

2SC1844

DESCRIPTION The 2SC1844 is the best for the head amplifier of tape recorders, the equalizer of moving coil type record players, and etc.

- FEATURES**
- Super Low Noise. NV : 30 mV TYP. (See test circuit.)
 - High h_{FE} . h_{FE} : 400 TYP. ($V_{CE} = 6.0$ V, $I_C = 1.0$ mA)
 - Complementary to 2SA991.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature -55 to +125 °C

Junction Temperature +125 °C Maximum

Maximum Power Dissipation ($T_a = 25$ °C)

Total Power Dissipation 500 mW

Maximum Voltages and Currents ($T_a = 25$ °C)

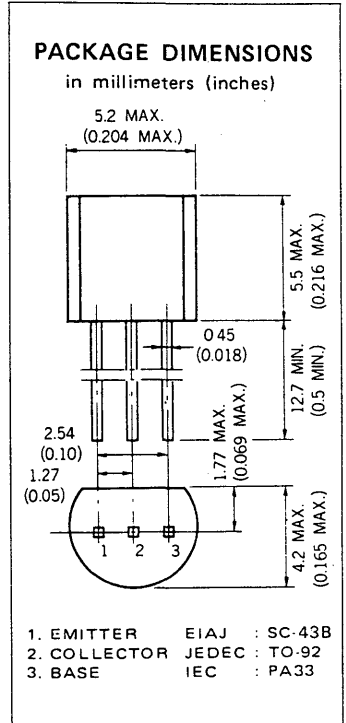
V_{CBO} Collector to Base Voltage 60 V

V_{CEO} Collector to Emitter Voltage 60 V

V_{EBO} Emitter to Base Voltage 5.0 V

I_C Collector Current 100 mA

I_B Base Current 20 mA



ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

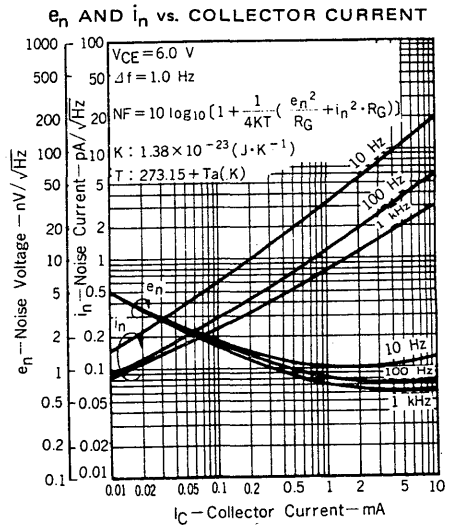
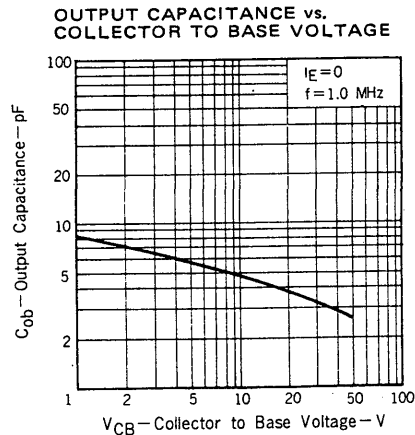
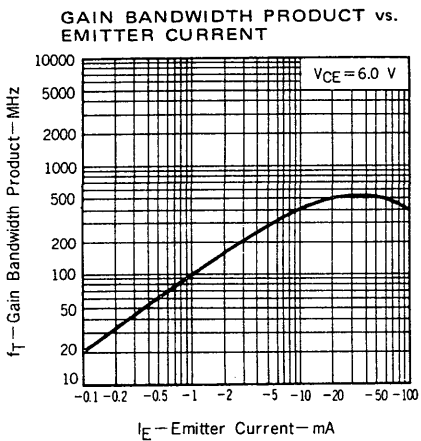
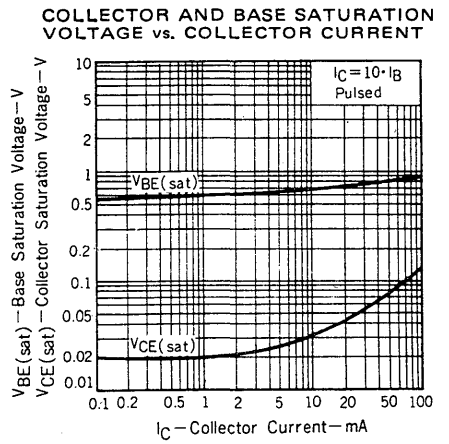
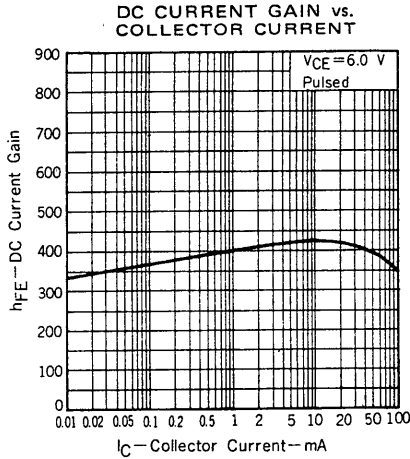
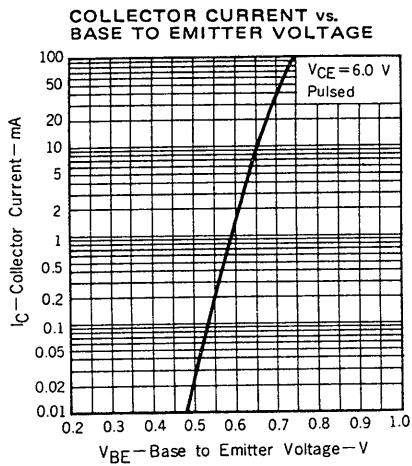
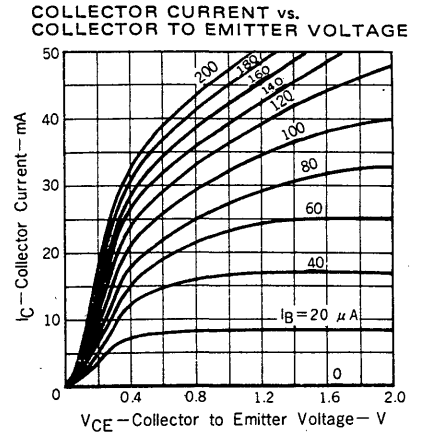
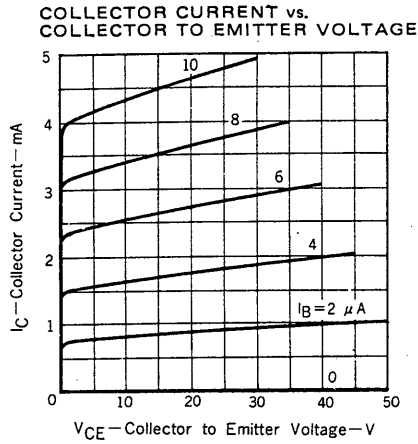
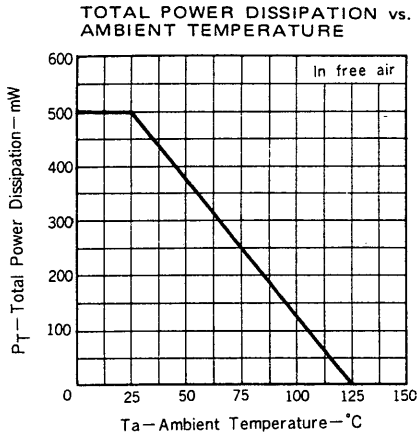
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	150	370		—	$V_{CE} = 6.0$ V, $I_C = 0.1$ mA
h_{FE2}	DC Current Gain	200	400	800	—	$V_{CE} = 6.0$ V, $I_C = 1.0$ mA
f_T	Gain Bandwidth Product	50	100		MHz	$V_{CE} = 6.0$ V, $I_E = -1.0$ mA
C_{ob}	Output Capacitance		4.8	8.0	pF	$V_{CB} = 10$ V, $I_E = 0$, $f = 1.0$ MHz
NV	Noise Voltage		30	45	mV	$V_{CE} = 5.0$ V, $I_C = 1.0$ mA, $R_G = 100$ k Ω $G_v = 80$ dB, $f = 10$ Hz to 1.0 kHz
I_{CBO}	Collector Cutoff Current			50	nA	$V_{CB} = 60$ V, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			50	nA	$V_{EB} = 5.0$ V, $I_C = 0$
V_{BE}	Base to Emitter Voltage	0.55	0.59	0.65	V	$V_{CE} = 6.0$ V, $I_C = 1.0$ mA
$V_{CE(sat)}$	Collector Saturation Voltage		0.13	0.30	V	$I_C = 100$ mA, $I_B = 10$ mA

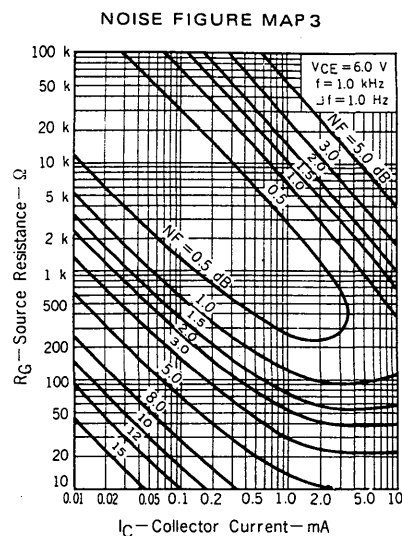
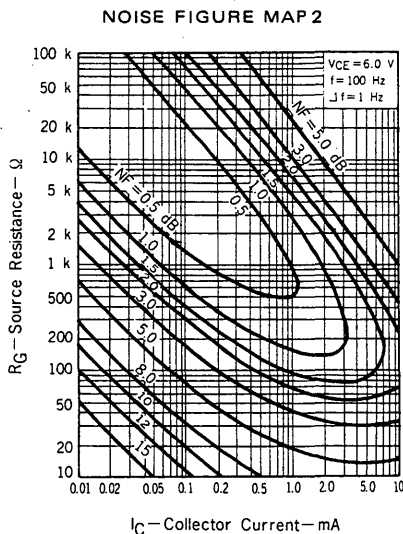
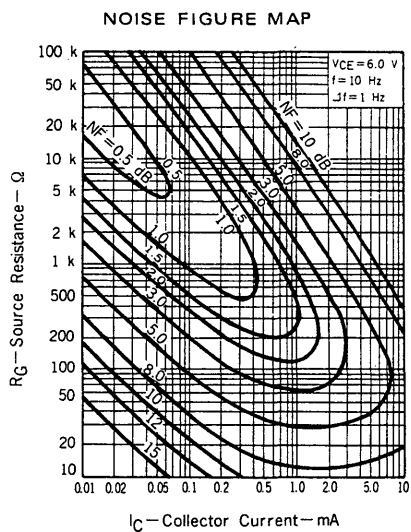
Classification of h_{FE2}

Rank	P	F	E
Range	200 - 400	300 - 600	400 - 800

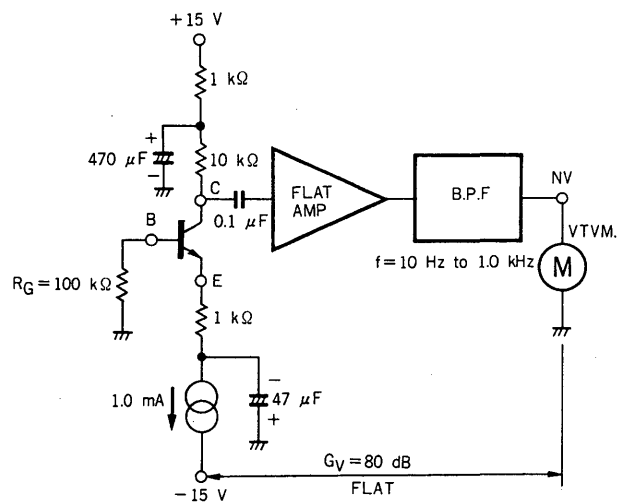
h_{FE} Test Conditions : $V_{CE} = 6.0$ V, $I_C = 1.0$ mA

TYPICAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)





NOISE VOLTAGE TEST CIRCUIT



V_{CE} = 5 V, I_C = 1.0 mA, R_G = 100 k Ω , G_V = 80 dB FLAT (f = 10 Hz to 1.0 kHz)