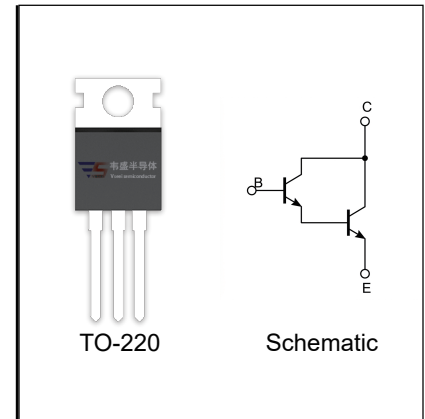


TIP120,121,122 Darlington TRANSISTOR (NPN)

TIP125,126,127 Darlington TRANSISTOR (PNP)

FEATURES

- Medium Power Complementary Silicon Transistors



MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	TIP120 TIP125	TIP121 TIP126	TIP122 TIP127	Unit
V _{CBO}	Collector-Base Voltage	60	80	100	V
V _{CEO}	Collector-Emitter Voltage	60	80	100	V
V _{EBO}	Emitter-Base Voltage	5			V
I _C	Collector Current -Continuous	5			A
P _C	Collector Power Dissipation	2			W
R _{θJA}	Thermal Resistance Junction to Ambient	62.5			°C/W
R _{θJC}	Thermal Resistance Junction to Case	1.92			°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55to+150			°C

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage TIP120,TIP125 TIP121,TIP126 TIP122,TIP127	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	60 80 100		V
Collector-emitter breakdown voltage TIP120,TIP125 TIP121,TIP126 TIP122,TIP127	$V_{CEO(SUS)}$	$I_C = 30mA, I_B = 0$	60 80 100		V
Collector cut-off current TIP120,TIP125 TIP121,TIP126 TIP122,TIP127	I_{CBO}	$V_{CB} = 60V, I_E = 0$ $V_{CB} = 80V, I_E = 0$ $V_{CB} = 100V, I_E = 0$		0.2	mA
Collector cut-off current TIP120,TIP125 TIP121,TIP126 TIP122,TIP127	I_{CEO}	$V_{CE} = 30V, I_B = 0$ $V_{CE} = 40V, I_B = 0$ $V_{CE} = 50V, I_B = 0$		0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		2	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = 3V, I_C = 0.5A$	1000		
	$h_{FE(2)}$	$V_{CE} = 3V, I_C = 3A$	1000	12000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 12mA$ $I_C = 5A, I_B = 20mA$		2 4	V
Base-emitter voltage	V_{BE}	$V_{CE} = 3V, I_C = 3A$		2.5	V
Output Capacitance TIP125,TIP126,TIP127 TIP120,TIP121,TIP122	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 0.1MHz$		300 200	pF

TIP127

Static Characteristic
