Silicon PNP transistor epitaxial type
A5983

[Applications]
General purpose amplifier
High voltage switching (such as telephone)

[Feature]
High voltage VCEO= -150V
Collector current IC= -0.6A
Low collector saturation voltage VCE(sat)= -0.5V (Max.) at IC= -50mA, IB= -5mA
NPN complementary pair with C5983

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-160	V
Collector-emitter voltage	VCEO	-150	V
Emitter-base voltage	VEBO	-5	V
Collector current	IC	-600	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-base breakdown voltage	BVCBO	-160	-	-	V	IC= -100uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	-150	-	-	V	IC= -1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	-5	-	-	V	IE= -10uA, IC= 0A
Collector cut-off current	ICBO	-	-	-50	nA	VCB= -120V, IE= 0A
Emitter cut-off current	IEBO	-	-	-50	nA	VEB= -3V, IC= 0A
DC current gain 1	hFE 1	45	-	-	-	VCE= -5V, IC= -1mA
DC current gain 2	hFE 2	90	-	270	-	VCE= -5V, IC= -10mA
DC current gain 3	hFE 3	45	-	-	-	VCE= -5V, IC= -50mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	-0.2	V	IC= -10mA, IB= -1mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	-0.5	V	IC= -50mA, IB= -5mA
Base-emitter saturation voltage 1	VBE(sat) 1	-	-	-1.0	V	IC= -10mA, IB= -1mA
Base-emitter saturation voltage 2	VBE(sat) 2	-	-	-1.0	V	IC= -50mA, IB= -5mA
Base-emitter on voltage (only A5983)	VBE(on)	-	-	-0.77	V	VCE= -5V, IC= -10mA
Transition frequency	fT	100	-	300	MHz	VCE= -10V, IE= 10mA
Collector output capacitance	Cob	-	-	6	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= -5V,Ta= 25C

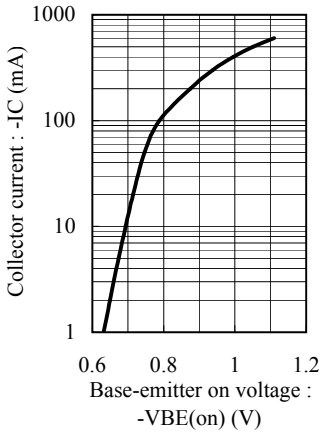

Fig.2 hFE - IC
at VCE= -5V, Ta= 25C

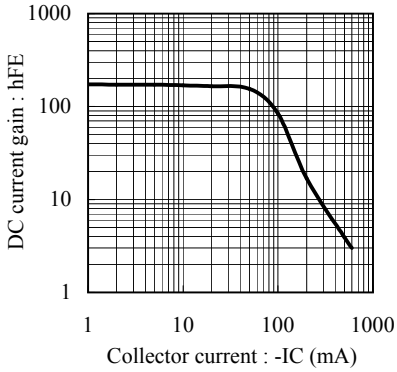

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

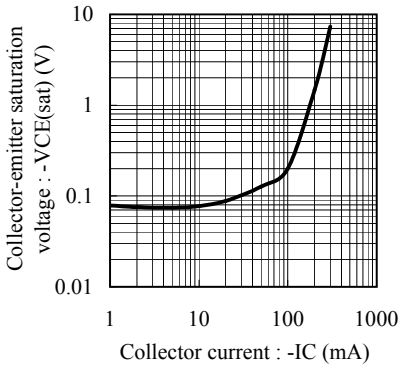

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

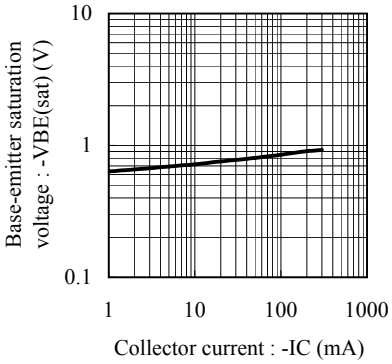

Fig.5 fT - IE
at VCE= -10V, Ta= 25C

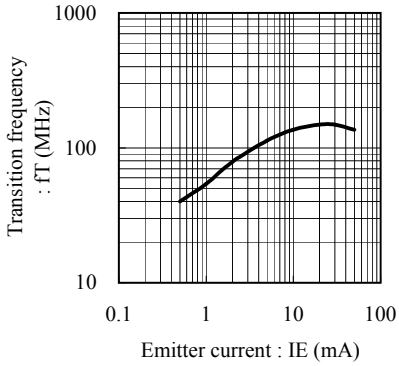

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

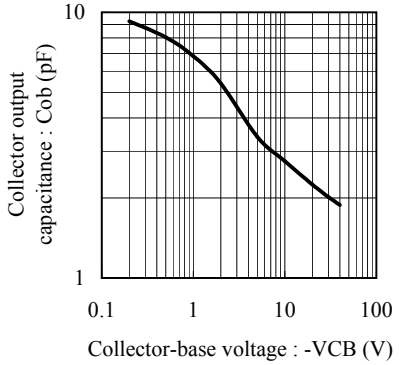

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C