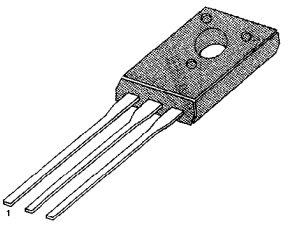
BD233/235/237 NPN EPITAXIAL SILICON TRANSISTOR

MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

• Complement to BD 234/236/238 respectively

TO-126



1. Emitter 2.Collector 3.Base

ABSOLUTE MAXIMUM RATINGS

Characteristic		Symbol	Rating	Unit
Collector Base Voltage	: BD233	V_{CBO}	45	V
	: BD235		60	V
	: BD237		100	V
Collector Emitter Voltage	: BD233	V_{CEO}	45	V
	: BD235		60	V
	: BD237		80	V
Collector Emitter Voltage	: BD233	V_{CER}	45	V
	: BD235		60	V
	: BD237		100	V
Emitter Base Voltage		V_{EBO}	5	V
Collector Current (DC)		I_C	2	A
Collector Current (Pulse)		I_C	6	A
Collector Dissipation (T_C=25°C)		P_C	25	W
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C)

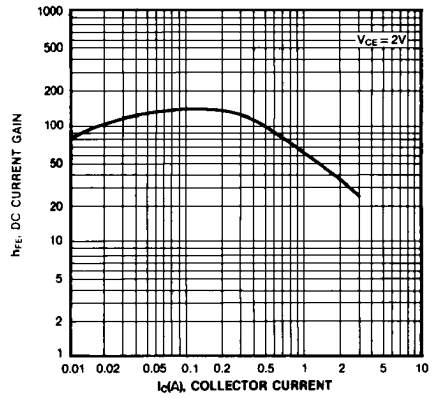
Characteristic		Symbol	Test Condition	Min	Typ	Max	Unit
* Collector Emitter Sustaining Voltage	: BD233	V_{CEO}(sus)	I_C = 100mA, I_B = 0	45			V
	: BD235			60			V
	: BD237			80			V
Collector Cutoff Current	: BD233	I_{CBO}	V_{CB} = 45V, I_E = 0			100	μA
	: BD235		V_{CB} = 60V, I_E = 0			100	μA
	: BD237		V_{CB} = 100V, I_E = 0			100	μA
Emitter Cutoff Current		I_{EBO}	V_{EB} = 5V, I_C = 0			1	mA
* DC Current Gain		h_{FE}	V_{CE} = 2V, I_C = 150mA	40			
			V_{CE} = 2V, I_C = 1A	25			
* Collector Emitter Saturation Voltage		V_{CE}(sat)	I_C = 1A, I_B = 0.1A			0.6	V
* Base Emitter On Voltage		V_{BE}(on)	V_{CE} = 2V, I_C = 1A			1.3	V
Current Gain Bandwidth Product		f_T	V_{CE} = 10V, I_C = 250mA	3			MHz

* Pulse Test: PW=300μs, duty Cycle≤1.5% Pulsed

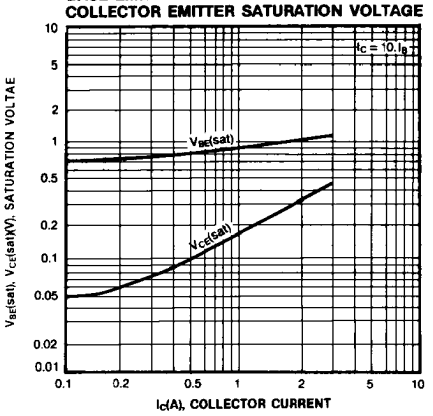
FAIRCHILD SEMICONDUCTOR™

Rev. B

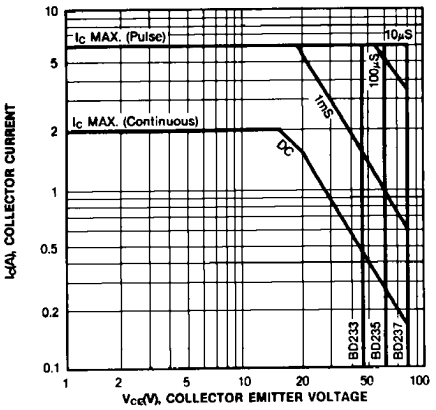
DC CURRENT GAIN



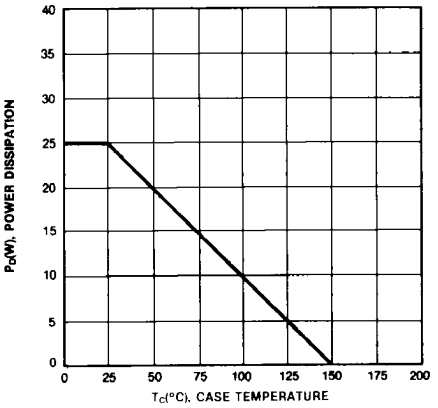
BASE EMITTER SATURATION VOLTAGE
COLLECTOR EMITTER SATURATION VOLTAGE



SAFE OPERATING AREA



POWER DERATING



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