

SILICON TRANSISTOR

2SC1623

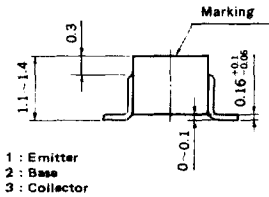
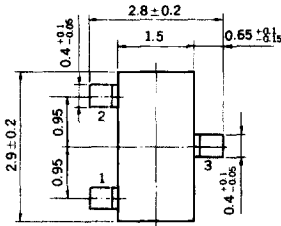
AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER

NPN SILICON EPITAXIAL TRANSISTOR

MINI MOLD

PACKAGE DIMENSIONS

in millimeters



FEATURES

- High DC Current Gain: $h_{FE} = 200$ TYP. ($V_{CE} = 6.0$ V, $I_C = 1.0$ mA)
- High Voltage: $V_{CEO} = 50$ V

ABSOLUTE MAXIMUM RATINGS

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

Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I_C	100	mA

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature	P_T	200	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 ($T_a = 25^\circ\text{C}$)

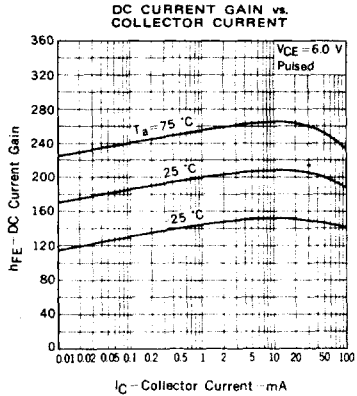
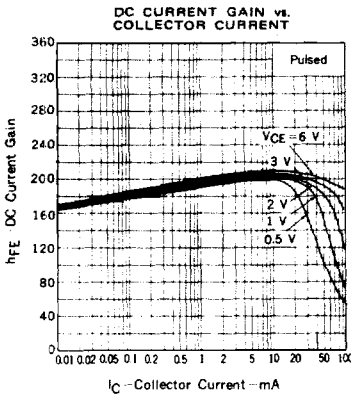
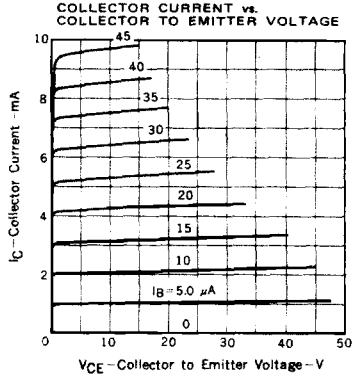
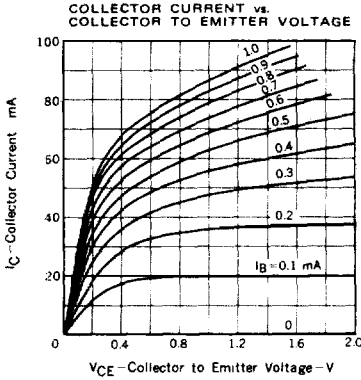
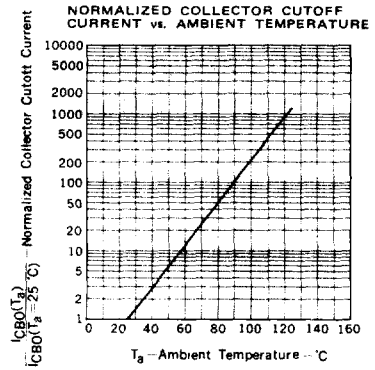
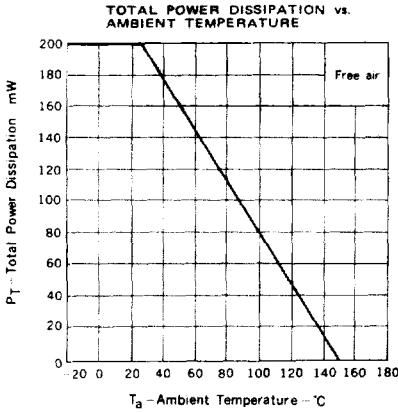
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			0.1	μA	$V_{CB} = 60$ V, $I_E = 0$
Emitter Cutoff Current	I_{EBO}			0.1	μA	$V_{EB} = 5.0$ V, $I_C = 0$
DC Current Gain	h_{FE}	90	200	600		$V_{CE} = 6.0$ V, $I_C = 1.0$ mA*
Collector Saturation Voltage	$V_{CE(sat)}$		0.15	0.3	V	$I_C = 100$ mA, $I_B = 10$ mA
Base to Saturation Voltage	$V_{BE(sat)}$		0.86	1.0	V	$I_C = 100$ mA, $I_B = 10$ mA
Base Emitter Voltage	V_{BE}	0.55	0.62	0.65	V	$V_{CE} = 6.0$ V, $I_C = 1.0$ mA
Gain Bandwidth Product	f_T		250		MHz	$V_{CE} = 6.0$ V, $I_E = -10$ mA
Output Capacitance	C_{ob}		3.2		pF	$V_{CB} = 6.0$ V, $I_E = 0$, $f = 1.0$ MHz

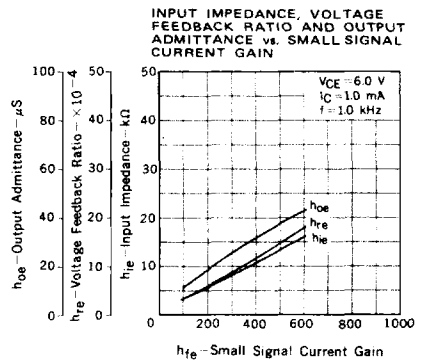
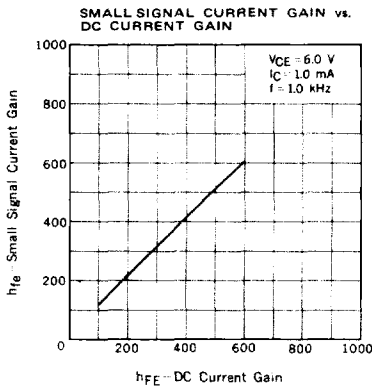
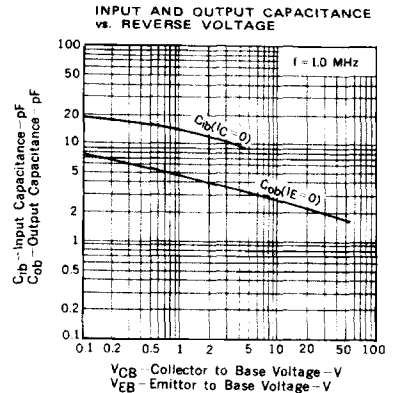
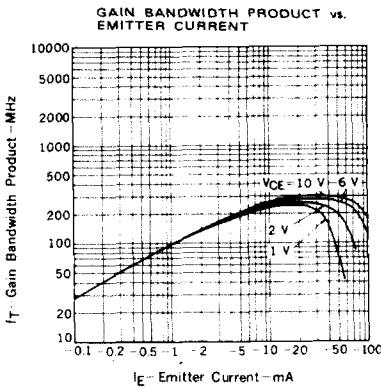
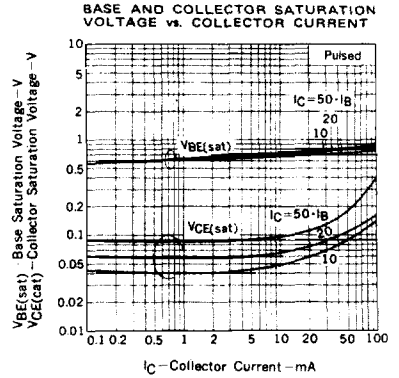
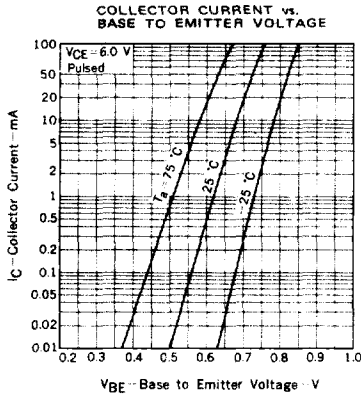
* Pulsed: $PW \leq 350$ μs , Duty Cycle $\leq 2\%$

h_{FE} Classification

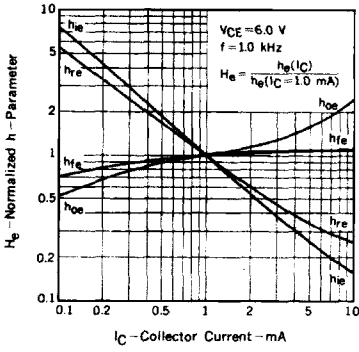
Marking	L4	L5	L6	L7
h_{FE}	90 to 180	135 to 270	200 to 400	300 to 600

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





NORMALIZED h-PARAMETER vs. COLLECTOR CURRENT



NORMALIZED h-PARAMETER vs. COLLECTOR TO EMITTER VOLTAGE

