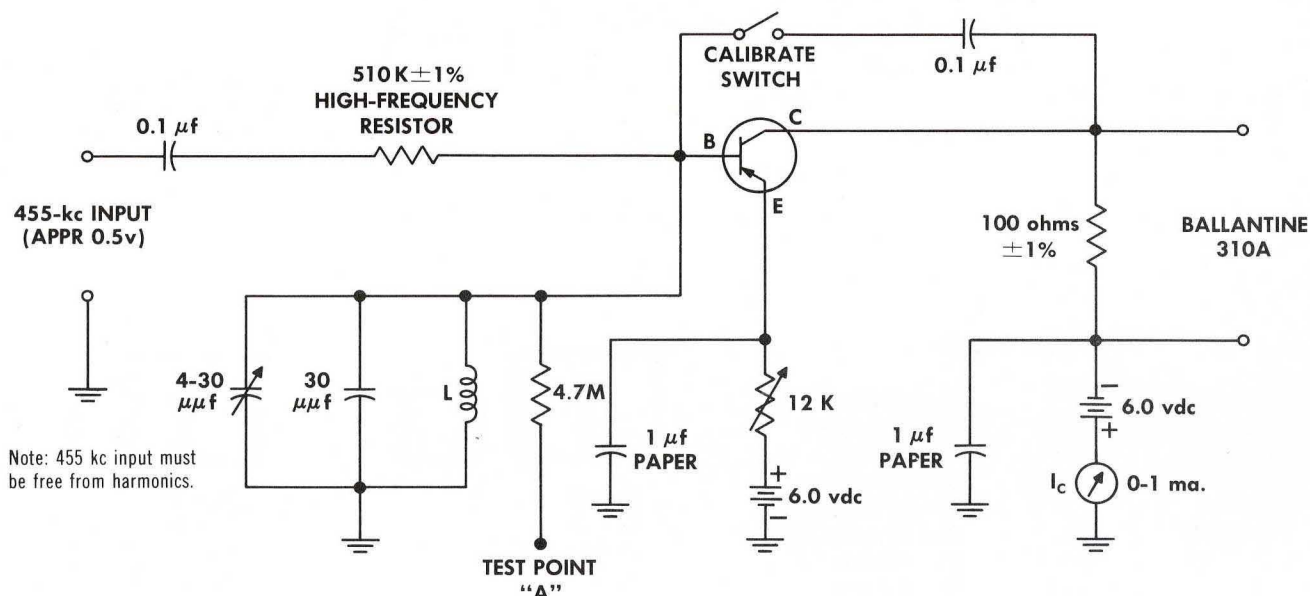


TYPE 2N1111

TEST CIRCUIT

455 - kc h_{fe} TEST SET



Coil Data

$L = 2.5$ mh

$Q = 150$ minimum at 455 kc

260 turns of #32 wire random wound on general ceramics

#F624-2 steatite Q_1 toroid core with one layer of insulated tape on bare core.

455-kc h_{fe} Test Set Operating Instructions

1. Connect a VTVM to test point "A" and adjust the 455-kc tuned circuit for resonance.
2. Close calibrate switch and adjust 455-kc input to give 0.1 mv reading on Ballantine 310A or equivalent.
3. Open calibrate switch, insert transistor, and set $I_c = 0.5$ ma.
4. Read h_{fe} value directly in db (0 db = 0.1 mv reference level).

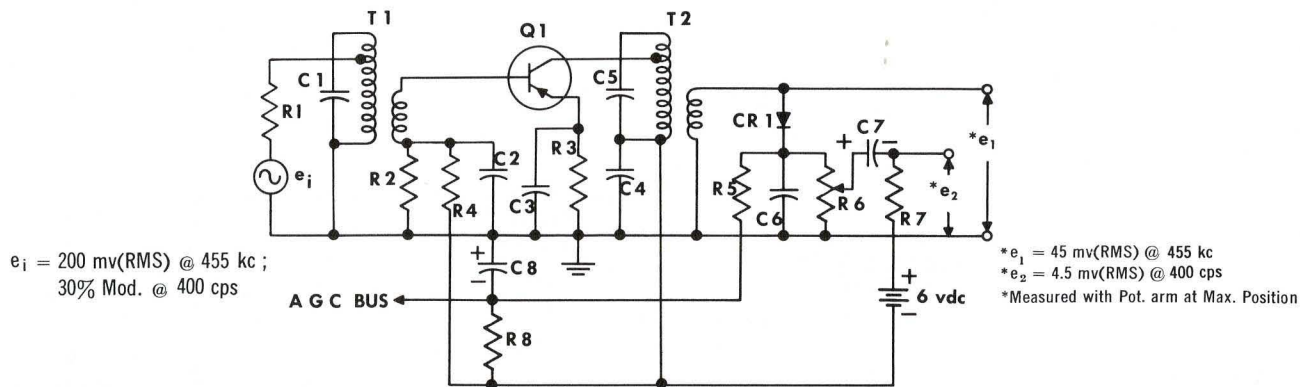
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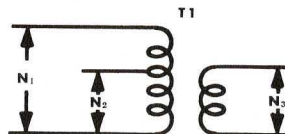
TYPICAL OUTPUT IF AMPLIFIER (455 kc)



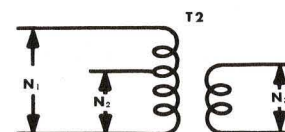
PARTS LIST:

C1, 5 = 190 $\mu\mu\text{f}$
 C2, 3, 4 = 0.05 μf
 C6 = 0.02 μf
 C7 = 2 μf
 C8 = 15 μf
 Q1 = 2N1111

R1 = 125 K ohms
 R2 = 1.5 K ohms
 R3 = 470 ohms
 R4 = 15 K ohms
 R5 = 2.7 K ohms
 R6 = 2.5 K ohms (Pot.)
 R7 = 820 ohms
 R8 = 33 K ohms

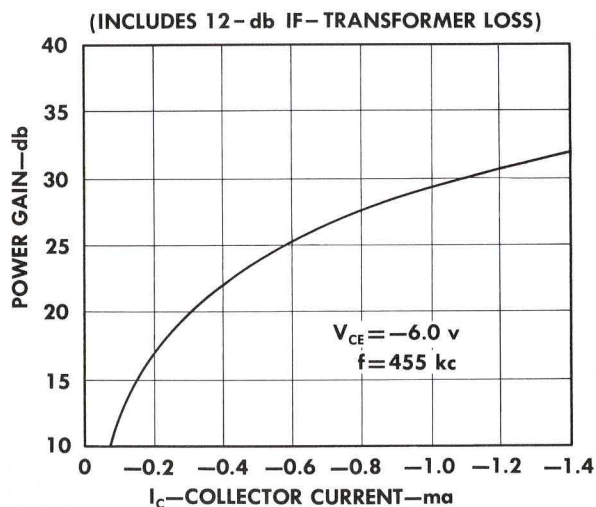


$Q_U = 65$
 $Q_L = 50$
 $N_1/N_2 = 3.38$
 $N_1/N_3 = 17.8$
 Insertion Loss = 13 db

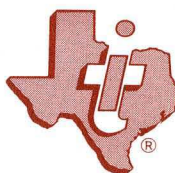
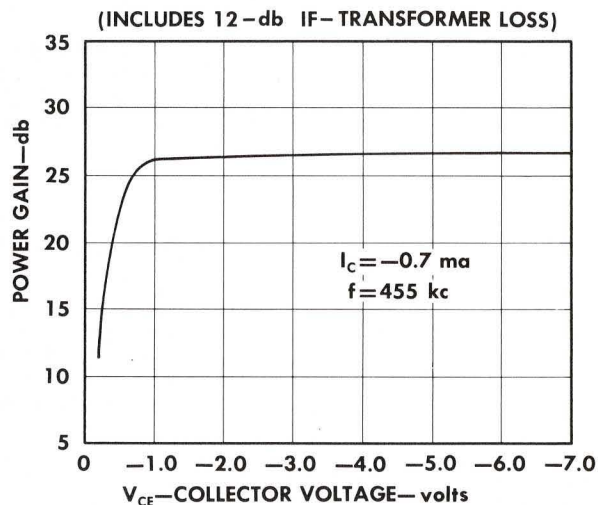


$Q_U = 90$
 $Q_L = 15$
 $N_1/N_2 = 2.32$
 $N_1/N_3 = 4.6$
 Insertion Loss = 1.6 db

TYPICAL POWER GAIN VS COLLECTOR CURRENT



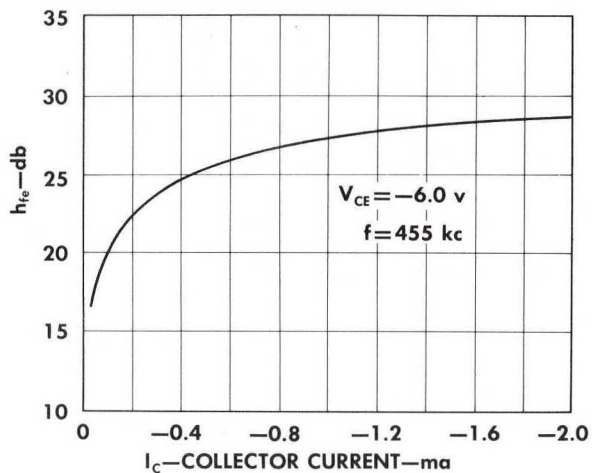
TYPICAL POWER GAIN VS COLLECTOR VOLTAGE



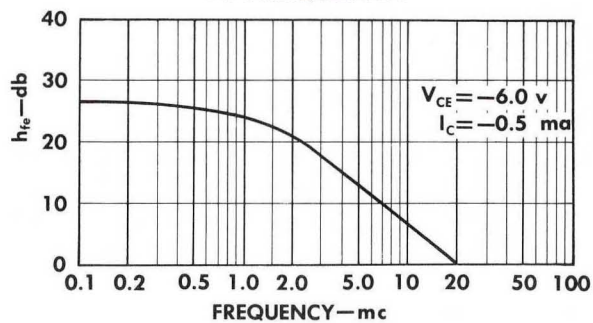
TYPE 2N1111

TYPICAL CHARACTERISTICS

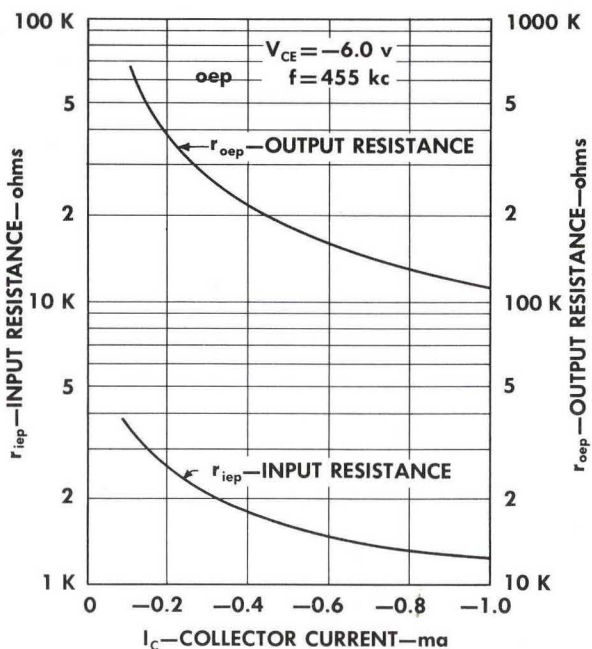
TYPICAL CURRENT AMPLIFICATION (h_{fe}) VS COLLECTOR CURRENT



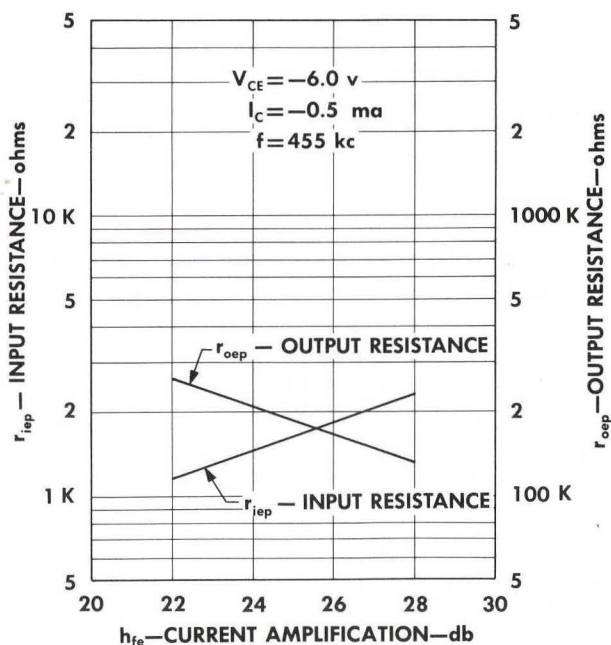
TYPICAL CURRENT AMPLIFICATION (h_{fe}) VS FREQUENCY



TYPICAL INPUT AND OUTPUT RESISTANCE VS I_C



TYPICAL INPUT AND OUTPUT RESISTANCE VS h_{fe}



r_{iep} = Common-emitter parallel input resistance with output shorted
 r_{oep} = Common-emitter parallel output resistance with input shorted

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