

MARK OF CAPACITOR

⊕ ELECT

⊖ FILM

⊖ CERAMIC

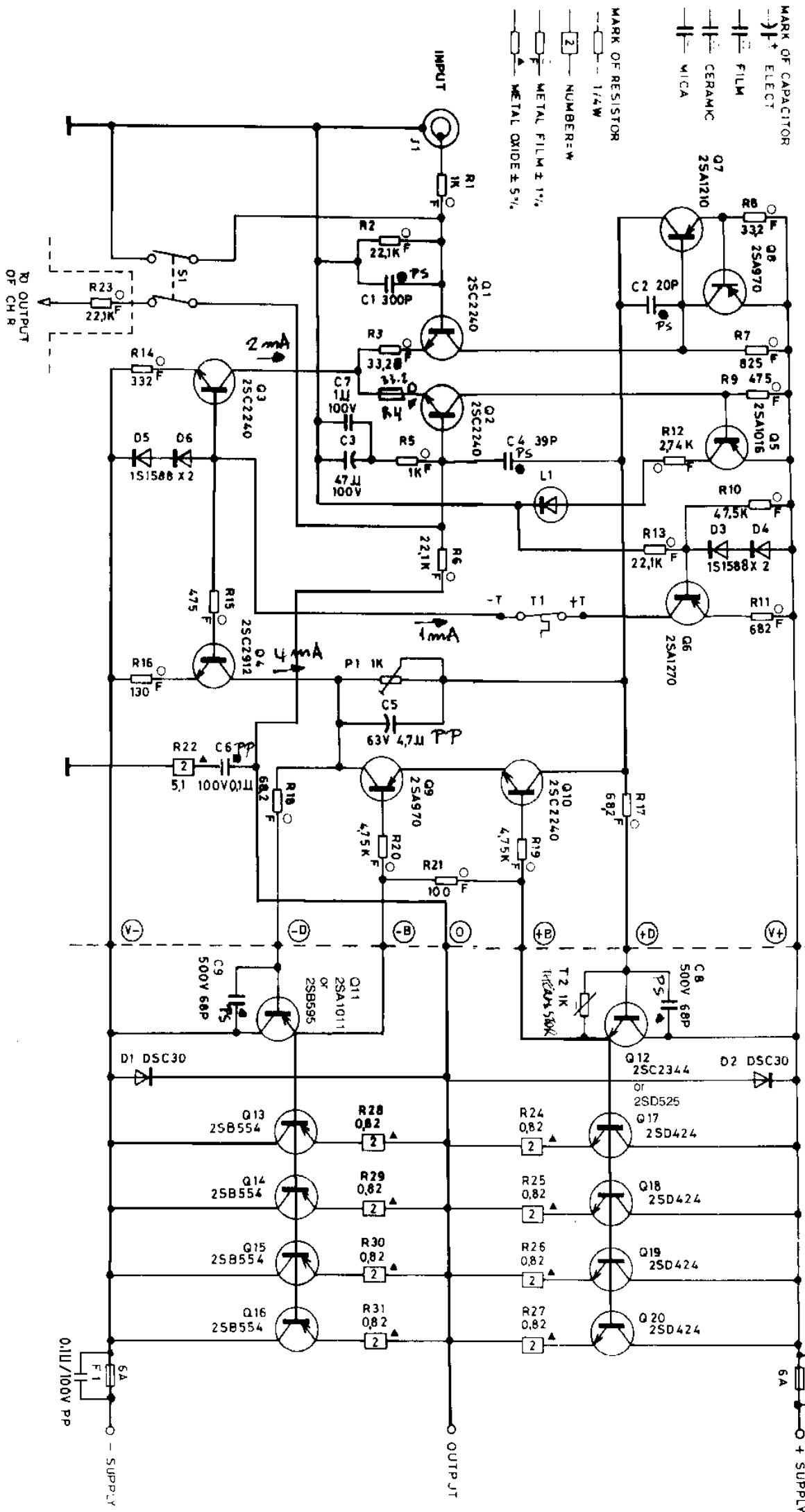
⊖ MICA

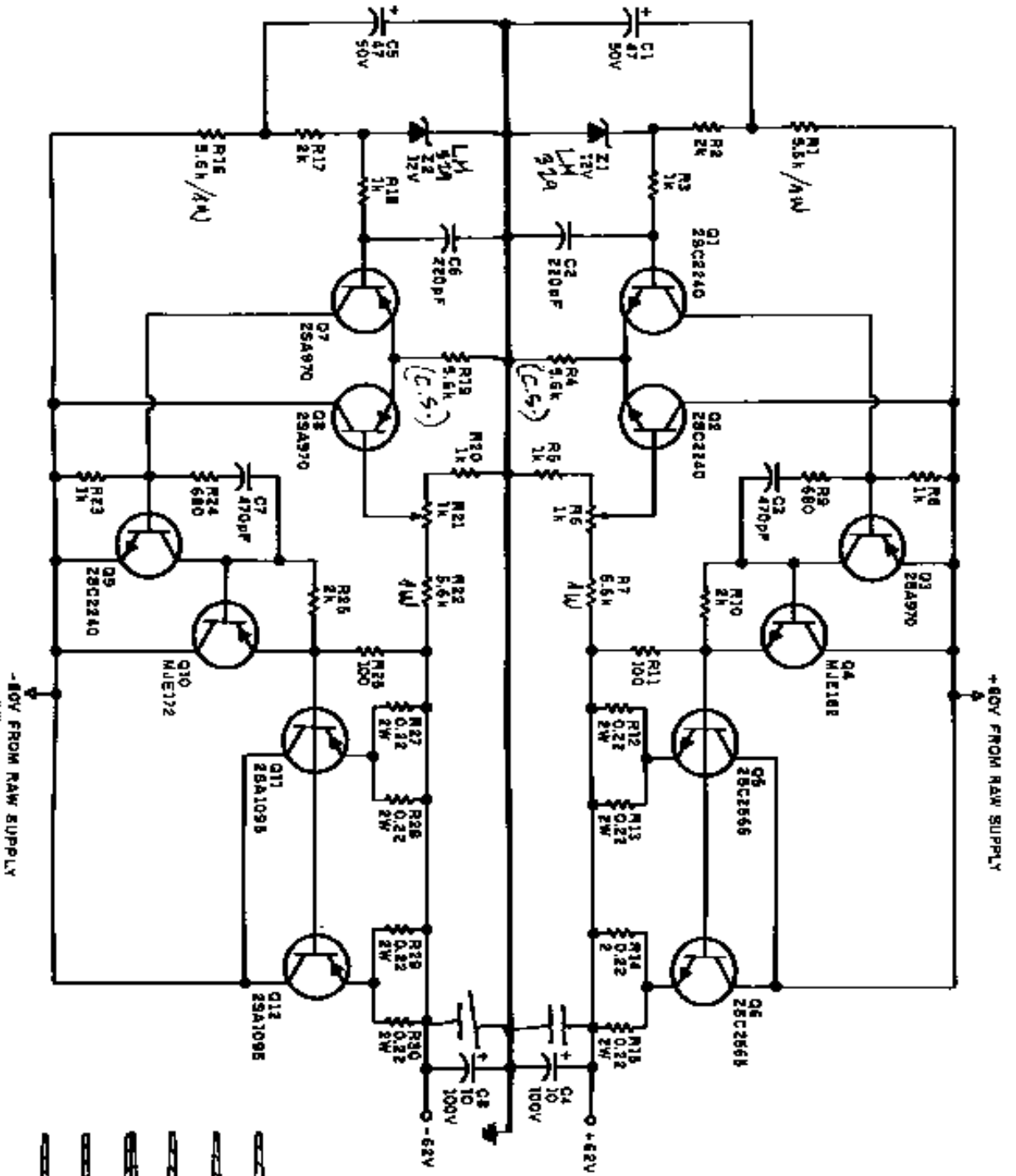
MARK OF RESISTOR

2 NUMBER=W

⊖ METAL FILM ± 1%

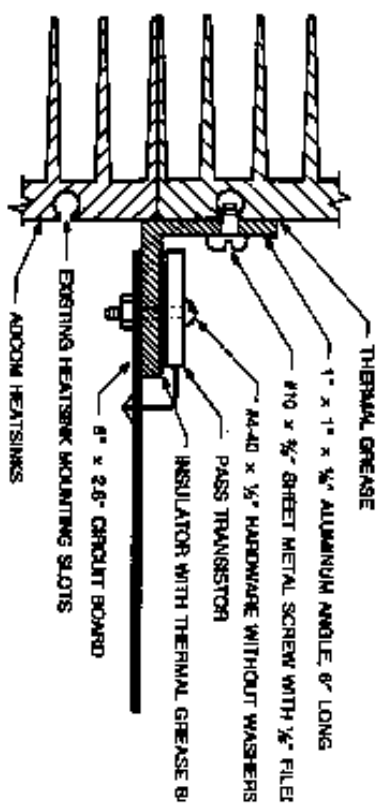
⊖ METAL OXIDE ± 5%





**PARTS LIST**

- Resistors:**  
 R1, R4, R7, R16, R19, R22 5.6k  
 R2, R10, R17, R25 2k  
 R3, R5, R8, R18, R20, R23 1k  
 R9, R24 680Ω  
 R11, R26 100Ω  
 R12-R15, R27-R30 0.22Ω/2W\*  
 \*can substitute 0.1Ω/3W wirewound for pairs of 0.22Ω resistors
- Zener diodes:**  
 Z1, Z2 12V, 0.5W
- Capacitors:**  
 C1, C5 47µF, 50V electrolytic  
 C2, C6 220µF polypropylene, polyester  
 C3, C7 470µF polypropylene, polyester  
 C4, C8 10µF, 100V electrolytic
- Triacs:**  
 T1, T2 1k Daromat, single turn
- Transistors:**  
 Q1, Q2, Q9 2SA970 Toshiba  
 Q3, Q7, Q8 2SC2240 Toshiba  
 Q4 MJE-182 Motorola  
 Q5, Q6 2SC2685 Toshiba  
 Q10 MJE-172 Motorola  
 Q11, Q12 2SA1095 Toshiba



*Mounting details—section view from top.*