

TO-220 Plastic-Encapsulated Transistors

TIP120, 121, 122 Darlington TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM} : 2 W ($T_{amb}=25^{\circ}C$)

Collector current

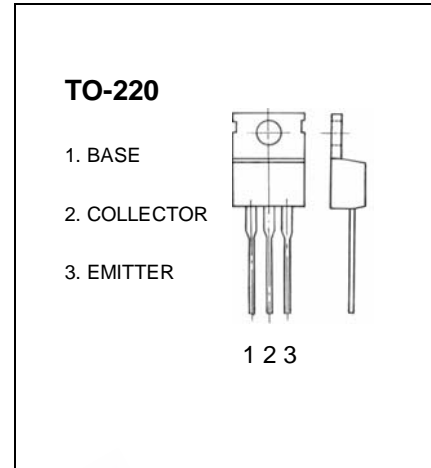
I_{CM} : 5 A

Collector-base voltage

$V_{(BR)CBO}$: TIP120: 60 V
TIP121: 80 V
TIP122: 100 V

Operating and storage junction temperature range

T_J, T_{stg} : $-65^{\circ}C$ to $+150^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ 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	$V_{(BR)CEO}$	$I_C=100mA, I_B=0$	60 80 100		V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$ $V_{CB}=80V, I_E=0$ $V_{CB}=100V, I_E=0$		0.2 0.2 0.2	μA
Collector cut-off current	I_{CEO}	$V_{CE}=30V, I_B=0$ $V_{CE}=40V, I_B=0$ $V_{CE}=50V, I_B=0$		0.5 0.5 0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		2	mA
DC current gain	h_{FE}	$V_{CE}=3V, I_C=0.5A$ $V_{CE}=3V, I_C=3A$	1000 1000		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3A, I_B=12mA$ $I_C=5A, I_B=20mA$		2 4	V
Base-emitter ON voltage	$V_{BE(on)}$	$V_{CE}=3V, I_C=3A$		2.5	V