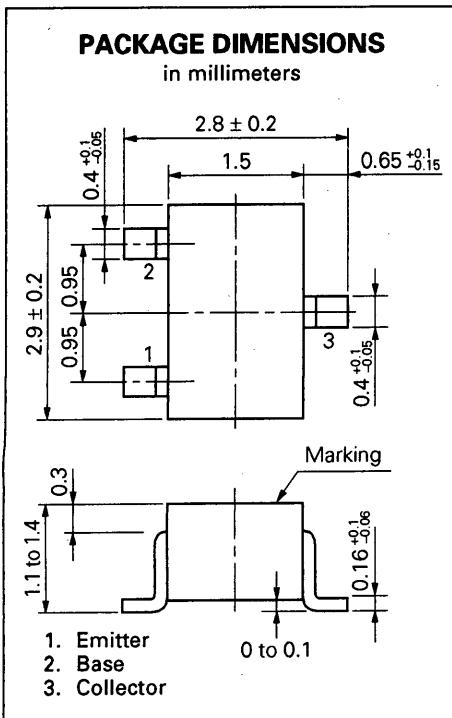


AUDIO FREQUENCY, GENERAL PURPOSE AMPLIFIER  
PNP SILICON EPITAXIAL TRANSISTOR  
MINI MOLD



**FEATURES**

- Complementary to 2SC1623
- High DC Current Gain:  $h_{FE} = 200$  TYP. ( $V_{CE} = -6.0$  V,  $I_C = -1.0$  mA)
- High Voltage:  $V_{CEO} = -50$  V

**QUALITY GRADE**

Standard

Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25$  °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
Total Power Dissipation	$P_T$	200	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS ( $T_a = 25$  °C)**

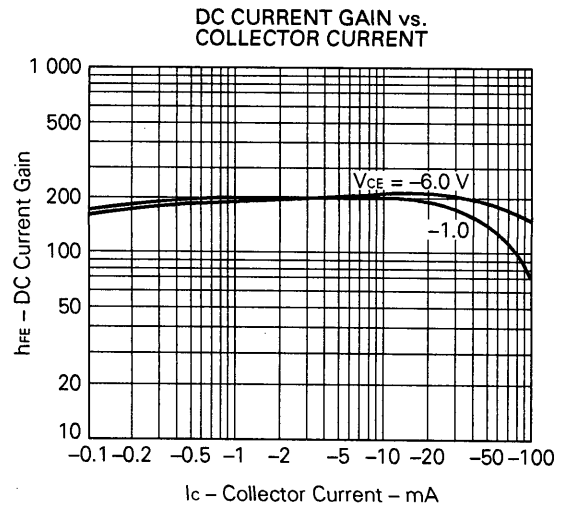
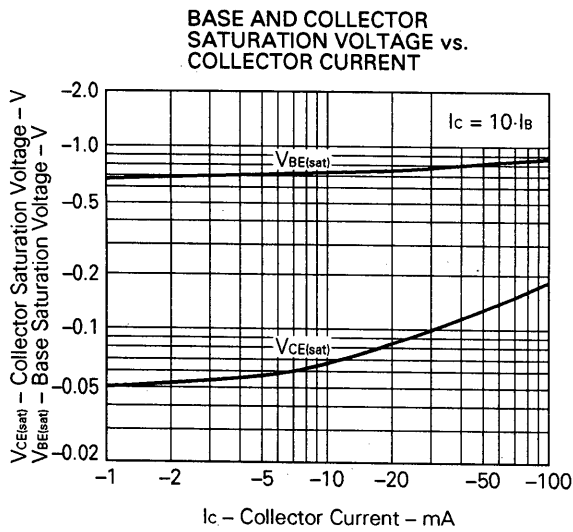
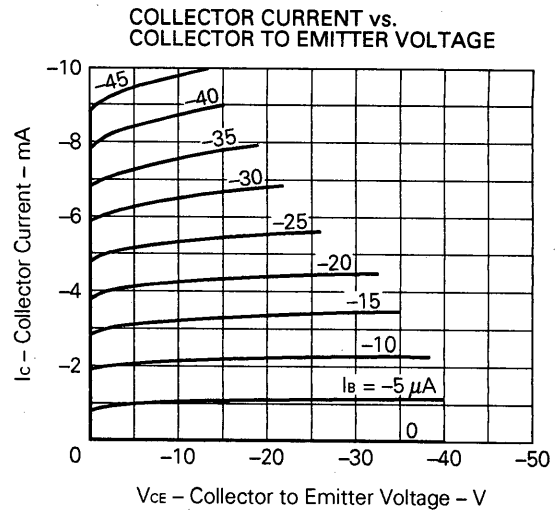
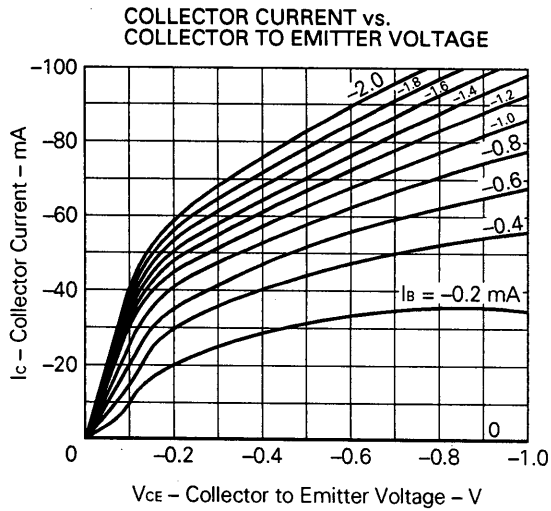
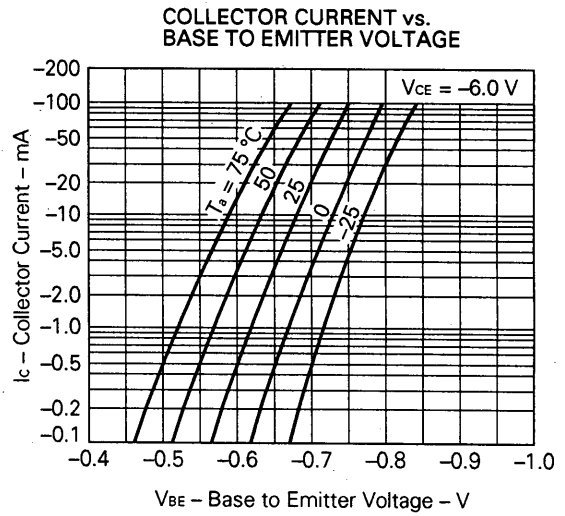
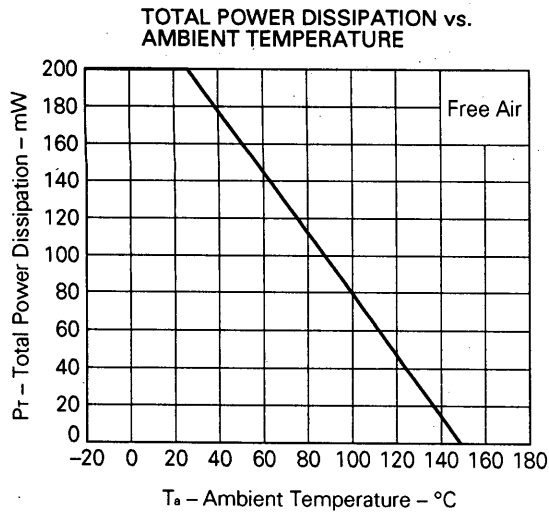
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			-0.1	$\mu A$	$V_{CB} = -60$ V, $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			-0.1	$\mu A$	$V_{EB} = -5.0$ V, $I_C = 0$
DC Current Gain	$h_{FE}$	90	200	600		$V_{CE} = -6.0$ V, $I_C = -1.0$ mA*
Collector Saturation Voltage	$V_{CE(sat)}$		-0.18	-0.3	V	$I_C = -100$ mA, $I_B = -10$ mA
Base to Emitter Voltage	$V_{BE}$	-0.58	-0.62	-0.68	V	$V_{CE} = 6.0$ V, $I_C = -1.0$ mA
Gain Bandwidth Product	$f_T$		180		MHz	$V_{CE} = -6.0$ V, $I_E = 10$ mA
Output Capacitance	$C_{ob}$		4.5		pF	$V_{CB} = -10$ V, $I_E = 0$ , $f = 1.0$ MHz

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

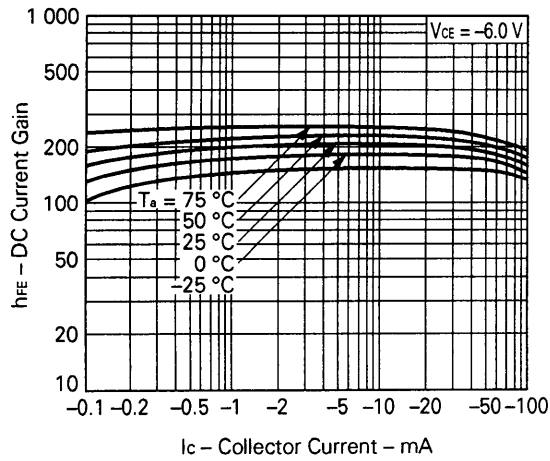
**$h_{FE}$  Classification**

Marking	M4	M5	M6	M7
$h_{FE}$	90 to 180	135 to 270	200 to 400	300 to 600

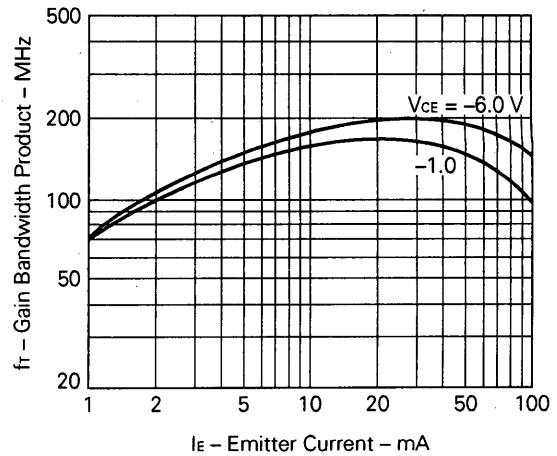
TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )



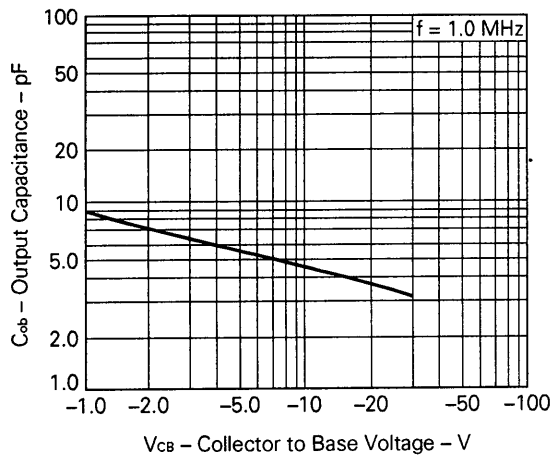
DC CURRENT GAIN vs. COLLECTOR CURRENT



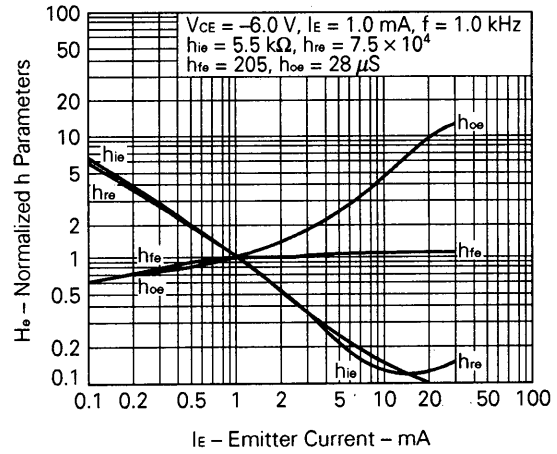
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



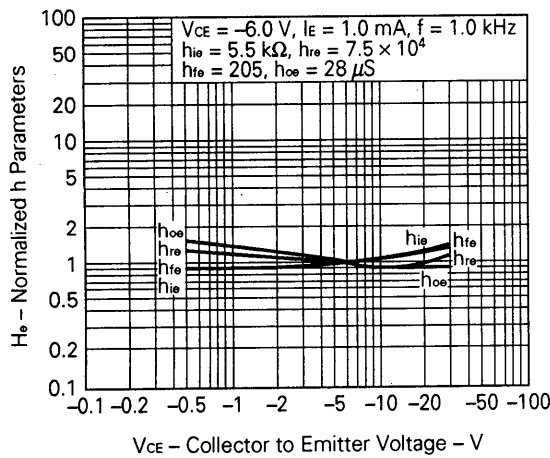
OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



NORMALIZED h PARAMETER vs. EMITTER CURRENT



NORMALIZED h PARAMETER vs. COLLECTOR TO EMITTER VOLTAGE



**REFERENCE APPLICATION NOTE**

ASSEMBLY MANUAL FOR SEMICONDUCTOR DEVICES	IEI-1207
QUALITY CONTROL OF NEC SEMICONDUCTOR DEVICES	TEI-1202
QUALITY CONTROL GUIDE OF SEMICONDUCTOR DEVICES	MEI-1202

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Application examples recommended by NEC Corporation.

Standard: Computer, Office equipment, Communication equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment, Other consumer products, etc.

Special: Automotive and Transportation equipment, Traffic control systems, Antidisaster systems, Anticrime systems, etc.