

Silicon PNP transistor epitaxial type (darlington)
BP876

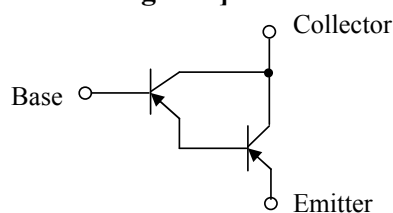
[Applications]

LED driver
 Motor driver

[Feature]

Darlington connection for a high hFE hFE=20k(typ.) at VCE= -10V, IC= -500mA
 High input impedance

[Circuit diagram]



[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-60	V
Collector-emitter voltage	VCER	-45	V
Emitter-base voltage	VEBO	-5	V
Collector current (DC)	IC	-1	A
Collector current (Pulse)	ICP	-1.5	A
Base current	IB	-0.1	A
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BVCEO	-60	-	-	V	IC= -100uA
Collector-emitter breakdown voltage	BVCER	-45	-	-	V	IC= -10mA, RBE= 4.5Mohm
Emitter-Base breakdown voltage	BVEBO	-5	-	-	V	IC= -100uA
Collector cut-off current	ICER	-	-	-10	uA	VCER= -45V, RBE= 4.5Mohm
Emitter cut-off current	IEBO	-	-	-10	uA	VEB= -4V
DC current gain 1	hFE 1	1k	-	-	-	VCE= -10V, IC= -0.15A
DC current gain 2	hFE 2	2k	-	-	-	VCE= -10V, IC= -0.5A
Collector-emitter saturation voltage 1	VCE(sat)1	-	-	-1.3	V	IC= -0.5A, IB= -0.5mA
Collector-emitter saturation voltage 2	VCE(sat)2	-	-	-1.8	V	IC= -1A, IB= -1mA
Base-emitter saturation voltage 1	VBE(sat)1	-	-	-1.9	V	IC= -0.5A, IB= -0.5mA
Base-emitter saturation voltage 2	VBE(sat)2	-	-	-2.2	V	IC= -1A, IB= -1mA
Transition frequency	fT	-	200	-	MHz	VCE= -5V, IE= 0.1A
Turn on time	ton	-	400	-	ns	VCC= -20V, -IC= -0.5A
Turn off time	toff	-	1500	-	ns	-IB1= IB2= -0.5mA

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.

Fig.1 IC - VBE(on)
at VCE= -10V, Ta= 25C

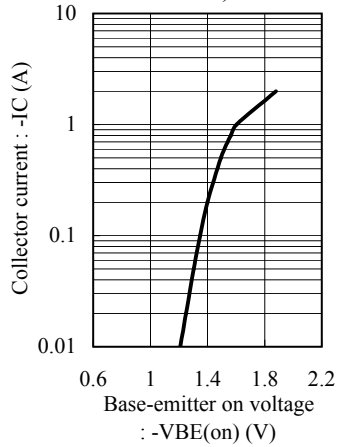


Fig.2 hFE - IC
at VCE= -10V, Ta= 25C

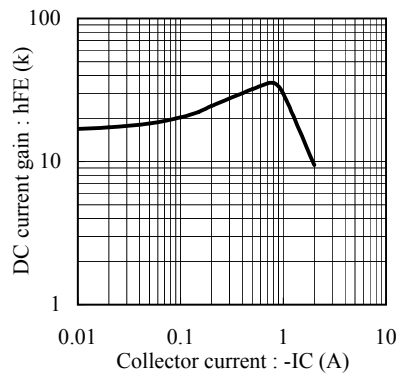


Fig.3 VCE(sat) - IC
at IC/IB= 1000, Ta= 25C

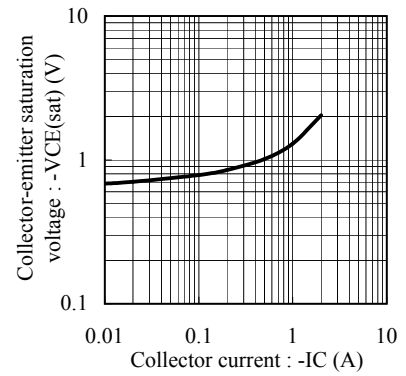


Fig.4 VBE(sat) - IC
at IC/IB= 1000, Ta= 25C

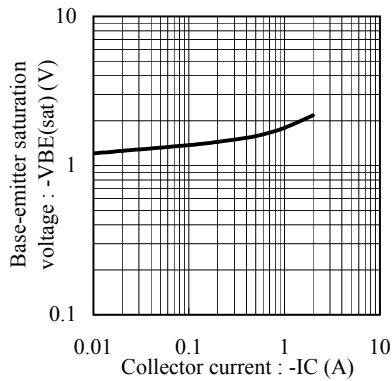


Fig.5 fT - IE
at VCE= -5V, Ta= 25C

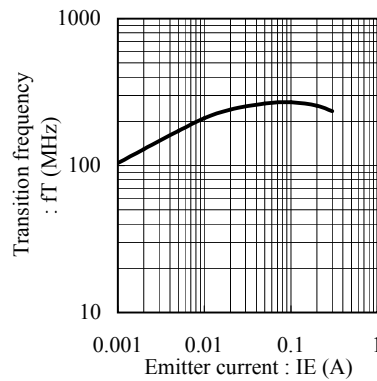


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

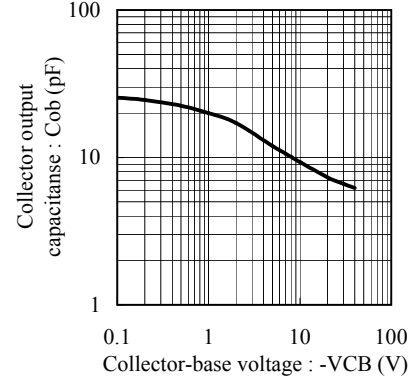


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

