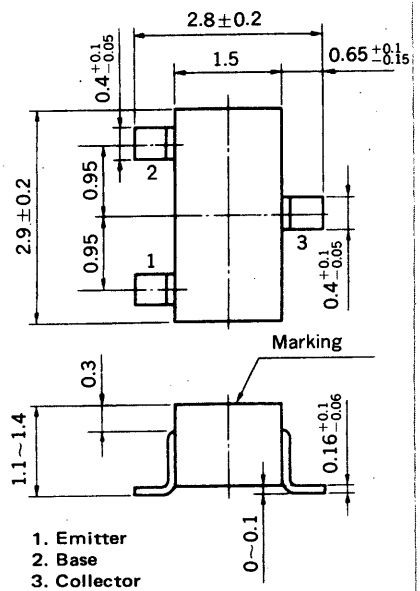
NEC
ELECTRON DEVICE

SILICON TRANSISTOR
2SC1622A

AUDIO FREQUENCY HIGH GAIN AMPLIFIER
NPN SILICON EPITAXIAL TRANSISTOR
MINI MOLD

PACKAGE DIMENSIONS
in millimeters



1. Emitter
2. Base
3. Collector

FEATURE

- High DC Current Gain: h_{FE} = 600 TYP. (V_{CE} = 6.0 V, I_C = 1.0 mA)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current (T_a = 25 °C)			
Collector to Base Voltage	V_{CBO}	120	V
Collector to Emitter Voltage	V_{CEO}	120	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I_C	50	mA
Maximum Power Dissipation			
Total Power Dissipation at 25 °C Ambient Temperature	P_T	200	mW
Maximum Temperatures			
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			0.05	μA	V_{CB} = 120 V, I_E = 0
Emitter Cutoff Current	I_{EBO}			0.05	μA	V_{EB} = 5.0 V, I_C = 0
DC Current Gain	h_{FE1}	100				V_{CE} = 6.0 V, I_C = 0.1 mA
DC Current Gain	h_{FE2}	135	500	900		V_{CE} = 6.0 V, I_C = 1.0 mA*
Collector Saturation Voltage	$V_{CE(sat)}$		0.07	0.30	V	I_C = 10 mA, I_B = 1.0 mA
Base to Emitter Voltage	V_{BE}	0.55	0.58	0.65	V	V_{CE} = 6.0 V, I_C = 1.0 mA
Gain Bandwidth Product	f_T	50	110		MHz	V_{CE} = 6.0 V, I_E = −1.0 mA
Output Capacitance	C_{ob}		1.6	2.5	pF	V_{CB} = 30 V, I_E = 0, f = 1.0 MHz

* Pulsed: PW ≦ 350 μs, Duty Cycle ≦ 2 %

h_{FE} Classification

Marking	D15	D16	D17	D18
h_{FE2}	135 to 270	200 to 400	300 to 600	450 to 900

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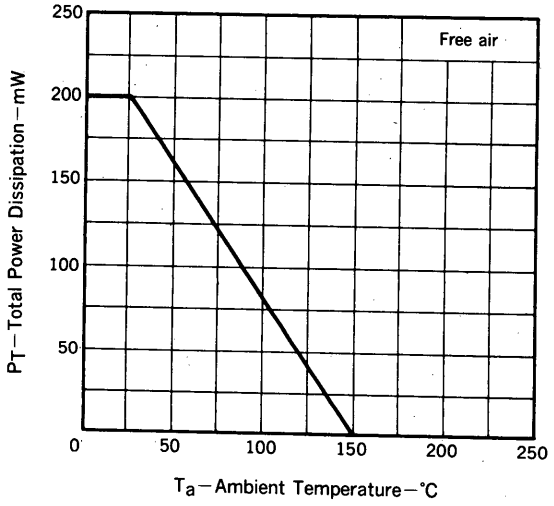
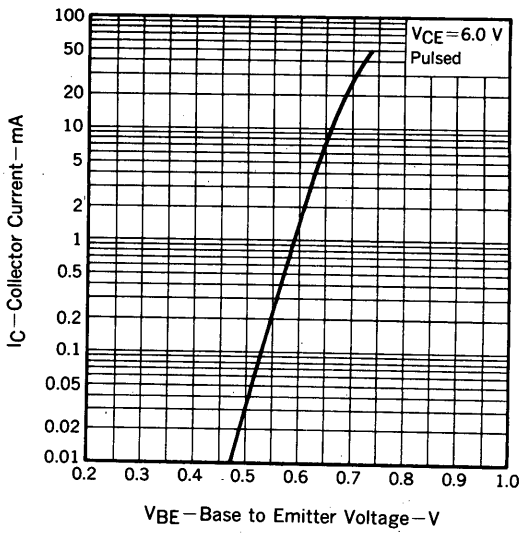
TYPICAL CHARACTERISTICS (T_a = 25 °C)

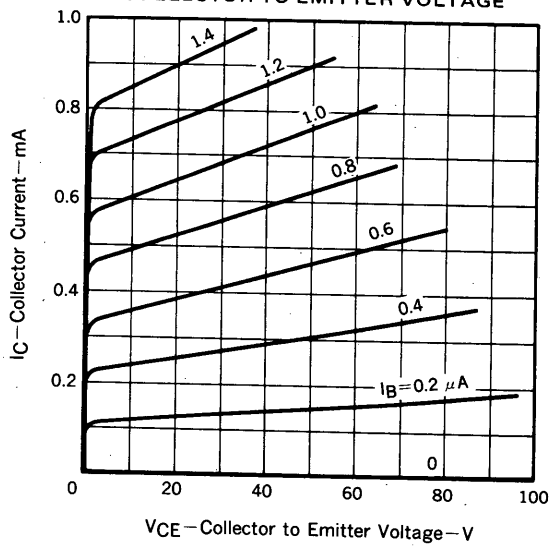
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



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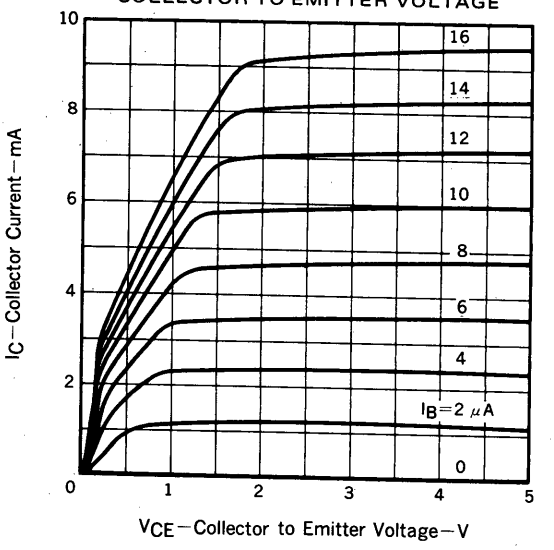
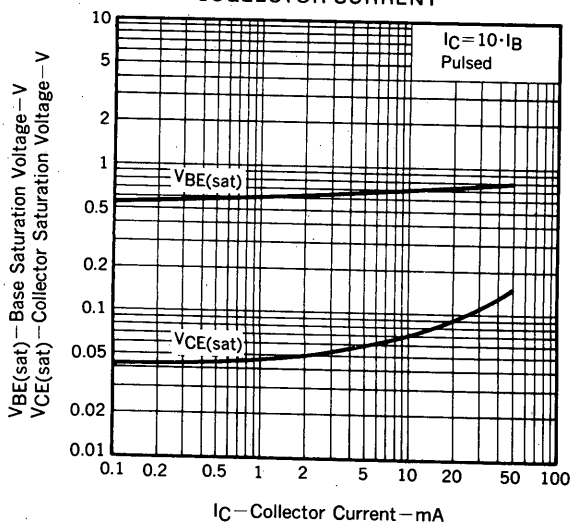
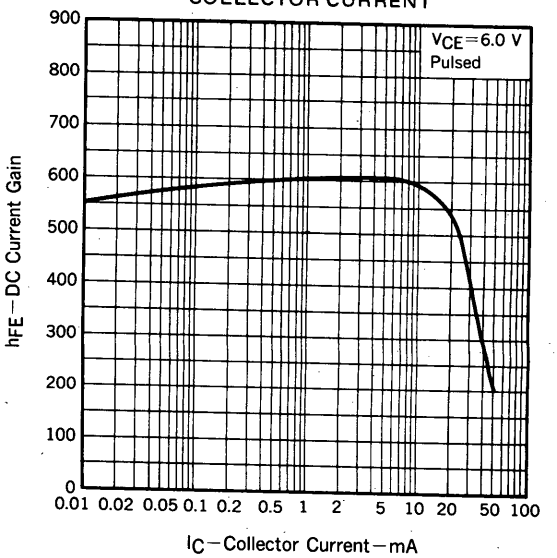


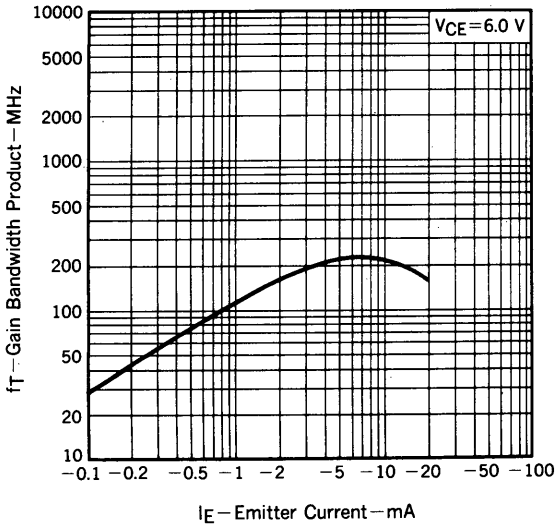
BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



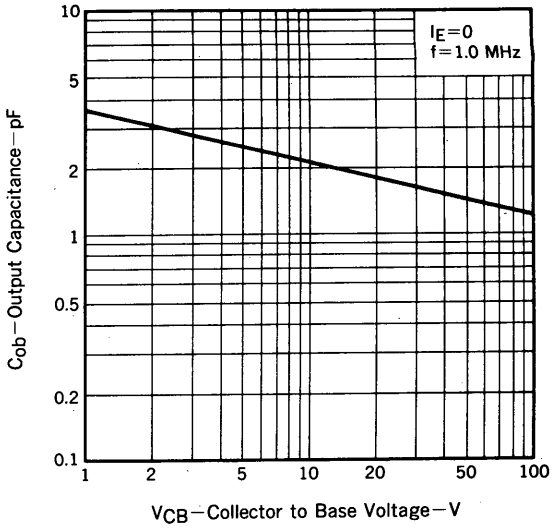
DC CURRENT GAIN vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs.
EMITTER CURRENT



OUTPUT CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



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TC–1482A
AUG.–31–84M
Printed in Japan