

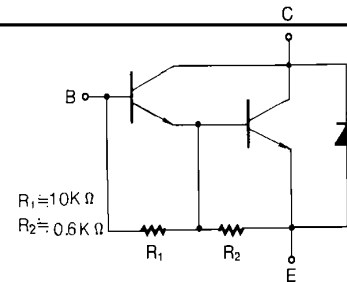
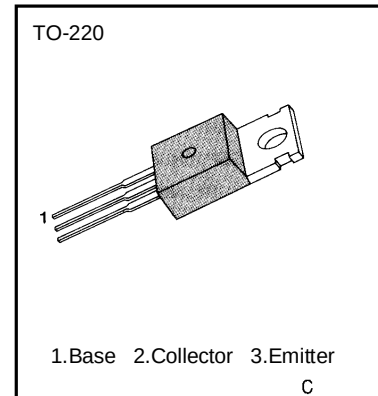
NPN EPITAXIAL TIP100/101/102 SILICON DARLINGTON TRANSISTOR

HIGH DC CURRENT GAIN
MIN $h_{FE}=1000$ @ $V_{CE}=4V$, $I_C=3A$
COLLECTOR-EMITTER SUSTAINING VOLTAGE
LOW COLLECTOR-EMITTER
SATURATION VOLTAGE
MONOLITHIC CONSTRUCTION WITH BUILT
IN BASE-EMITTER SHUNT RESISTORS
INDUSTRIAL USE

Complementary to TIP105/106/107

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage : TIP100	V_{CBO}	60	V
: TIP101		80	V
: TIP102		100	V
Collector Emitter Voltage	V_{CEO}	60	V
: TIP100		80	V
: TIP101		100	V
: TIP102		100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	8	A
Collector Current (Pulse)	I_C	15	A
Base Current (DC)	I_B	1	A
Collector Dissipation ($T_A=5^{\circ}C$)	P_C	2	W
Collector Dissipation ($T_C=5^{\circ}C$)	P_C	80	W
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-65 ~ 150	$^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}C$)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 30mA$, $I_B = 0$	60		V
: TIP100			80		V
: TIP101			100		V
: TIP102					V
Collector Cutoff Current : TIP100	I_{CEO}	$V_{CE} = 30V$, $I_B = 0$		50	μA
: TIP101		$V_{CE} = 40V$, $I_B = 0$		50	μA
: TIP102		$V_{CE} = 50V$, $I_B = 0$		50	μA
Collector Cutoff Current : TIP100	I_{CBO}	$V_{CE} = 60V$, $I_E = 0$		50	μA
: TIP101		$V_{CE} = 80V$, $I_E = 0$		50	μA
: TIP102		$V_{CE} = 100V$, $I_E = 0$		50	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V$, $I_C = 0$		2	mA
DC Current Gain	h_{FE}	$V_{CE} = 4V$, $I_C = 3A$	1000	2000	
		$V_{CE} = 4V$, $I_C = 8A$	200		
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3A$, $I_B = 6mA$		2	V
		$I_C = 8A$, $I_B = 80mA$		2.5	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 4V$, $I_C = 8A$		2.8	V
Output Capacitance	C_{ob}	$V_{CB} = 10V$, $I_E = 0$, $f = 0.1MHz$		200	pF

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