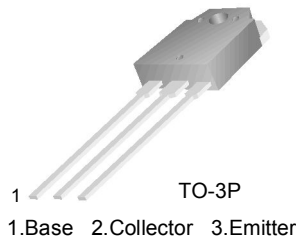


FJA3835

NPN Epitaxial Silicon Transistor

- Power Amplifier
- High Current Capability : $I_C=8A$
- High Power Dissipation
- Wide S.O.A



Absolute Maximum Ratings* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current (DC)	8	A
I_{CP}	Collector Current (Pulse)	16	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

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

Electrical Characteristics* $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=5\text{mA}, I_E=0$	200			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, R_{BE}=\infty$	120			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=5\text{mA}, I_C=0$	8			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=80\text{V}, I_E=0$			0.1	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=4\text{V}, I_C=0$			0.1	mA
h_{FE}	* DC Current Gain	$V_{CE}=4\text{V}, I_C=3\text{A}$	120		250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}, I_B=0.3\text{A}$			0.5	V
$V_{BE(sat)}$	Base-Emitter On Voltage	$I_C=3\text{A}, I_B=0.3\text{A}$			1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE}=5\text{V}, I_C=1\text{A}$		30		MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, f=1\text{MHz}$		210		pF
t_{ON}	Turn On Time	$V_{CC}=20\text{V},$ $I_C=1\text{A}=10I_{B1}=-10I_{B2}$		0.26		μs
t_F	Fall Time	$R_L=20\Omega$		0.68		μs
t_{STG}	Storage Time			6.68		μs

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Characteristics

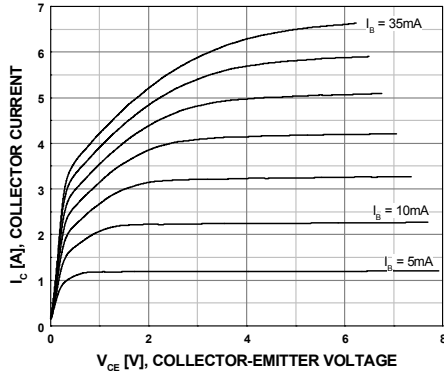


Figure 1. Static Characteristic

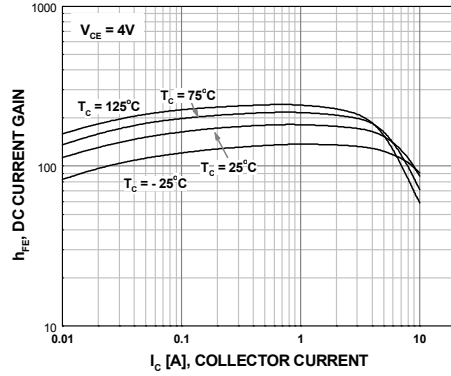


Figure 2. DC current Gain

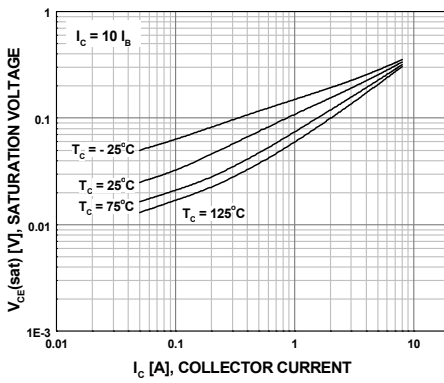


Figure 3. Collector-Emitter Saturation Voltage

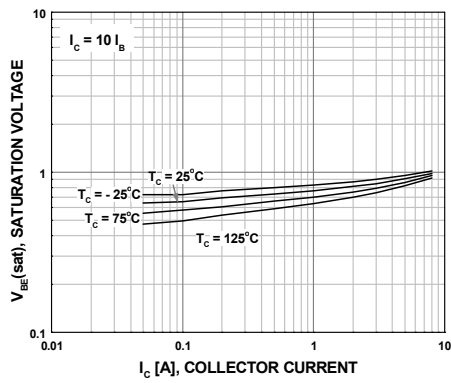


Figure 4. Base-Emitter Saturation Voltage

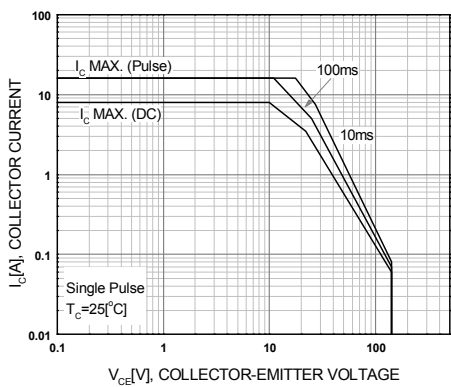


Figure 5. Safe Operating Area

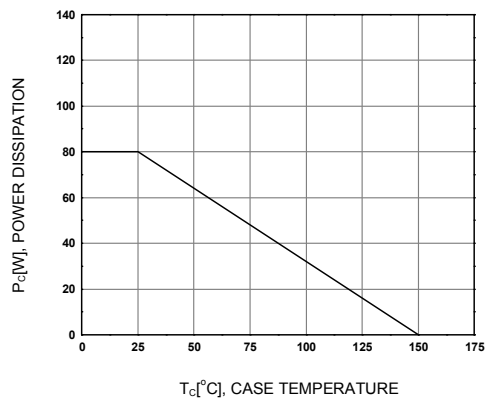
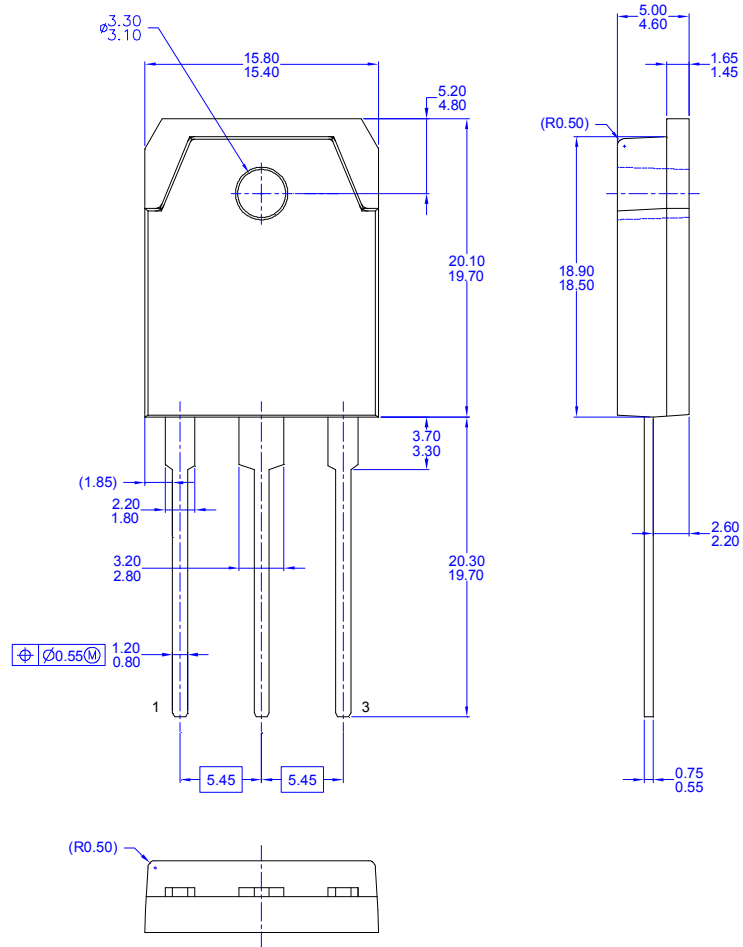


Figure 6. Power Derating

Package Dimension (TO-3P)




NOTES:

- A) THIS PACKAGE CONFORMS TO EIAJ SC-65 PACKAGING STANDARD.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DIMENSIONING AND TOLERANCING PER ASME14.5 1973.
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