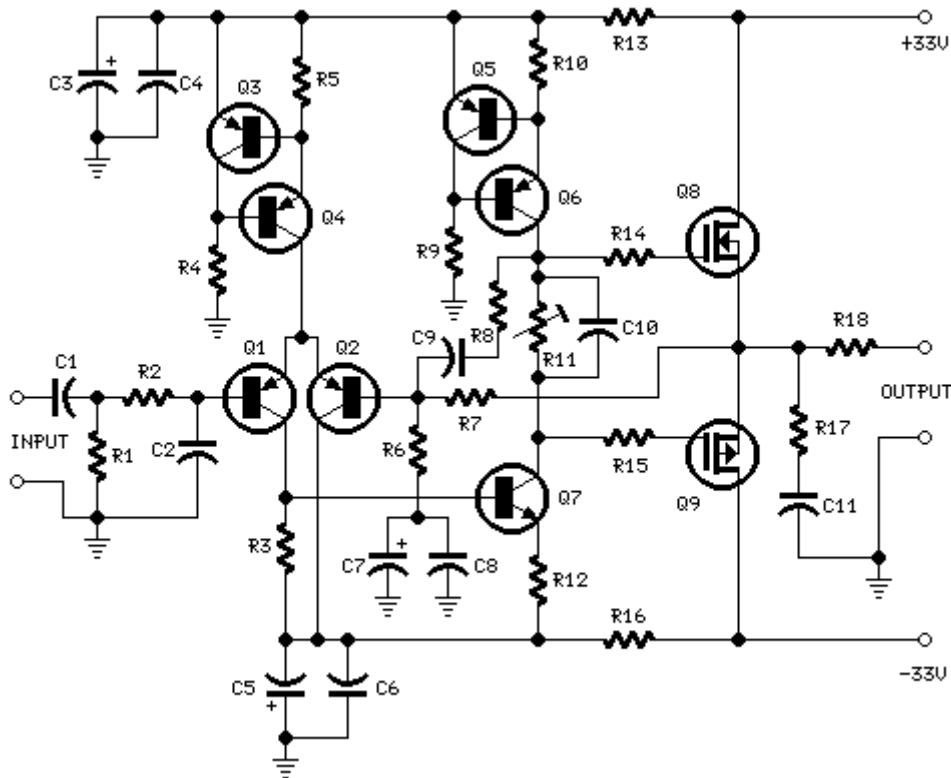


25W Mosfet 音頻功率放大器 source: RED Free Circuit Designs

喬治查爾斯電子電路網
<http://georgecharles.why.to>

- 電路簡單高品質
- 不需前置放大器

電路圖:

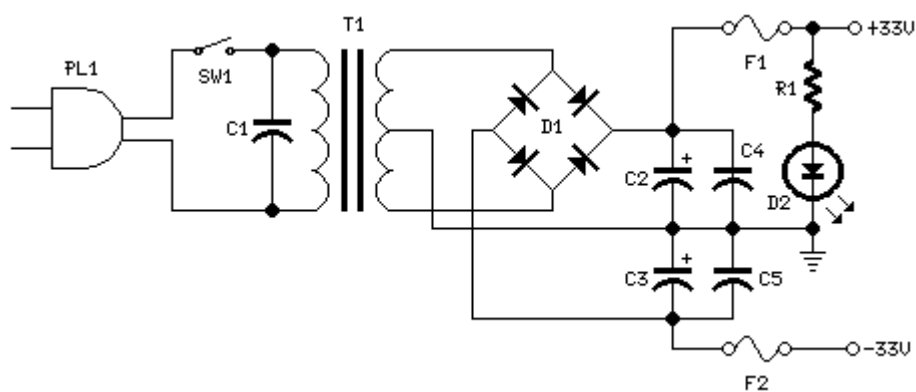


零件清單:

R1,R4 = 47K	1/4W Resistors	C1 = 470nF	63V Polyester Capacitor
R2 = 4K7	1/4W Resistors	C2 = 330pF	63V Polystyrene Capacitor
R3 = 1K5	1/4W Resistors	C3,C5 = 470 μ F	63V Electrolytic Capacitors
R5 = 390R	1/4W Resistors	C4,C6,C8,C11 = 100nF	63V Polyester Capacitors
R6 = 470R	1/4W Resistors	C7 = 100 μ F	25V Electrolytic Capacitor
R7 = 33K	1/4W Resistors	C9 = 10pF	63V Polystyrene Capacitor
R8 = 150K	1/4W Resistors	C10 = 1 μ F	63V Polyester Capacitor
R9 = 15K	1/4W Resistors		
R10 = 27R	1/4W Resistors	Q1-Q5 = BC560C	45V100mA Low noise High gain PNP Transistors

R11 = 500R	1/2W Trimmer Cermet	Q6 = BD140	80V 1.5A PNP Transistor
R12,R13,R16 = 10R	1/4W Resistors	Q7 = BD139	80V 1.5A NPN Transistor
R14,R15 = 220R	1/4W Resistors	Q8 = IRF532	100V 12A N-Channel Hexfet Transistor
R17 = 8R2	2W Resistor	Q9 = IRF9532	100V 10A P-Channel Hexfet Transistor
R18 = R22	4W Resistor (wirewound)		

電源供應電路圖:



零件清單:

R1 = 3K3	1/2W Resistor	F1,F2	3.15A Fuses with sockets
C1 = 10nF	1000V Polyester Capacitor	T1	220V Primary, 25 + 25V Secondary 120VA Mains transformer
C2,C3 = 4700µF	50V Electrolytic Capacitors		
C4,C5 = 100nF	63V Polyester Capacitors	PL1	Male Mains plug
D1	200V 8A Diode bridge	SW1	SPST Mains switch
D2	5mm. Red LED		

Notes:

- 可以直接輸入 CD Plater,收音調諧器、錄音座等音源，於輸入端加一個 10K A 的可變電阻調音量。
- Q6 & Q7 需加上簡單的 U 型散熱片。
- Q8 & Q9 必需安裝在主散熱片上。

- 無訊號輸入時，調整 R11 設定靜態電流為 100mA (最好以一個三用表串接在 Q8 的 D 極來測量)
- 正確的接地是消除交流哼聲的重要因素，連接輸入端、R1, R4, R9, C3 to C8 在同一點，連接 C11 於輸出端的地線，然後分別輸入及輸出端的接地點到電源供應的接地端連接。

技術資料:

輸出功率: 25Watt RMS @ 8 Ohm (1KHz sinewave) 以上

靈敏度: 200mV input for 25W output

頻率響應: 30Hz to 20KHz -1dB

Total harmonic distortion @ 1KHz: 0.1W 0.014% 1W 0.006% 10W 0.006% 20W 0.007% 25W 0.01%

Total harmonic distortion @10KHz: 0.1W 0.024% 1W 0.016% 10W 0.02% 20W 0.045% 25W 0.07%

Unconditionally stable on capacitive loads