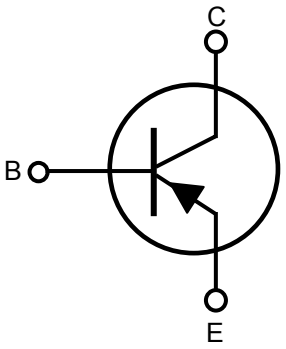
■ Product characteristics

V_{CBO}	-300V
V_{CEO}	-300V
I_C	-18A

Symbol

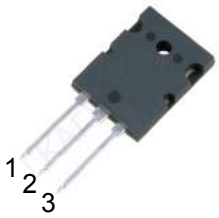


■ Applications

High-Fidelity Audio Output Amplifier
General Purpose Power Amplifier

■ Features

High Voltage : V_{CEO}=-300V
Complement to 2SC5200



1:B 2:C 3:E

■ Absolute Maximum Ratings (T_C=25℃ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	BV_{CBO}	-300	V
Collector-Emitter Voltage	BV_{CEO}	-300	V
Emitter-Base Voltage	BV_{EBO}	-5	V
Collector Current(DC)	I_C	-18	A
Base Current	I_B	-1.5	A
Total Device Dissipation(T_C=25°C)	P_D	180	W
Derate above 25°C		1.04	W/°C
Junction and Storage Temperature	T_J, T_{STG}	- 50 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

■ Electrical Characteristics (T_C=25℃ unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=-5mA, I_E=0	-300			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=-10mA, R_{BE}=∞	-300			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-5mA, I_C=0	-5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=-300V, I_E=0			-5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=-5V, I_C=0			-5.0	μA
DC Current Gain	h_{FE1}	V_{CE}=-5V, I_C=-1A	55		160	
DC Current Gain	h_{FE2}	V_{CE}=-5V, I_C=-7A	35	60		
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=-8A, I_B=-0.8A		-0.4	-3.0	V
Base-Emitter On Voltage	V_{BE}(on)	V_{CE}=-5V, I_C=-7A		-1.0	-1.5	V
Current Gain Bandwidth Product	f_T	V_{CE}=-5V, I_C=-1A		30		MHz
Output Capacitance	C_{ob}	V_{CB}=-10V, f=1MHz		200		pF

* Pulse Test: Pulse Width=20μs, Duty Cycle≤2%

■ Typical Performance Characteristics

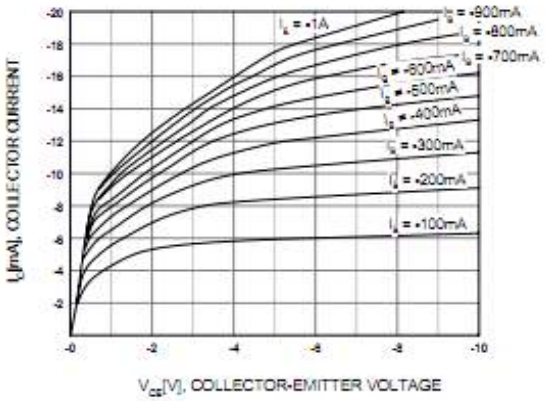


Figure 1. Static Characteristic

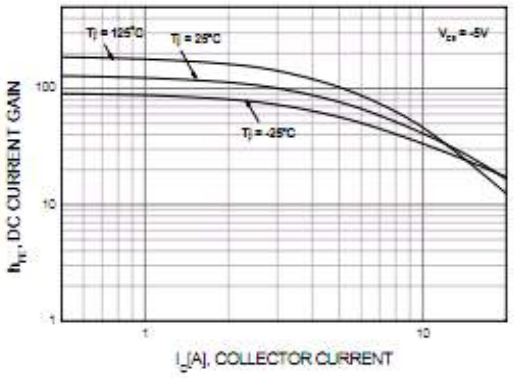


Figure 2. DC current Gain

Figure 3. Base-Emitter Saturation Voltage

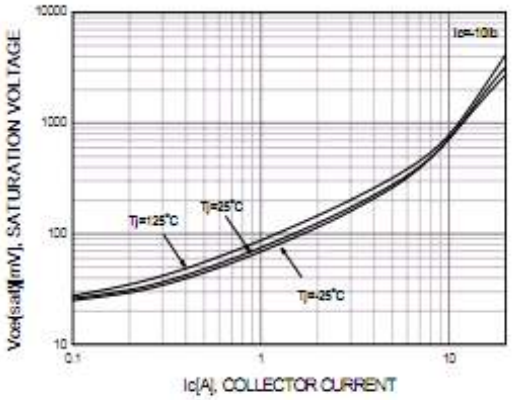


Figure 4. Collector-Emitter Saturation Voltage

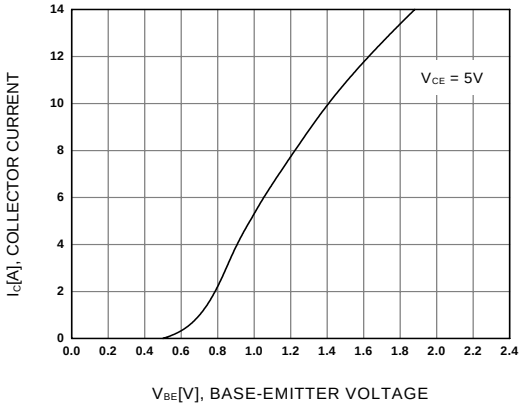


Figure 5. Base-Emitter On Voltage

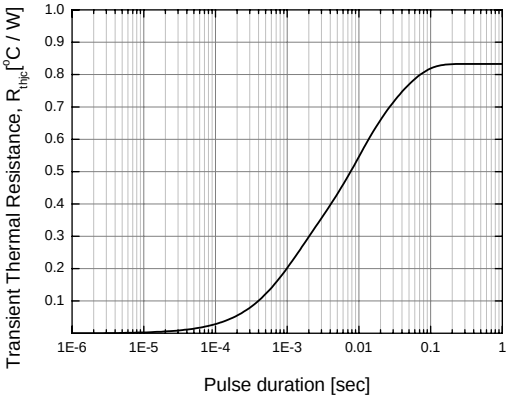


Figure 6. Thermal Resistance

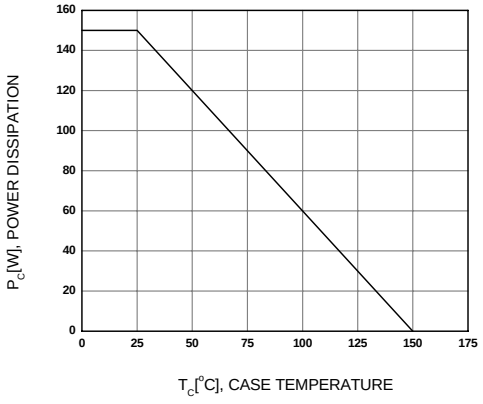


Figure 7. Power Derating

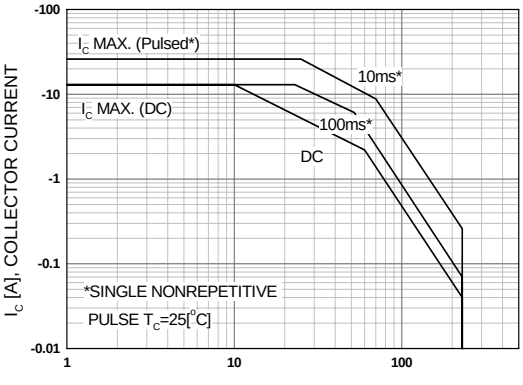


Figure 8. Safe Operating Area

■ TO-3PL Package mechanical data