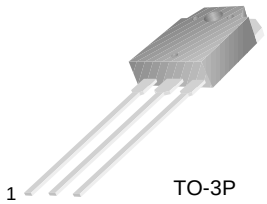
FAIRCHILD
SEMICONDUCTOR®

FJA3835

Power Amplifier

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



TO-3P

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	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°C)	80	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

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

* Pulse Test : PW=20µs

Typical Characteristics

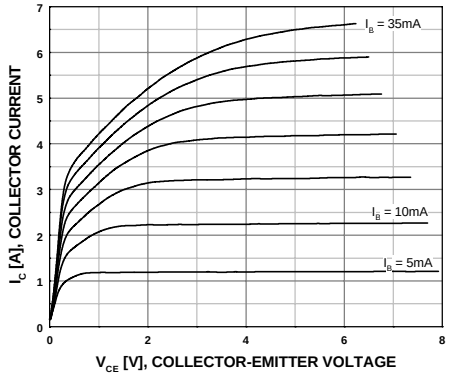


Figure 1. Static Characterstic

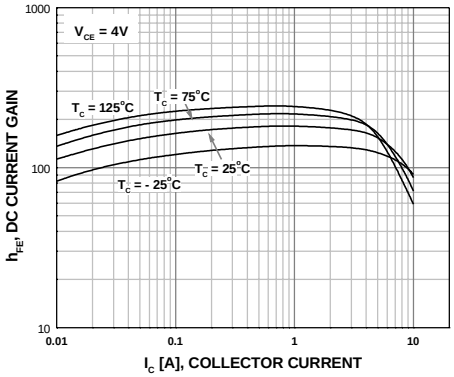


Figure 2. DC current Gain

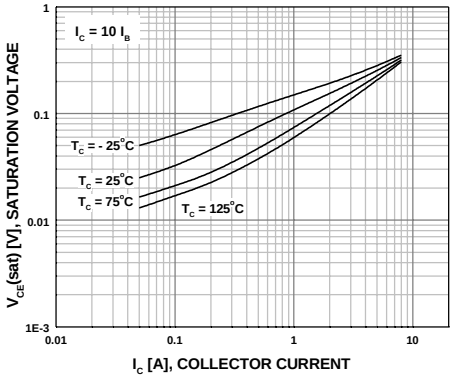


Figure 3. Collector-Emitter Saturation Voltage

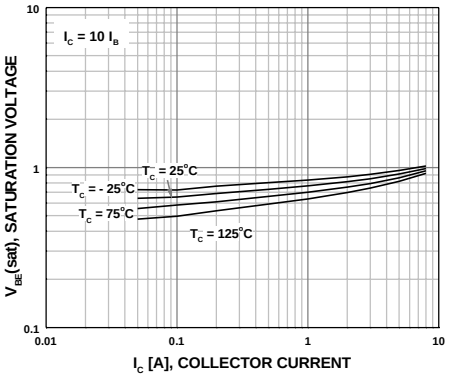


Figure 4. Base-Emitter Saturation Voltage

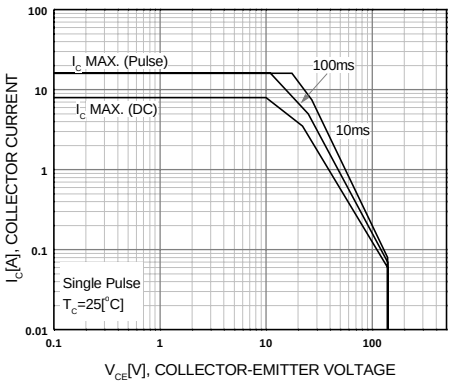


Figure 5. Safe Operating Area

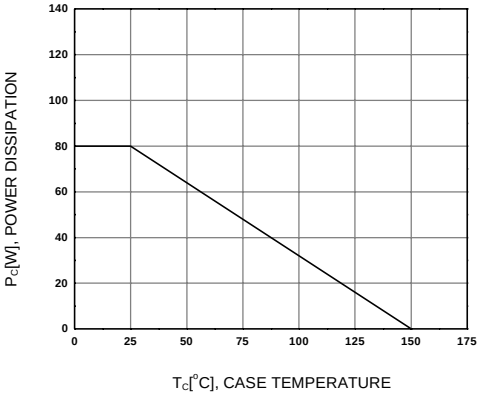
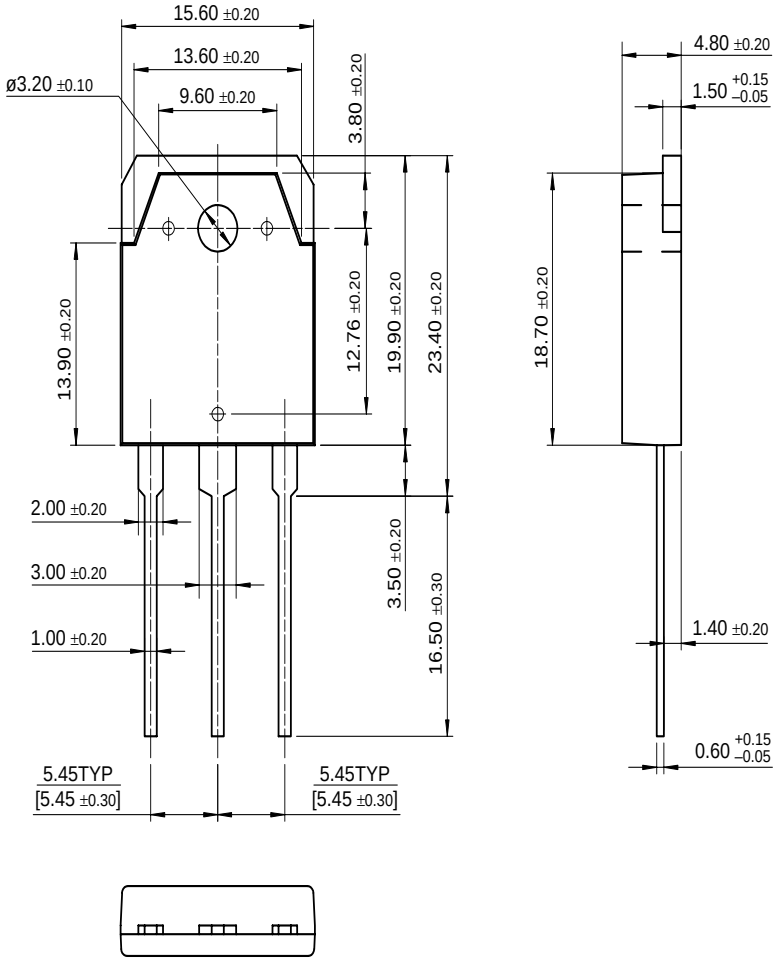


Figure 6. Power Derating

Package Demensions

TO-3P



Dimensions in Millimeters

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DOME™	GTO™	MSX™	Quiet Series™	TINYOPTO™
EcoSPARK™	HiSeC™	MSXPro™	RapidConfigure™	TruTranslation™
E^2CMOS^{TM}	I^2C™	OCX™	RapidConnect™	UHC™
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	UltraFET®
FACT™	ISOPLANAR™	OPTOLOGIC®	SMART START™	VCX™
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Programmable Active Droop™		POP™	SuperFET™	

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