

TIP30 SERIES
(TIP30/30A/30B/30C)

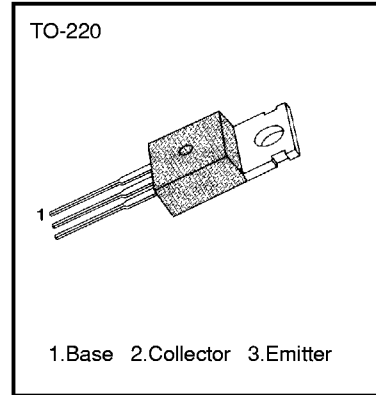
PNP EPITAXIAL SILICON TRANSISTOR

**MEDIUM POWER LINEAR
 SWITCHING APPLICATIONS**

• Complement to TIP29/29A/29B/29C

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage : TIP30	V_{CBO}	- 40	V
: TIP30A		- 60	V
: TIP30B		- 80	V
: TIP30C		- 100	V
Collector Emitter Voltage : TIP30	V_{CEO}	- 40	V
: TIP30A		- 60	V
: TIP30B		- 80	V
: TIP30C		- 100	V
Emitter-Base Voltage	V_{EBO}	- 5	V
Collector Current (DC)	I_C	- 1	A
Collector Current (Pulse)	I_C	- 3	A
Base Current	I_B	- 0.4	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	30	W
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	- 65 ~ 150	$^\circ\text{C}$



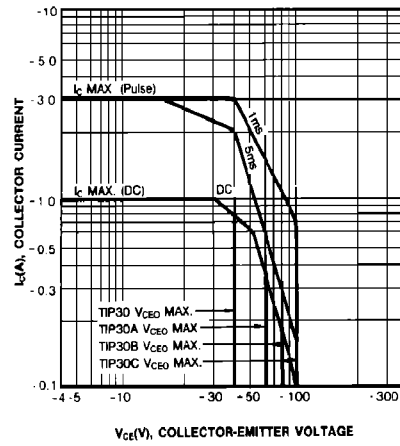
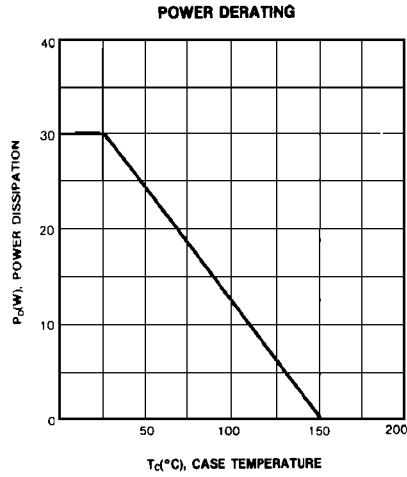
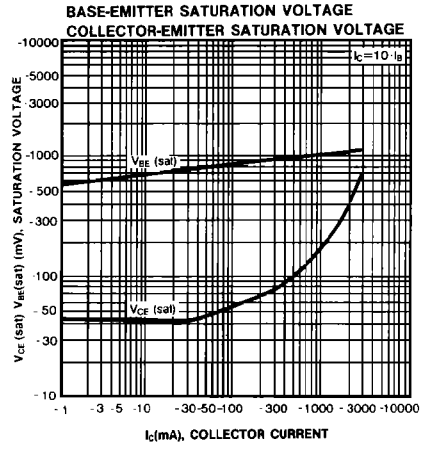
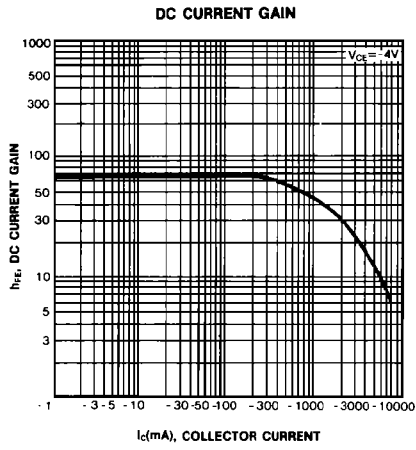
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
*Collector Emitter Sustaining Voltage : TIP30	$BV_{CEO(sus)}$	$I_C = -30\text{mA}, I_B = 0$	-40		V
: TIP30A			-60		V
: TIP30B			-80		V
: TIP30C			-100		V
Collector Cutoff Current : TIP30/30A	I_{CEO}	$V_{CE} = -30\text{V}, I_B = 0$		-0.3	mA
: TIP30B/30C				-0.3	mA
Collector Cutoff Current : TIP30	I_{CES}	$V_{CE} = -40\text{V}, V_{EB} = 0$		-200	μA
: TIP30A				-200	μA
: TIP30B				-200	μA
: TIP30C				-200	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$		-1.0	mA
*DC Current Gain	h_{FE}	$V_{CE} = -4\text{V}, I_C = -0.2\text{A}$	40		
			$V_{CE} = -4\text{V}, I_C = -1\text{A}$	15	75
*Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -125\text{mA}$		-0.7	V
*Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -4\text{V}, I_C = -1\text{A}$		-1.3	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -10\text{V}, I_C = -200\text{mA}$ $f = 1\text{MHz}$	3.0		MHz

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

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