



1.EMITTER
2.COLLECTOR
3.BASE

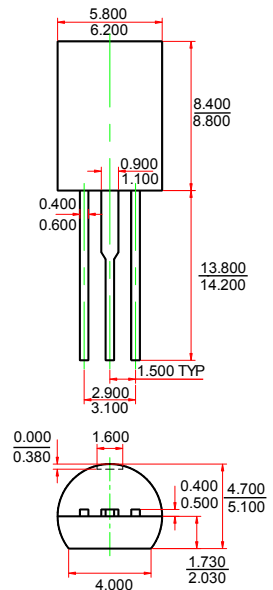
Features

- ✧ Audio power amplifier
- ✧ Complement to Application

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$

TO-92MOD



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYPE	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C = -10\text{ mA}$, $I_B = 0$	-30			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E = -1\text{mA}$, $I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}$, $I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -500\text{mA}$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5\text{ A}$, $I_B = -0.03\text{A}$			-2	V
Base-emitter voltage	V_{BE}	$I_C = -500\text{ mA}$, $V_{CE} = -2\text{V}$			-1	V
Transition frequency	f_T	$V_{CE} = -2\text{ V}$, $I_C = -500\text{mA}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		48		pF

CLASSIFICATION OF h_{FE}

Rank	O	Y
Range	100-200	160-320

Typical Characteristics

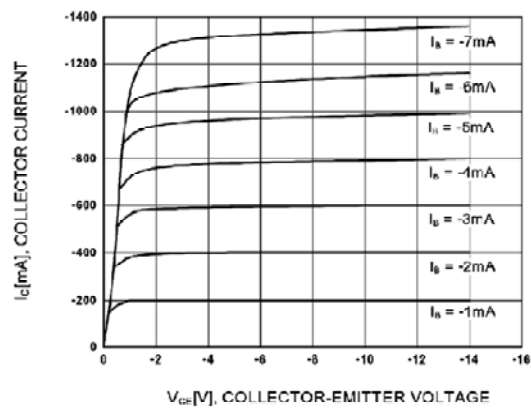


Figure 1. Static Characteristic

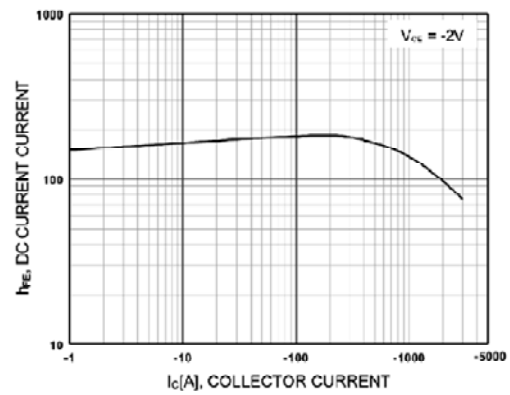


Figure 2. DC current Gain

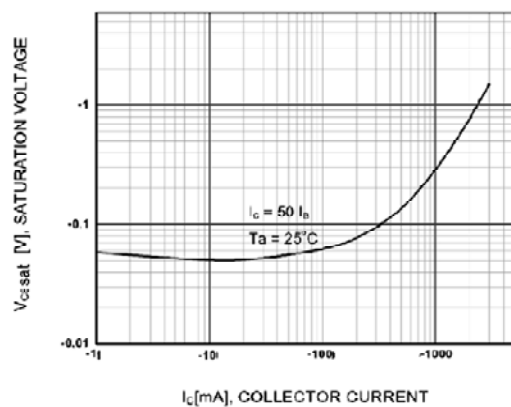


Figure 3. Collector-Emmitter Saturation Voltage

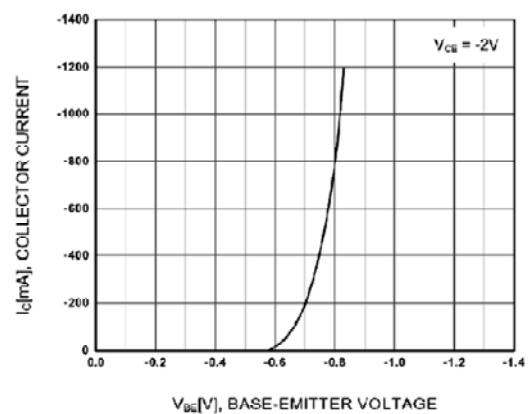


Figure 4. Base-Emitter On Voltage

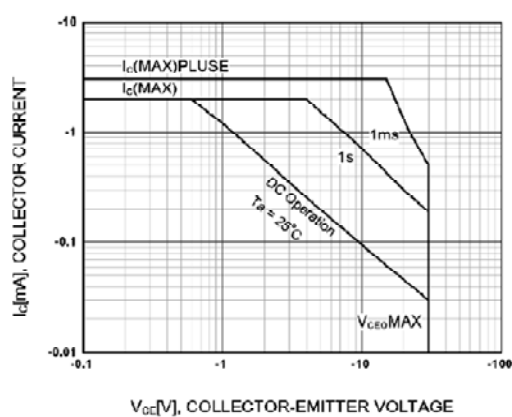


Figure 5. Safe Operating Area

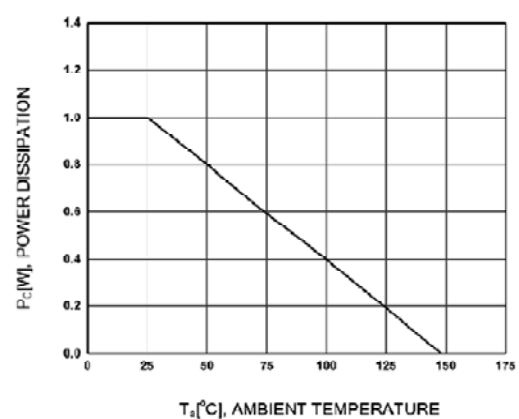


Figure 6. Power Derating