

**Silicon PNP transistor epitaxial type (darlington)
B5943**

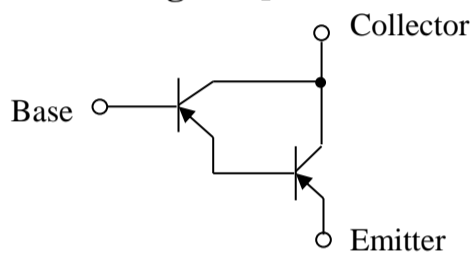
[Applications]

Motor driver

[Feature]

Darlington connection for a high hFE hFE=20k(min.) at VCE= -5V, IC= -100mA
High input impedance

[Circuit diagram]



[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-30	V
Collector-emitter voltage	VCEO	-30	V
Emitter-base voltage	VEBO	-10	V
Collector current	IC	-500	mA
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	-30	-	-	V	IC= -100uA
Collector cut-off current	ICBO	-	-	-100	nA	VCB= -30V
Emitter cut-off current	IEBO	-	-	-100	nA	VEB= -10V
DC current gain 1	hFE 1	10k	-	-	-	VCE= -5V, IC= -10mA
DC current gain 2	hFE 2	20k	-	-	-	VCE= -5V, IC= -100mA
Collector-emitter saturation voltage	VCE(sat)	-	-	-1.5	V	IC= -100mA, IB= -100uA
Base-emitter on voltage	VBE(on)	-	-	-2	V	VCE= -5V, IC= -100mA
Transition frequency	fT	125	-	-	MHz	VCE= -5V, IE= 10mA

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.

No. B5943-20070213

Fig.1 VBE(on) - IC
at VCE= -5V, Ta= 25C

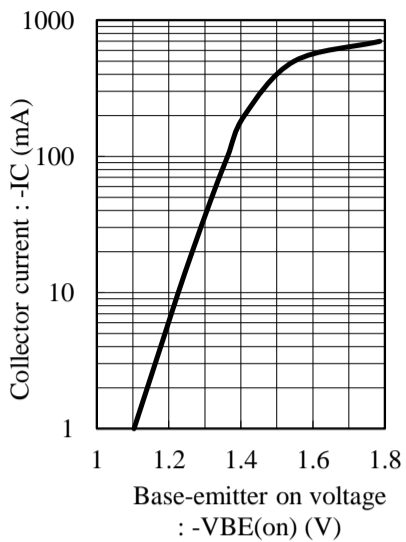


Fig.2 hFE - IC
at VCE= -5V, Ta= 25C

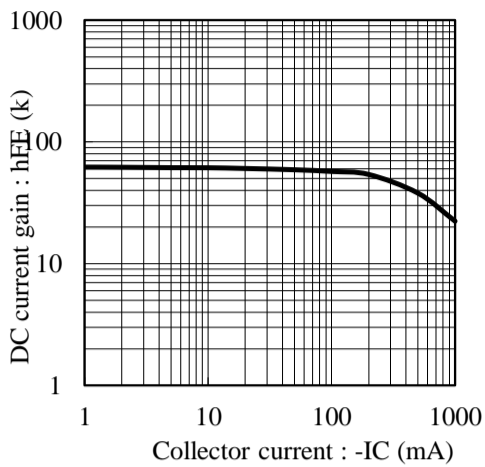


Fig.3 VCE(sat) - IC
at IC/IB= 1000, Ta= 25C

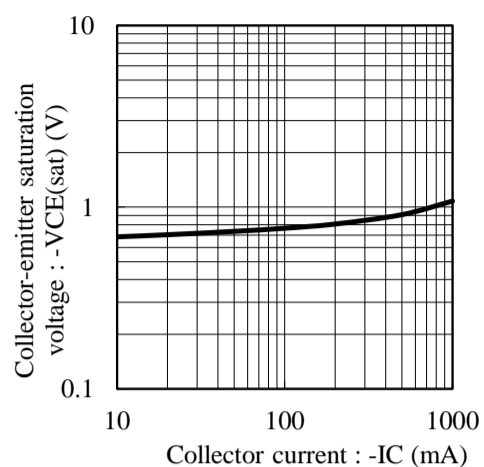


Fig.4 fT - IE
at VCE= -5V, Ta= 25C

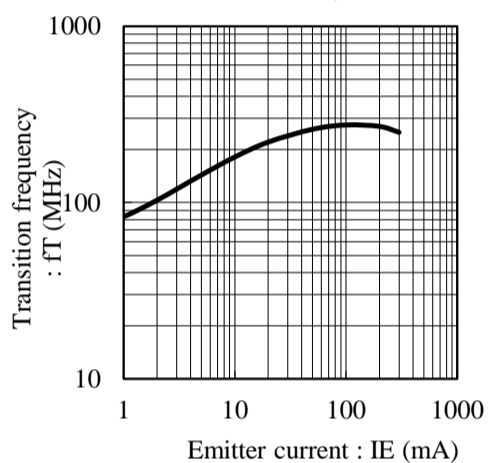


Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C

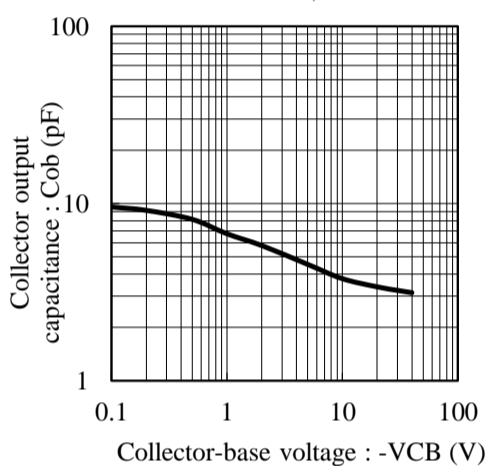


Fig.6 Cib - VEB
at f= 1MHz, Ta= 25C

