

■ Product characteristics

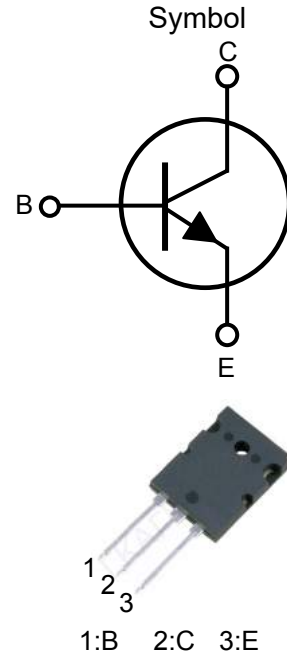
V_{CBO}	300V
V_{CEO}	300V
I_C	18A

■ Applications

High-Fidelity Audio Output Amplifier
General Purpose Power Amplifier

■ Features

High Voltage : $V_{CEO}=300V$
Complement to 2SA1943



■ Absolute Maximum Ratings ($T_C=25^\circ C$ 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($T_C=25^\circ C$)	P_D	180	W
Derate above $25^\circ C$		1.04	W/ $^\circ C$
Junction and Storage Temperature	T_J, T_{STG}	- 50 ~ +150	$^\circ C$

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

■ Electrical Characteristics ($T_C=25^\circ C$ 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}	$I_C=10mA, R_{BE}=\infty$	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=20 μs , Duty Cycle $\leq 2\%$

■ Typical Performance Characteristics

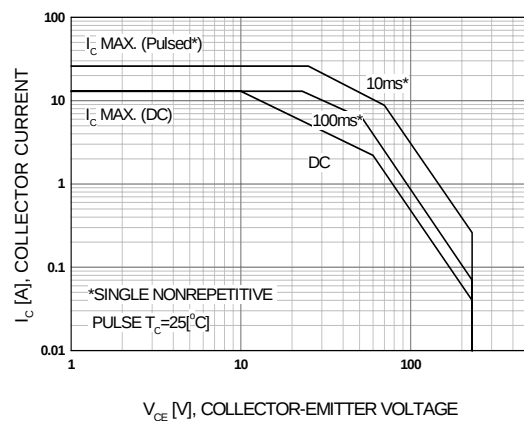
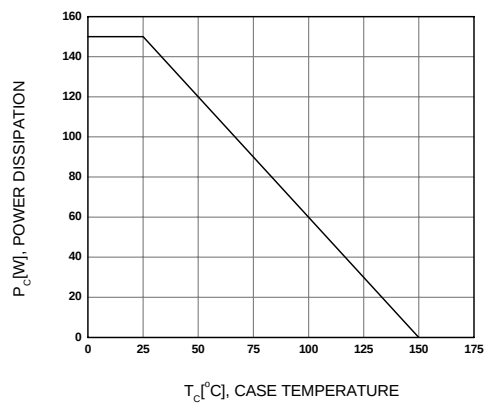
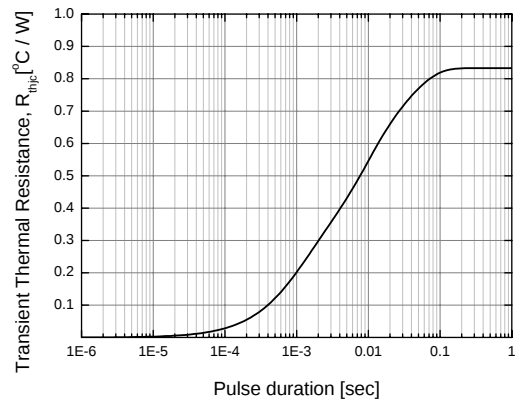
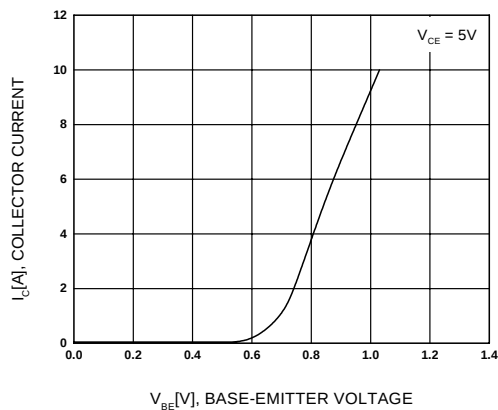
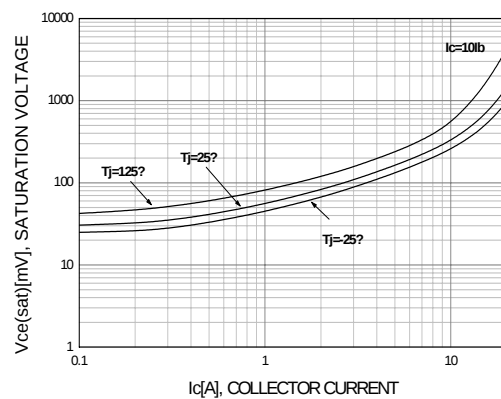
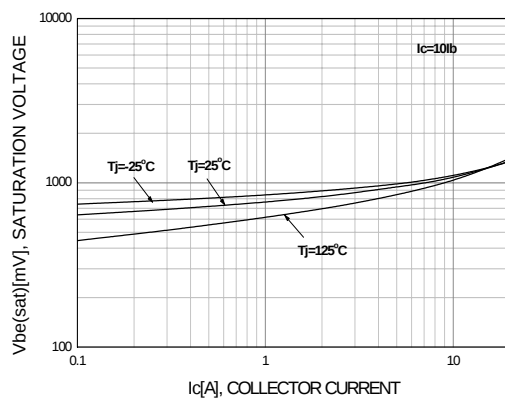
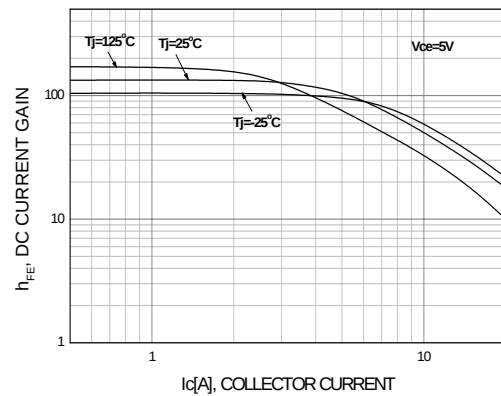
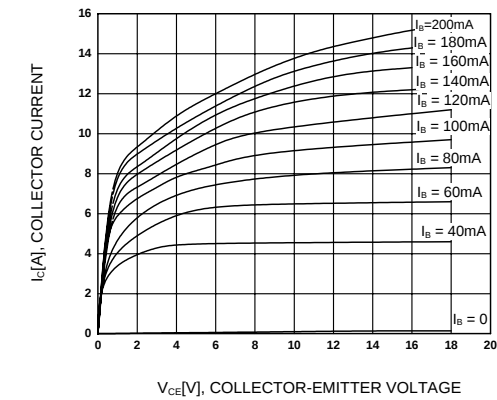


Figure 7. Power Derating

Figure 8. Safe Operating Area

[illegible]