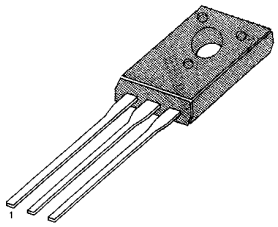
BD376/378/380 PNP EPITAXIAL SILICON TRANSISTOR

MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

- Complement to BD375, BD377 and BD379 respectively

TO-126



1. Emitter 2.Collector 3.Base

ABSOLUTE MAXIMUM RATINGS

Characteristic		Symbol	Rating	Unit
Collector Base Voltage	: BD376	V_{CBO}	- 50	V
	: BD378		- 75	V
	: BD380		- 100	V
Collector Emitter Voltage	: BD376	V_{CEO}	- 45	V
	: BD378		- 60	V
	: BD380		- 80	V
Emitter Base Voltage		V_{EBO}	- 5	V
Collector Current (DC)		I_C	- 2	A
Collector Current (Pulse)		I_C	- 3	A
Base Current		I_B	- 1	A
Collector Dissipation (T_C=25℃)		P_C	25	W
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_C=25℃)

Characteristic		Symbol	Test Condition	Min	Typ	Max	Unit
*Collector Emitter Sustaining Voltage	: BD376	V_{CEO}(sus)	I_C = - 100mA, I_B = 0	- 45			V
	: BD378			- 60			V
	: BD380			- 80			V
Collector Base Voltage	: BD376	V_{CBO}	I_C = - 100uA, I_E = 0	- 50			V
	: BD378			- 75			V
	: BD380			- 100			V
Collector Cutoff Current	: BD376	I_{CBO}	V_{CB} = - 45V, I_E = 0			- 2	uA
	: BD378		V_{CB} = - 60V, I_E = 0			- 2	uA
	: BD380		V_{CB} = - 80V, I_E = 0			- 2	uA
Emitter Cutoff Current		I_{EBO}	V_{EB} = - 5V, I_C = 0			- 100	uA
*DC Current Gain		h_{FE}1	V_{CE} = - 2V, I_C = - 0.15A	40		375	
		h_{FE}2	V_{CE} = - 2V, I_C = - 1A	20			
* Collector Emitter Saturation Voltage		V_{CE}(sat)	I_C = - 1A, I_B = - 0.1A			- 1	V
*Base Emitter On Voltage		V_{BE}(on)	V_{CE} = - 2V, I_C = -1A			- 1.5	V
Turn On Time		t_{ON}	V_{CC} = - 30V, I_C = - 0.5A		50		nS
			I_B1 = - I_B2 = - 0.05A				
Turn Off Time		t_{OFF}	V_{CC} = - 30V, I_C = - 0.5A		500		nS
			I_B1 = - I_B2 = - 0.05A				

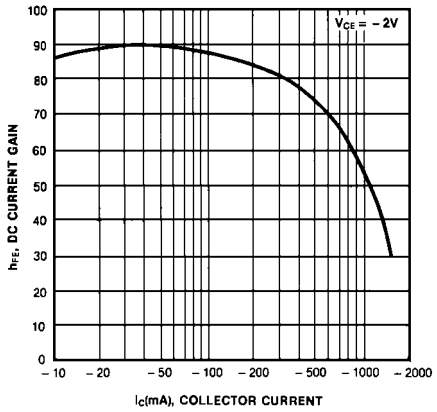
* Pulse Test : PW=350uS, duty Cycle=2% Pulsed

h_{FE}(1) CLASSIFICNTION

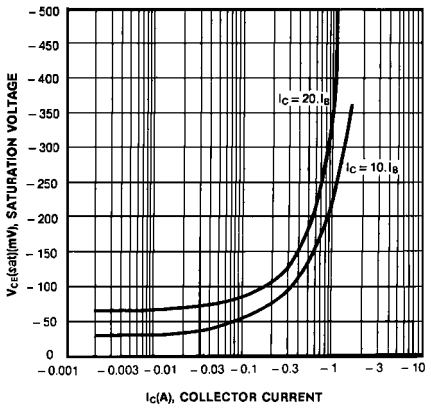
Classification	6	10	16	25
h_{FE} 1	40 - 100	63 - 160	100 - 250	150 - 375

SAMSUNG ELECTRONICS

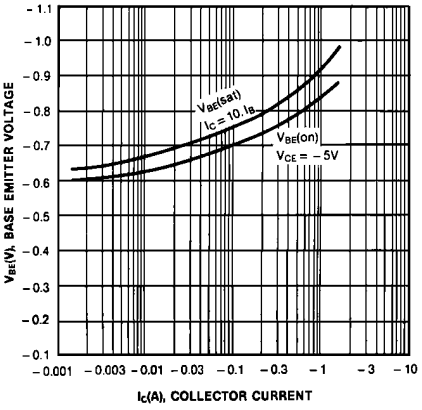
DC CURRENT GAIN



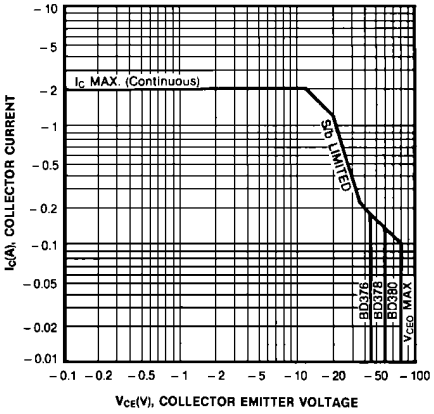
COLLECTOR EMITTER SATURATION VOLTAGE



BASE EMITTER VOLTAGE



SAFE OPERATING AREA



POWER DERATING