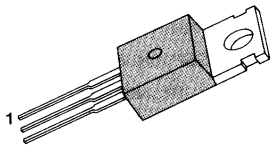
TIP32 SERIES
(TIP32/32A/32B/32C) PNP EPITAXIAL SILICON TRANSISTOR

MEDIUM POWER LINEAR
SWITCHING APPLICATIONS

• Complement to TIP31/31A/31B/31C

TO-220



1.Base 2.Collector 3.Emitter

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage : TIP32	V_{CBO}	-40	V
: TIP32A		-60	V
: TIP32B		-80	V
: TIP32C		-100	V
Collector Emitter Voltage : TIP32	V_{CEO}	-40	V
: TIP32A		-60	V
: TIP32B		-80	V
: TIP32C		-100	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	I_C	-3	A
Collector Current (Pulse)	I_C	-5	A
Base Current	I_B	-3	A
Collector Dissipation (T_C=25°C)	P_C	40	W
Collector Dissipation (T_A=25°C)	P_C	2	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C

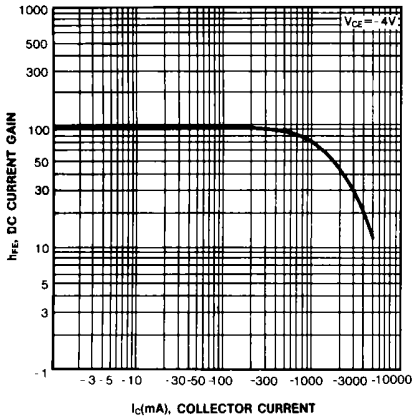
ELECTRICAL CHARACTERISTICS (T_C=25°C)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
*Collector Emitter Sustaining Voltage : TIP32	BV_{CEO}(sus)	I_C = - 30mA, I_B = 0	-40		V
: TIP32A			-60		V
: TIP32B			-80		V
: TIP32C			-100		V
Collector Cutoff Current : TIP32/32A	I_{CEO}	V_{CE} = - 30V, I_B = 0		- 0.3	mA
: TIP32B/32C		V_{CE} = - 60V, I_B = 0		- 0.3	mA
Collector Cutoff Current : TIP32	I_{CES}	V_{CE} = - 40V, V_{EB} = 0		- 200	μA
: TIP32A		V_{CE} = - 60V, V_{EB} = 0		- 200	μA
: TIP32B		V_{CE} = - 80V, V_{EB} = 0		- 200	μA
: TIP32C		V_{CE} = - 100V, V_{EB} = 0		- 200	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = - 5V, I_C = 0		- 1	mA
*DC Current Gain	h_{FE}	V_{CE} = - 4V, I_C = - 1A	25		
		V_{CE} = - 4V, I_C = - 3A	10	50	
*Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = - 3A, I_B = - 375mA		- 1.2	V
*Base Emitter On Voltage	V_{BE}(on)	V_{CE} = - 4V, I_C = - 3A		- 1.8	V
Current Gain Bandwidth Product	f_T	V_{CE} = - 10V, I_C = - 500mA f = 1MHz	3.0		MHz

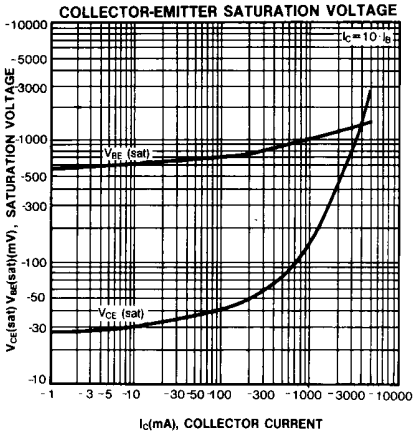
* Pulse Test: PW≤300μs, duty Cycle≤2%

FAIRCHILD SEMICONDUCTOR™

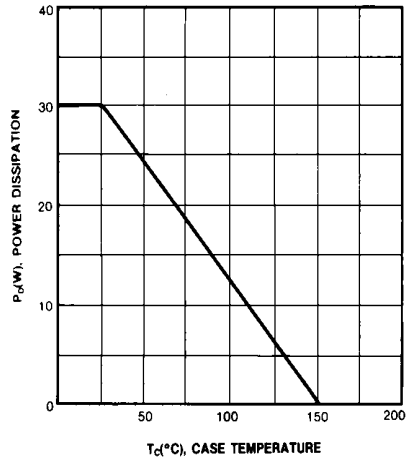
DC CURRENT GAIN



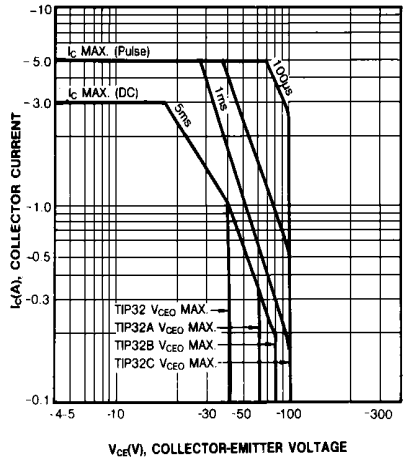
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING



SAFE OPERATING AREA



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