Silicon NPN transistor epitaxial type
C5988

[Applications]
High current amplifier

[Feature]
Collector current IC= 6A
Very low collector saturation voltage VCE(sat)= 550mV (Max.) at IC= 6A, IB= 300mA
Exellent gain characteristics specified up to 10 ampers
PNP complementary pair with A5988

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	150	V
Collector-emitter voltage	VCEO	60	V
Emitter-base voltage	VEBO	6	V
Collector current (DC)	IC	6	A
Collector current (Pulse)	ICP	20	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-base breakdown voltage	BVCBO	150	170	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	60	70	-	V	IC= 10mA
Emitter-base breakdown voltage	BVEBO	6	8	-	V	IE= 100uA
Collector cut-off current	ICBO	-	-	50	nA	VCB= 120V
Emitter cut-off current	IEBO	-	-	10	nA	VEB= 6V
DC current gain 1	hFE 1	100	-	-	-	VCE= 1V, IC= 10mA
DC current gain 2	hFE 2	120	200	300	-	VCE= 1V, IC= 2A
DC current gain 3	hFE 3	75	100	-	-	VCE= 1V, IC= 5A
DC current gain 4	hFE 4	-	30	-	-	VCE= 1V, IC= 10A
Collector-emitter saturation voltage 1	VCE(sat) 1	-	20	50	mV	IC= 100mA, IB= 5mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	80	120	mV	IC= 1A, IB= 50mA
Collector-emitter saturation voltage 3	VCE(sat) 3	-	150	220	mV	IC= 2A, IB= 100mA
Collector-emitter saturation voltage 4	VCE(sat) 4	-	400	550	mV	IC= 6A, IB= 300mA
Base-emitter saturation voltage	VBE(sat)	-	1.15	1.3	V	IC= 6A, IB= 300mA
Base-emitter on voltage	VBE(on)	-	1.05	1.2	V	VCE= 1V, IC= 6A
Transition frequency	fT	-	150	-	MHz	VCE= 10V, IE= -100mA
Collector output capacitance	Cob	-	50	-	pF	VCB= 10V, f = 1MHz, IE= 0A

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= 1V, Ta= 25C

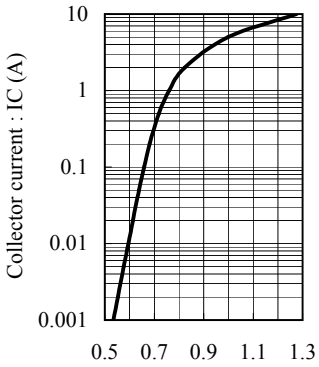

Fig.2 hFE - IC
at VCE= 1V, Ta= 25C

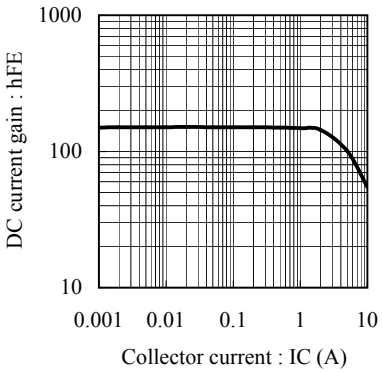

Fig.3 VCE(sat) - IC
at IC/IB= 20, Ta= 25C

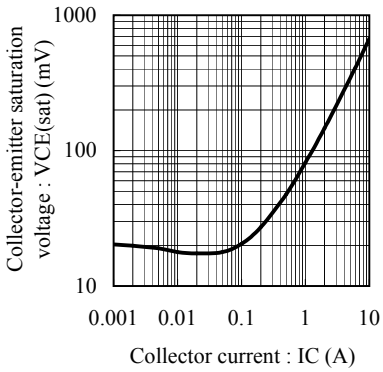

Fig.4 VBE(sat) - IC
at IC/IB= 20, Ta= 25C

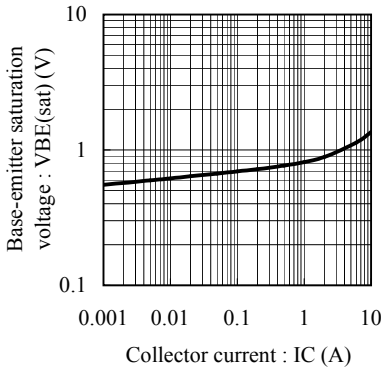

Fig.5 fT - IE
at VCE= 10V, Ta= 25C

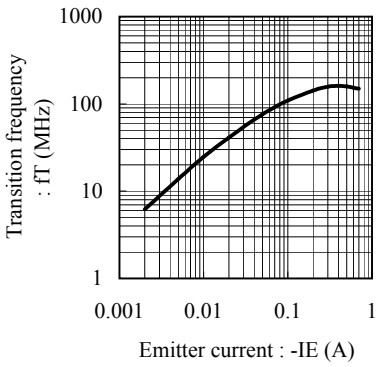

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

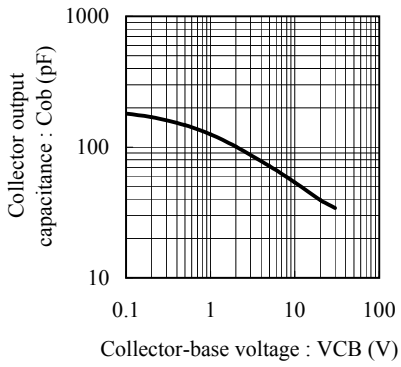

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C