

SILICON TRANSISTOR

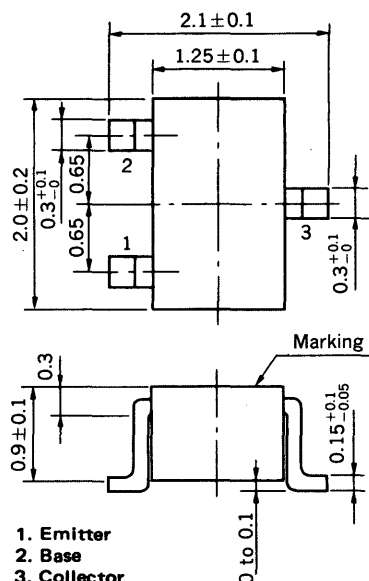
2SA1612

AUDIO FREQUENCY HIGH GAIN AMPLIFIER

PNP SILICON EPITAXIAL TRANSISTOR

PACKAGE DIMENSIONS

in millimeters



FEATURES

- Complementary to 2SC4180
- High DC Current Gain: h_{FE} 500 TYP. ($V_{CE} = -6.0$ V, $I_C = -1.0$ mA)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ\text{C}$)

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	150	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

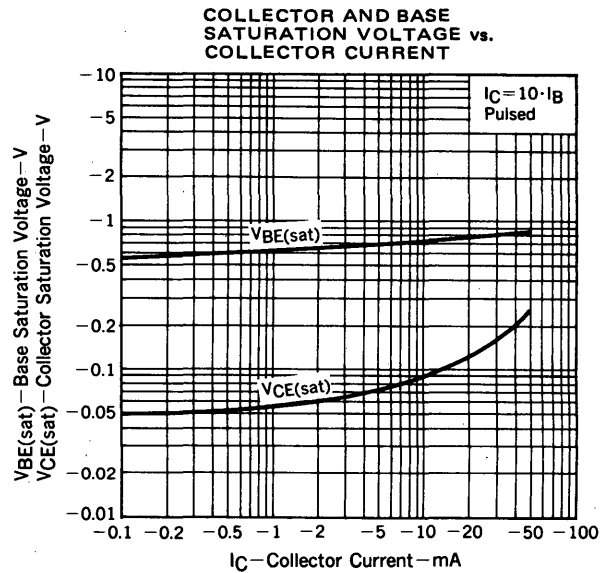
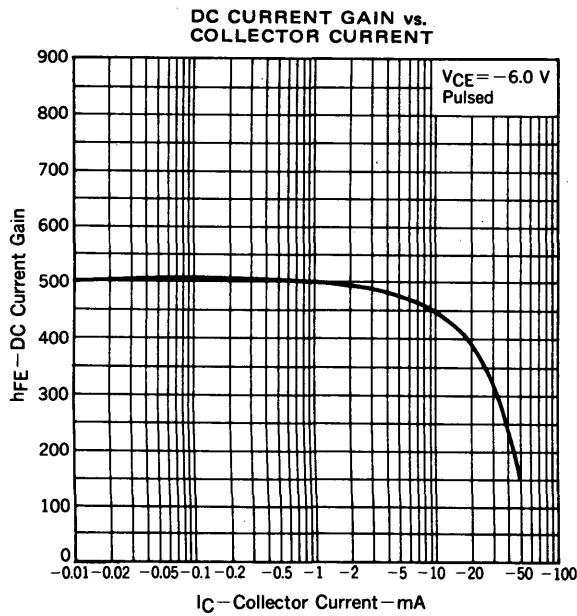
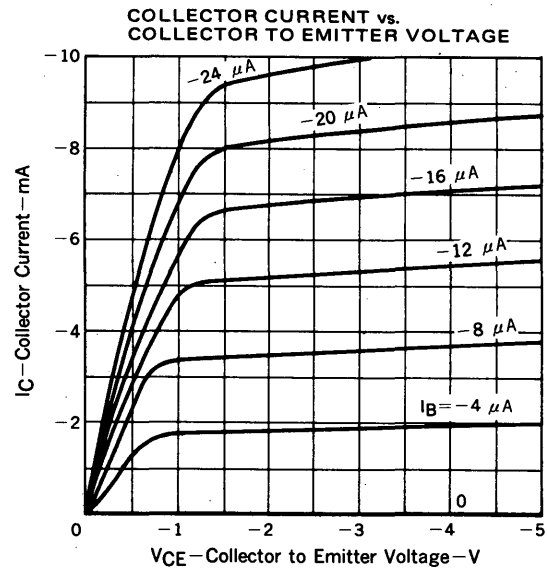
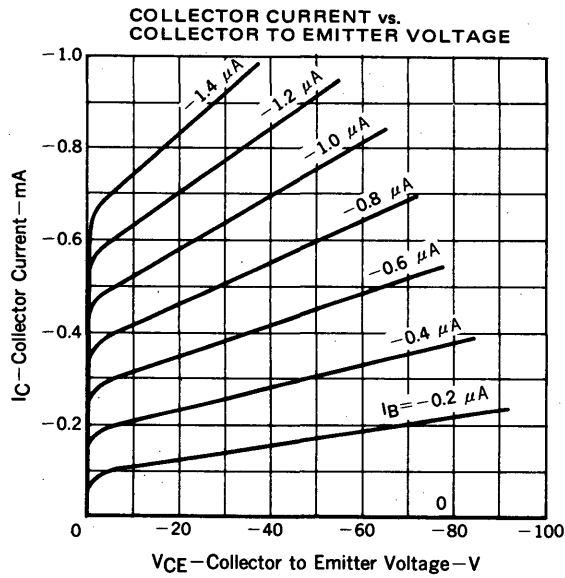
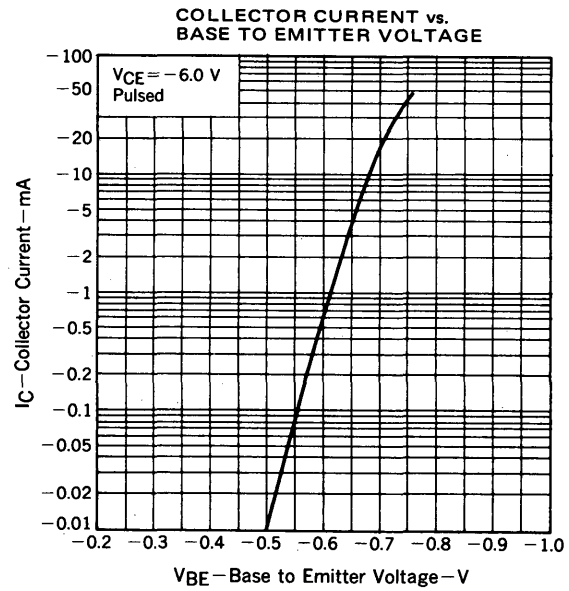
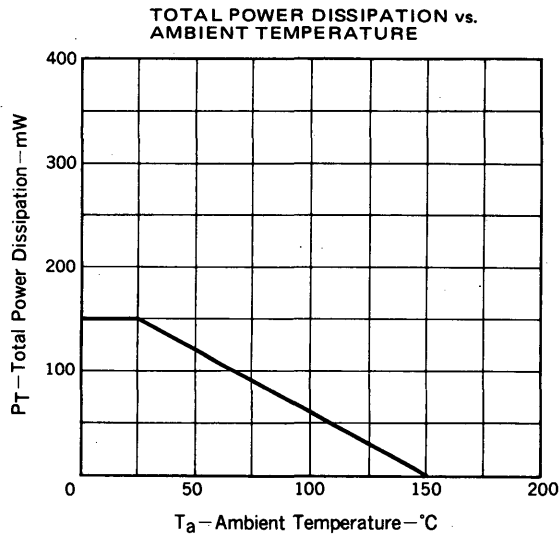
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			-50	nA	$V_{CB} = -120$ V, $I_E = 0$
Emitter Cutoff Current	I_{EBO}			-50	nA	$V_{EB} = -5.0$ V, $I_C = 0$
DC Current Gain	h_{FE1}	100	500			$V_{CE} = -6.0$ V, $I_C = -0.1$ mA*
DC Current Gain	h_{FE2}	135	500	900		$V_{CE} = -6.0$ V, $I_C = -1.0$ mA
Collector Saturation Voltage	$V_{CE(sat)}$		-0.09	-0.30	V	$I_C = -10$ mA, $I_B = -1.0$ mA
Base to Emitter Voltage	V_{BE}	-0.55	-0.61	-0.65	V	$V_{CE} = -6.0$ V, $I_C = -1.0$ mA
Gain Bandwidth Product	f_T	50	90		MHz	$V_{CE} = -6.0$ V, $I_E = 1.0$ mA
Output Capacitance	C_{ob}		2.0	3.0	pF	$V_{CB} = -30$ V, $I_E = 0$, $f = 1.0$ MHz

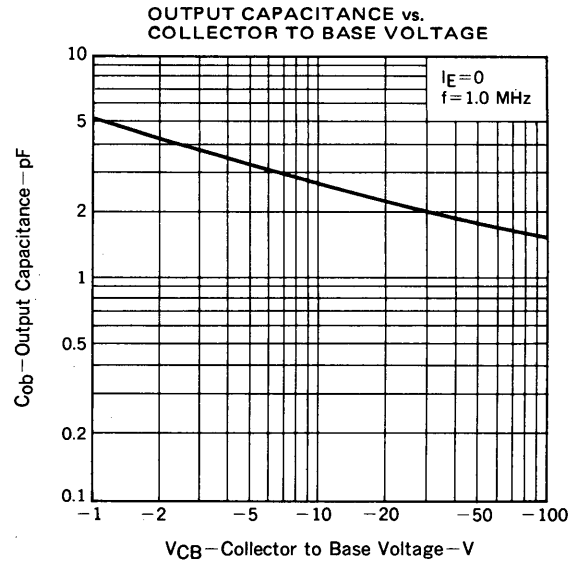
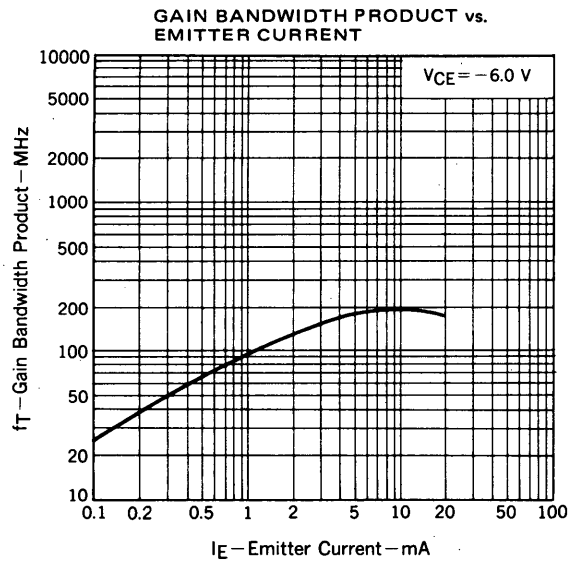
* Pulsed: $PW \leq 350$ μs , Duty Cycle $\leq 2\%$

h_{FE2} Classification

Marking	C15	C16	C17	C18
h_{FE2}	135 to 270	200 to 400	300 to 600	450 to 900

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)





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