HFZT

TIP120

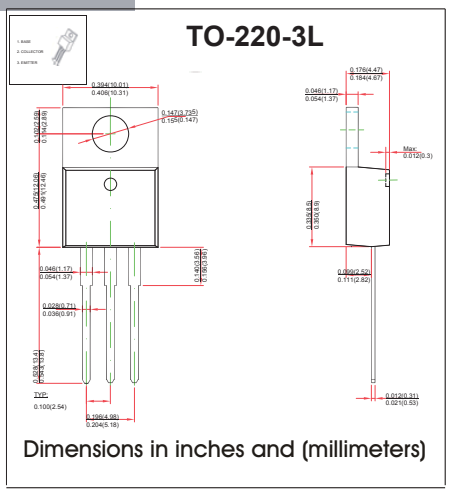
TO-220-3L Plastic-Encapsulate Transistors

FEATURES

- Medium Power Complementary Silicon Transistors
- Darlington TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:TO-220-3L molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	TIP120	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	5	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	62.5	℃/W
$R_{\theta Jc}$	Thermal Resistance Junction to Case	1.92	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55to+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 1mA,I_E=0	60 80 100		V
Collector-emitter breakdown voltage	$V_{CEO(SUS)}$	I_C= 30mA,I_B=0	60 80 100		V
Collector cut-off current	I_{CBO}	V_{CB}= 60 V, I_E=0 V_{CB}= 80 V, I_E=0 V_{CB}= 100V, I_E=0		0.2	mA
Collector cut-off current	I_{CEO}	V_{CE}=30 V, I_B=0 V_{CE}=40 V, I_B=0 V_{CE}=50 V, I_B=0		0.5	mA
Emitter cut-off current	I_{EBO}	V_{EB}=5 V, I_C=0		2	mA
DC current gain	$h_{FE(1)}$	V_{CE}= 3V, I_C=0.5A	1000		
	$h_{FE(2)}$	V_{CE}= 3V, I_C=3 A	1000		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=3A,I_B=12mA I_C=5 A,I_B=20mA		2 4	V
Base-emitter voltage	V_{BE}	V_{CE}=3V, I_C=3 A		2.5	V
	Cob	V_{CB}=10V, I_E=0,f=0.1MHz		300 200	pF