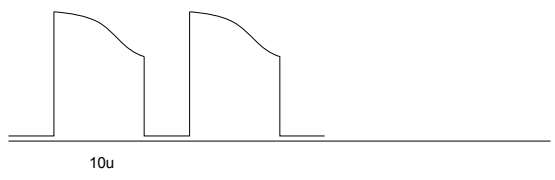
Fig 1 Low power electro-kinetic gun



Note R9 is selected for NE1 igniting when voltage reaches 600 volts



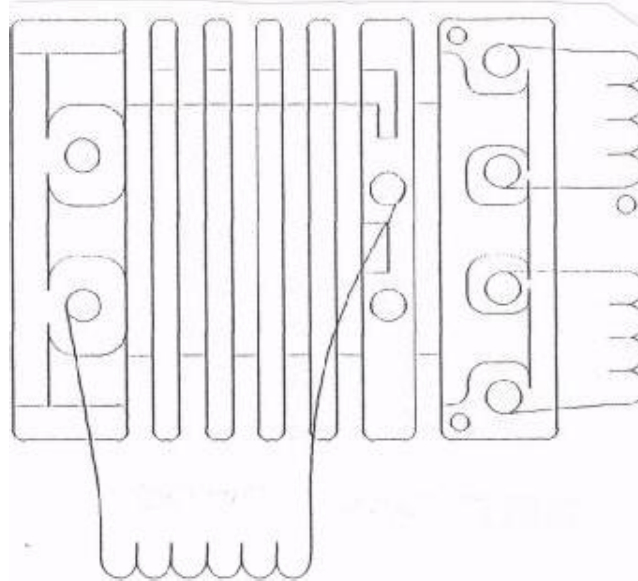
Wave shape Q1 beginning of charging cycle



Wave shape Q1 end of charging cycle

Diode D3,4 are necessary when using the photoflash electrolytic capacitors to keep the voltage from reversing. Unfortunately these diodes also remove the repulsive energy of the negative reversing current from further accelerating the projectile. Higher quality pulse discharge capacitors could be used without the diodes but would be larger and more costly.

Transformer #28K089 Specifications



Feedback 8 turns#30
approx 12 uh

Collector 9 turns#24
approx 15 uh

Output 2500 turns #40
approx 1.1 hy

Secondary insulated for 9 kv

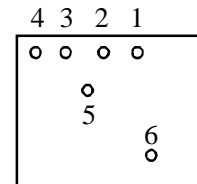
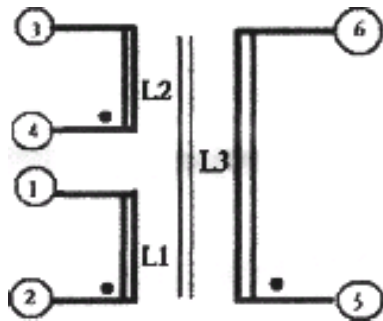
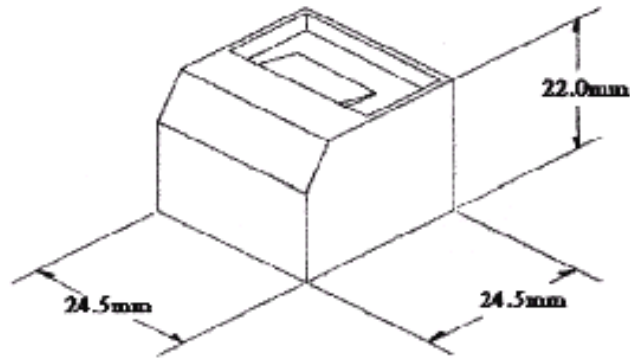
Connect windings to the indicated pins

Gap core at 6 mils

Assembly potted into a 24.5 x 24.5 x 22 mm plastic cup with pins

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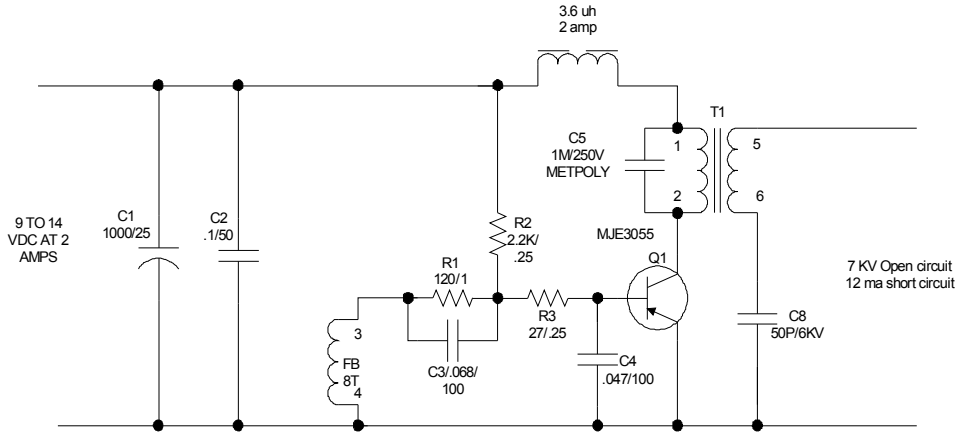


BOTTOM VIEW

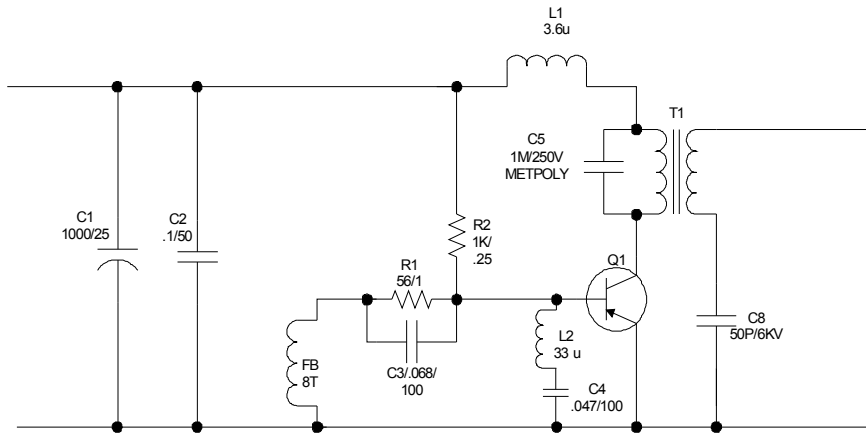
MEAST. ITEM	DATA	TEST INSTRUMENT/CONDITION
INDUCTANCE L1	19.0uH ±15%	LCR METER (1KHz)
INDUCTANCE L2	15.6uH ±15%	LCR METER (1KHz)
INDUCTANCE L3	1.0H ±15%	LCR METER (1 KHz)
RESISTANCE L1	0.1200 ±15%	LCR METER (1KHz)
RESISTANCE L2	0.2100 ±15%	LCR METER (1KHz)
RESISTANCE L3	8100 ±15%	LCR METER (1 KHz)
L 1 • L2 TO L3	3KVAC/ 1 mA / 1 MIN.	INSULATION/PUNCHER/TESTER

NEON21 SCHEMATIC

NEON21SCH-601

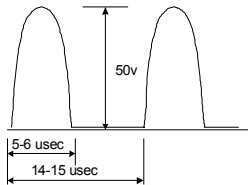
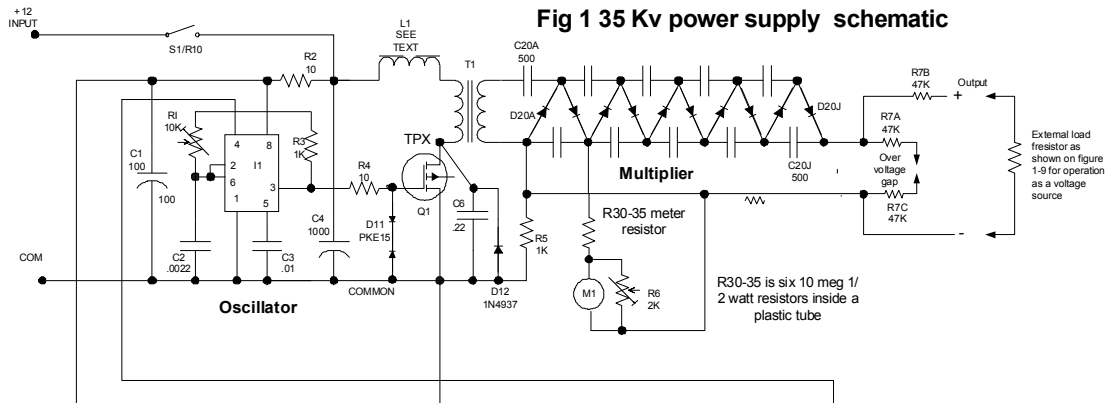


BASIC NEON 2100



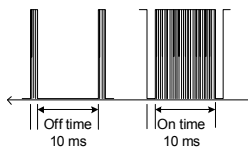
REVISED NEON2100 WITH CURRENT FEED CHOKE AND FILTER FOR HEAVIER LOADS

Fig 1 35 Kv power supply schematic



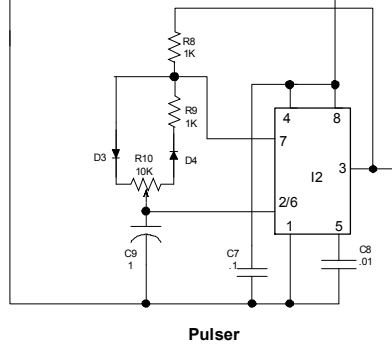
Out put should be terminated into a 25 megohm 25 watt high voltage resistor for load test. Connect scope to test point TPX. Adjust R1 to the wave shape shown with unit connected to a 12 volt 3 amp supply.

Out put voltage should be 30kv indicating a current of over 1 ma. Input current will be 2.5 amps with a power output in excess of 30 watts!



Low output setting of R10 High output setting of R10

Wave shape obtained at TPX when controlling R10. Output voltage is now controlled by the ratio of on to off time at pin 4 of I1..



Pulser