

SILICON TRANSISTOR 2SC1623

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER NPN SILICON EPITAXIAL TRANSISTOR MINI MOLD

FEATURES

High DC Current Gain: hfe = 200 TYP.
 (Vce = 6.0 V, Ic = 1.0 mA)

• High Voltage: VcEo = 50 V

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current (TA = 25 °C)

Collector to Base Voltage Vсво 60 ٧ Collector to Emitter Voltage 50 Vceo ٧ Emitter to Base Voltage 5.0 V_{EBO} V Collector Current (DC) lс 100 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

PACKAGE DIMENSIONS in millimeters 2.8 ± 0.2 1.5 0.65 ± 0.1 0.6

ELECTRICAL CHARACTERISTICS (TA = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	Ісво			0.1	μΑ	Vcb = 60 V, IE = 0
Emitter Cutoff Current	Ієво			0.1	μΑ	V _{EB} = 5.0 V, I _C = 0
DC Current Gain	hfe	90	200	600		Vce = 6.0 V, Ic = 1.0 mA*
Collector Saturation Voltage	V _{CE(sat)}		0.15	0.3	V	Ic = 100 mA, I _B = 10 mA*
Base to Saturation Voltage	V _{BE(sat)}		0.86	1.0	V	Ic = 100 mA, I _B = 10 mA*
Base Emitter Voltage	VBE	0.55	0.62	0.65	V	Vce = 6.0 V, Ic = 1.0 mA*
Gain Bandwidth Product	f⊤		250		MHz	Vce = 6.0 V, Ie = -10 mA
Output Capacitance	Cob		3.0		pF	Vcb = 6.0 V, IE = 0, f = 1.0 MHz

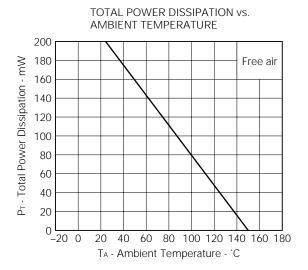
^{*} Pulsed: PW \leq 350 μ s, Duty Cycle \leq 2 %

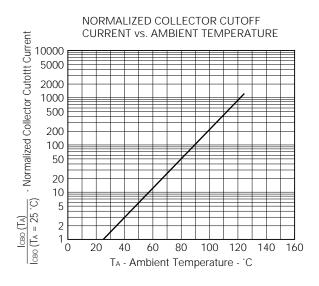
hfe Classification

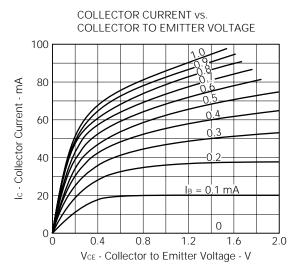
Marking	L4	L5	L6	L7
hfe	90 to 180	135 to 270	200 to 400	300 to 600

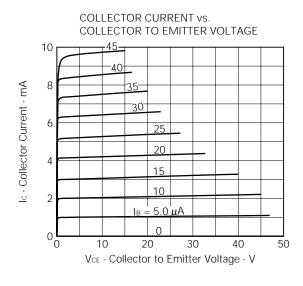


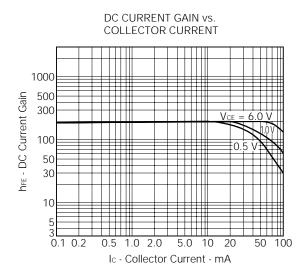
TYPICAL CHARACTERISTICS (TA = 25 °C)

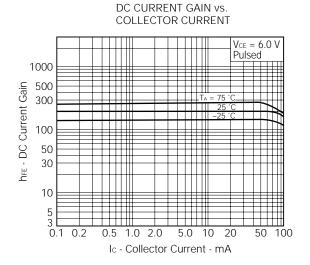




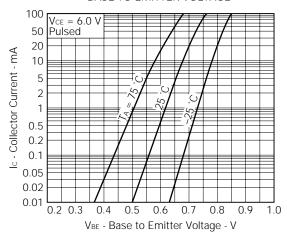




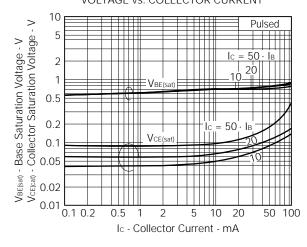




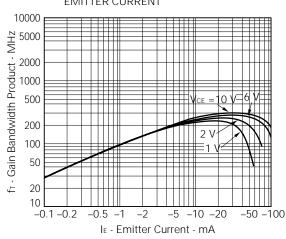
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



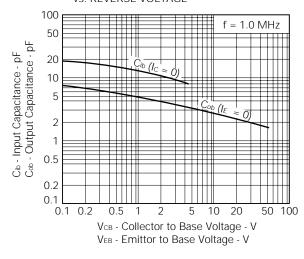
COLLECTOR AND BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



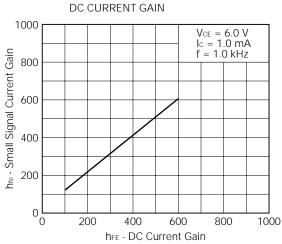
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



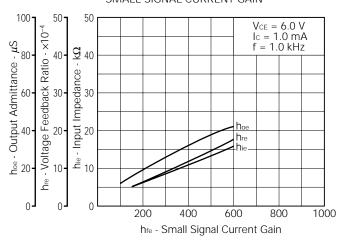
INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



SMALL SIGNAL CURRENT GAIN vs.

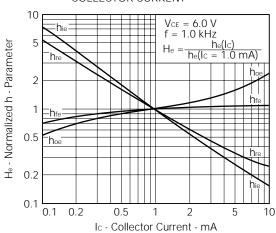


INPUT IMPEDANCE VOLTAGE FEEDBACK RATIO AND OUTPUT ADMITTANCE vs. SMALL SIGNAL CURRENT GAIN

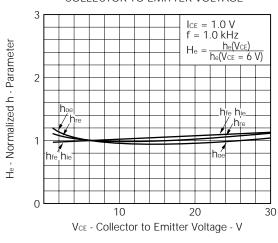




NORMALIZED h-PARAMETER vs. COLLECTOR CURRENT



NORMALIZED h-PARAMETER vs. COLLECTOR TO EMITTER VOLTAGE



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Anti-radioactive design is not implemented in this product.

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