Silicon NPN transistor epitaxial type
C5979

[Applications]

General purpose transistors
Low frequency signal amplifier

[Feature]

High break-down voltage BVCEO= 50V
High level collector current IC= 500mA
Low collector saturation voltage VCE(sat)= 0.11V(Typ.) at IC= 150mA, IB= 15mA
Complimentary pair with phenitec P/N A5977

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	50	V
Collector-emitter voltage	VCEO	50	V
Emitter-base voltage	VEBO	5	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-base breakdown voltage	BVCBO	50	-	-	V	IC= 10uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	50	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	5	-	-	V	IE= 10uA, IC= 0A
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 20V, IE= 0A
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 4V, IE= 0A
DC current gain 1	hFE 1	68	-	330	-	VCE= 3V, IC= 10mA
DC current gain 2 *	hFE 2	10	-	-	-	VCE= 3V, IC= 500mA
Collector-emitter saturation voltage	VCE(sat)	-	0.11	0.5	V	IC= 150mA, IB= 15mA
Base-emitter on voltage	VBE(on)	-	0.64	-	V	VCE= 3V, IC= 10mA
Transition frequency	f T	-	280	-	MHz	VCE= 5V, IE= -50mA
Collector output capacitance	Cob	-	5	12	pF	VCB= 10V, f = 1MHz, IE= 0A

* Pulse

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 VBE(on) - IC
at VCE= 3V, Ta= 25C

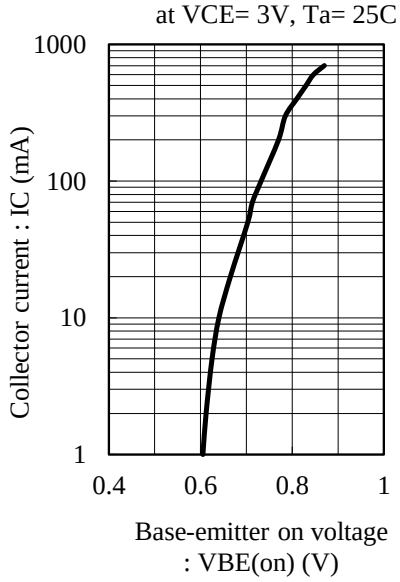

Fig.2 hFE - IC
at VCE= 3V, Ta= 25C

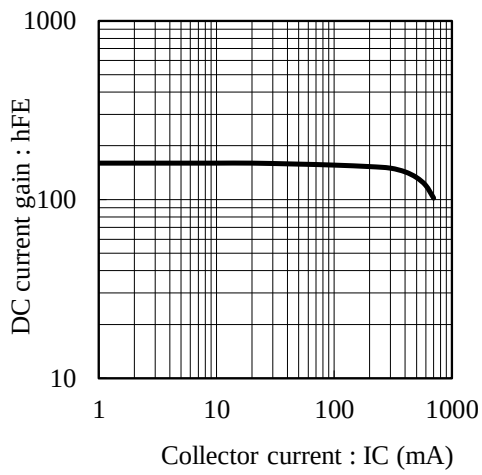

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

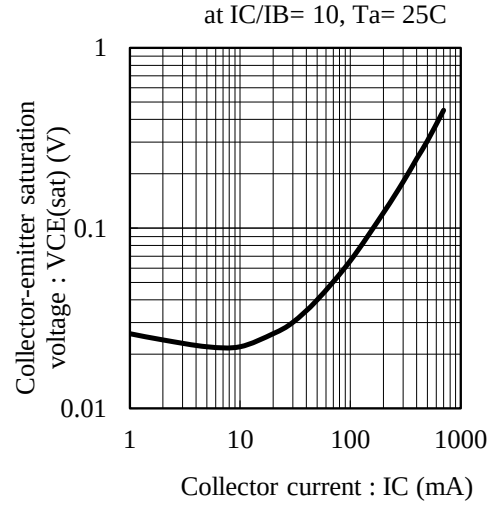

Fig.4 fT - IE
at VCE= 5V, Ta= 25C

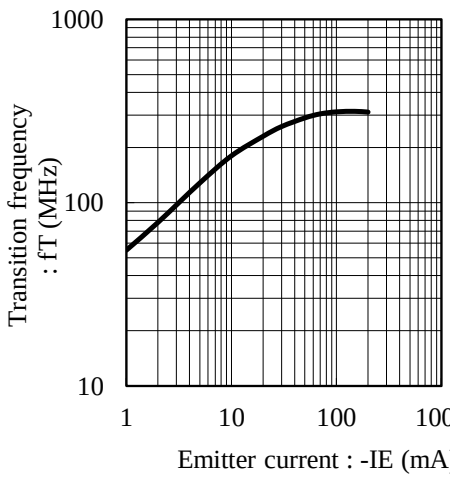

Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C