

**Silicon PNP transistor epitaxial type  
A5864**

**[ Applications ]**

Audio frequency power amplifier  
Car security  
Medium speed switching

**[ Feature ]**

High DC gain  $hFE= 135-400$  at  $VCE= -2V, IC= -0.1A$   
Low collector saturation voltage  $VCE(sat)= -0.3V$  (Max.) at  $IC= -1A, IB= -50mA$

**[ Absolute maximum ratings (Ta=25C) ]**

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-80	V
Collector-emitter voltage	VCEO	-60	V
Emitter-base voltage	VEBO	-6	V
Collector current (DC)	IC	-1	A
Collector current (Pulse)	ICP	-2	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 cut-off current	ICBO	-	-	-100	nA	VCB= -80V, IE= 0A
Emitter cut-off current	IEBO	-	-	-100	nA	VEB= -6V, IC= 0A
DC current gain 1	hFE 1	200	-	400	-	VCE= -2V, IC= -0.1A
DC current gain 2	hFE 2	85	-	-	-	VCE= -2V, IC= -1A
Collector-emitter saturation voltage	VCE(sat)	-	-	-0.3	V	IC= -1A, IB= -50mA
Base-emitter saturation voltage	VBE(sat)	-	-	-1.2	V	IC= -1A, IB= -50mA
Base-emitter on voltage	VBE(on)	-600	-	-700	mV	VCE= -2V, IC= -50mA
Transition frequency	fT	-	180	-	MHz	VCE= -2V, IE= 0.1A
Collector output capacitance	Cob	-	20	-	pF	VCB= -10V, f = 1MHz, IE= 0A
Turn on time	ton	-	0.07	-	us	VCC= -10V, IC= -0.1A
Storage time	tstg	-	0.7	-	us	-IB1= IB2= 10mA
Fall time	tf	-	0.07	-	us	

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= -2V, Ta= 25C

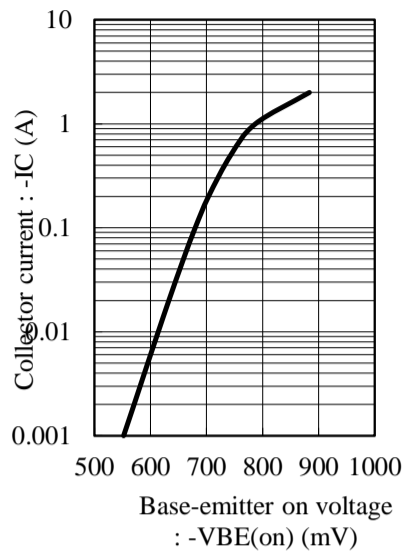


Fig.2 hFE - IC  
at VCE= -2V, Ta= 25C

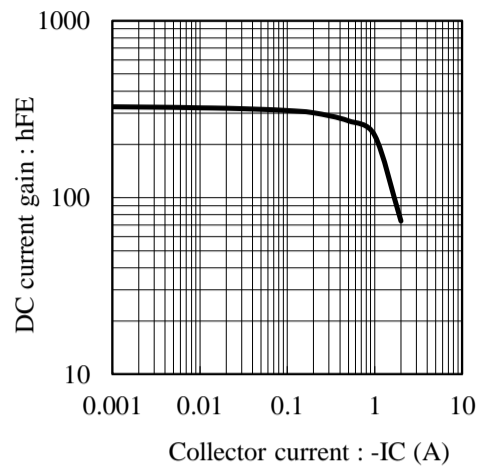


Fig.3 VCE(sat) - IC  
at IC/IB= 20, Ta= 25C

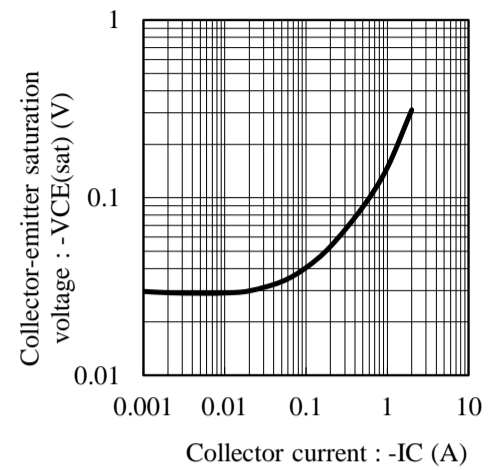


Fig.4 VBE(sat) - IC  
at IC/IB= 20, Ta= 25C

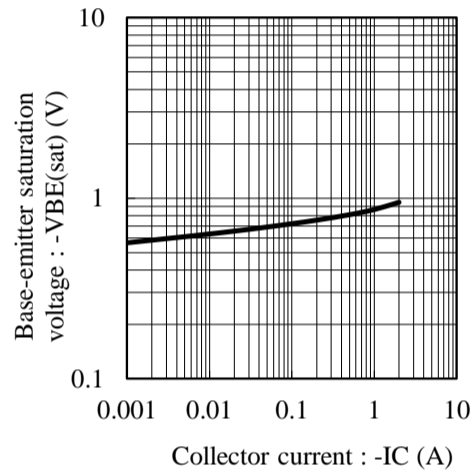


Fig.5 fT - IE  
at VCE= -2V, Ta= 25C

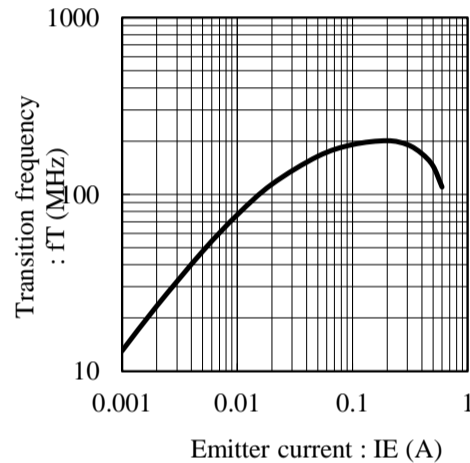


Fig.6 Cob - VCB  
at f= 1MHz, Ta= 25C

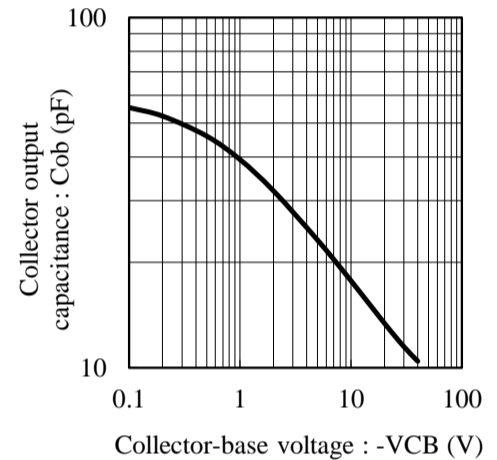


Fig.7 Cib - VEB  
at f= 1MHz, Ta= 25C

