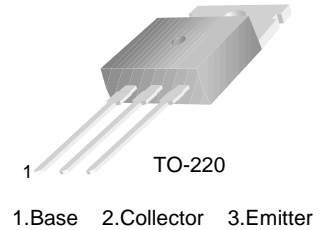




■■ APPLICATION: AMPLIFIER APPLICATION,
SWITCHING APPLICATION.

■■ MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V _{CB0}	60	V
Collector-emitter voltage	V _{CE0}	60	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _C	3	A
Base current	I _B	1	A
Collector Power Dissipation (Ta=25°C)	P _C	2	W
Collector Power Dissipation (Tc=25°C)	P _C	40	W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-65~150	°C



■■ ELECTRICAL CHARACTERISTICS

(Ta=25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
DC Current Gain	h _{FE1}	10		50		V _{CE} =4V, I _C =3A
	h _{FE2}	25				V _{CE} =4V, I _C =1A
Collector-Emitter Cut-off Current	I _{CEO}			0.3	mA	V _{CE} =30V, I _E =0
Emitter-Base Cut-off Current	I _{EB0}			1	mA	V _{EB} =5V, I _C =0
Collector-Base Breakdown Voltage	BV _{CB0}	60			V	I _C =1mA, I _E =0
Base-Emitter on Voltage	BV _{CEO}	60			V	I _C =30mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EB0}	5			V	I _E =1mA, I _C =0
Base-Emitter on Voltage	V _{BE(on)}			1.8	V	V _{CE} =4V, I _C =3A
Collector-Emitter Saturation Voltage	V _{CE(sat)}			1.2	V	I _C =3A, I _B =0.375A
Gain bandwidth product	f _T	3			MHz	V _{CE} =-10V, I _C =-0.5A, f=1MHz

■■ h_{FE} Classification And Marking

Mark TIP31A

Classification

h_{FE} 10~50