

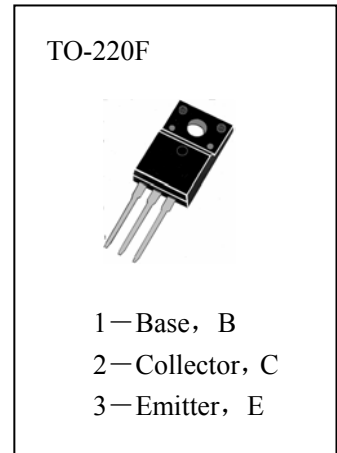


APPLICATIONS

Medium Power Linear switching Applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

- T<sub>stg</sub>—Storage Temperature..... -55~150°C
- T<sub>j</sub>—Junction Temperature..... 150°C
- P<sub>C</sub>—Collector Dissipation(Tc=25°C).....30W
- P<sub>C</sub>—Collector Dissipation (Ta=25°C) .....2W
- V<sub>CBO</sub>—Collector-Base Voltage.....100V
- V<sub>CEO</sub>—Collector-Emitter Voltage.....100V
- V<sub>EBO</sub>—Emitter-Base Voltage.....5V
- I<sub>C</sub>—Collector Current (DC) .....3A
- I<sub>C</sub>—Collector Current (Pulse) .....5A
- I<sub>b</sub>—Base Current.....1A



ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	100			V	I <sub>C</sub> =30mA, I <sub>B</sub> =0
H <sub>FE</sub> (1)	*DC Current Gain	25				V <sub>CE</sub> =4V, I <sub>C</sub> =1A
H <sub>FE</sub> (2)	*DC Current Gain	10		50		V <sub>CE</sub> =4V, I <sub>C</sub> =3A
V <sub>CE(sat)</sub>	*Collector- Emitter Saturation Voltage			1.2	V	I <sub>C</sub> =3A, I <sub>B</sub> =375mA
V <sub>BE(ON)</sub>	*Base-Emitter On Voltage			1.8	V	V <sub>CE</sub> =4V, I <sub>C</sub> =3A
I <sub>CEO</sub>	Collector Cut-off Current			0.3	mA	V <sub>CB</sub> =60V, I <sub>B</sub> =0
I <sub>CES</sub>	Collector Cut-off Current			200	μ A	V <sub>CE</sub> =100V, V <sub>EB</sub> =0
I <sub>EBO</sub>	Emitter Cut-off Current			1	mA	V <sub>EB</sub> =5V, I <sub>C</sub> =0
f <sub>T</sub>	Current Gain-Bandwidth Product	3.0			MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A, f=1MHz

\*Pulse Test: PW≤300 μ s, Duty cycle≤2%

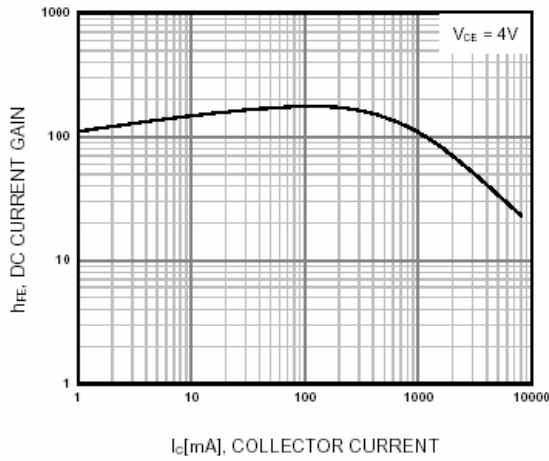


Figure 1. DC current Gain

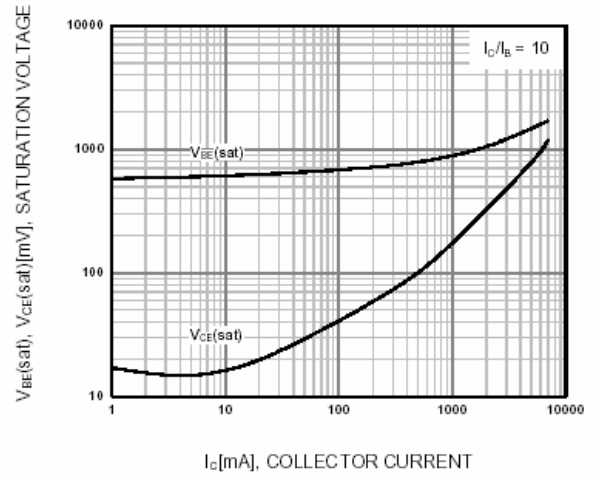


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

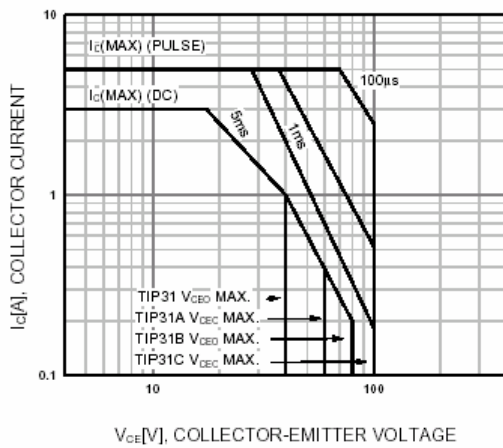


Figure 3. Safe Operating Area

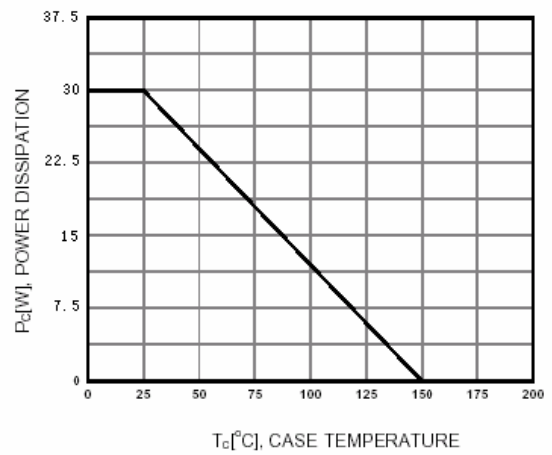


Figure 4. Power Derating