

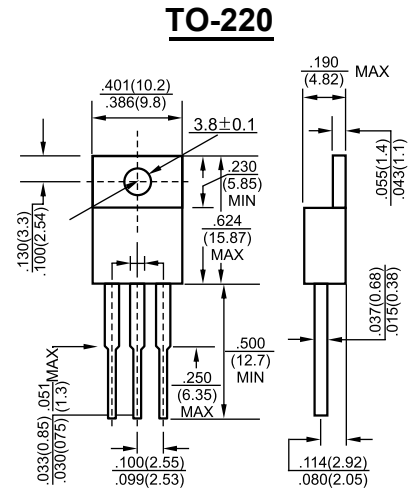
1. BASE
2. COLLECTOR
3. EMITTER

## Features

- ✧ High DC Current Gain :  $h_{FE}=1000$  @  $V_{CE}=4V$ ,  $I_C=1A$ (Min.)
- ✧ Low Collector-Emitter Saturation Voltage
- ✧ Industrial Use

## MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	100	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current -Continuous	2	A
P <sub>C</sub>	Collector Power Dissipation	2	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55 to +150	°C



Dimensions in inches and (millimeters)

## ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10mA, I <sub>E</sub> =0	100			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =0 <sup>(SUS)</sup>	100			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10mA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>B</sub> =0			2	mA
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0			1	mA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			2	mA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =1A	1000			
	h <sub>FE(2)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =2A	500			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =8mA			2.5	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =2A			2.8	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz			100	pF

## Typical Characteristics

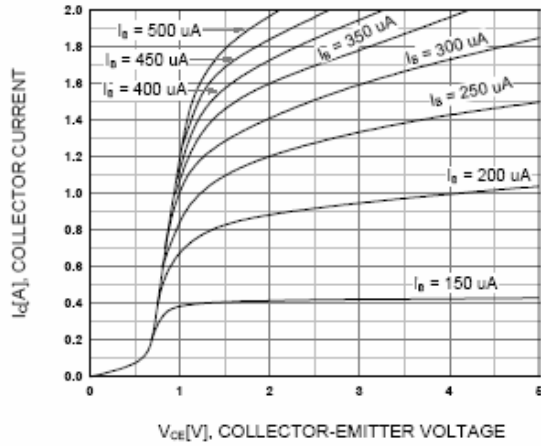


Figure 1. Static Characteristic

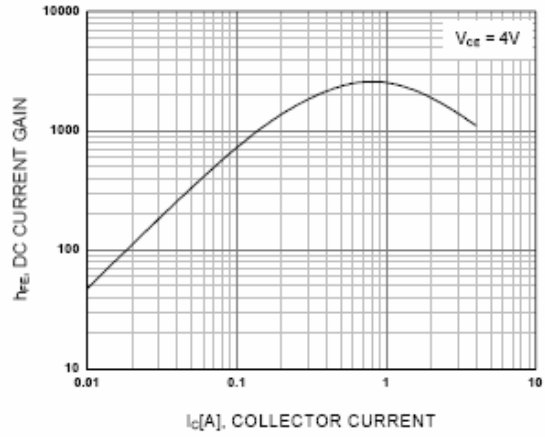


Figure 2. DC current Gain

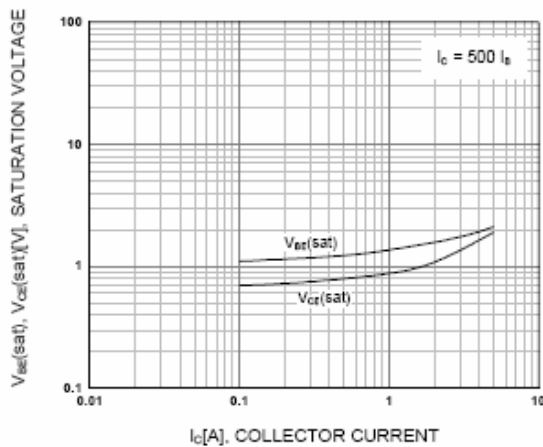


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

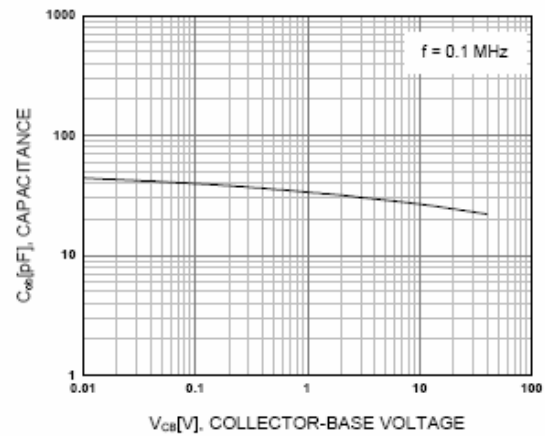


Figure 4. Collector Output Capacitance

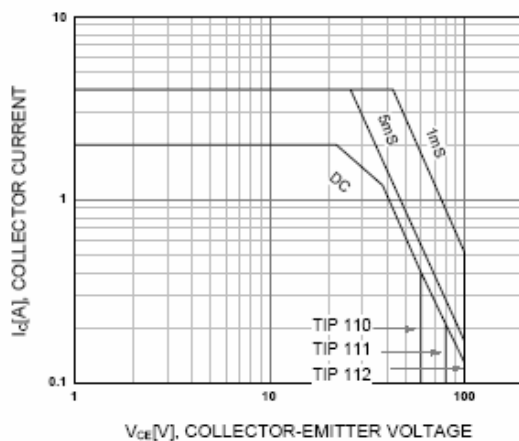


Figure 5. Safe Operating Area

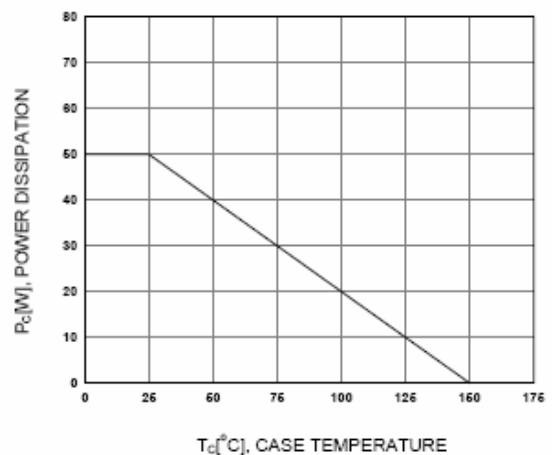


Figure 6. Power Derating