Silicon NPN transistor epitaxial type
C5038

[Applications]
High-frequency amplification
Oscillation
Mixing

[Feature]
High transition frequency fT= 650MHz(min.)
Low output capacitance Cob= 0.7pF(typ.)
High gain

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	30	V
Collector-emitter voltage	VCEO	25	V
Emitter-base voltage	VEBO	3	V
Collector current	IC	50	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	30	-	-	V	IC= 100uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	25	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	3	-	-	V	IE= 10uA, IC= 0A
Collector cut-off current	ICBO	-	-	100	nA	VCB= 25V, IE= 0A
Emitter cut-off current	IEBO	-	-	100	nA	VEB= 2V, IC= 0A
DC current gain	hFE	110	-		-	VCE= 10V, IC= 4mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.5	V	IC= 4mA, IB= 0.4mA
Transition frequency	f T	650	-	-	MHz	VCE= 10V, IE= -4mA
Collector output capacitance	Cob	-	0.7	-	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 VBE(on) - IC
at VCE= 10V, Ta= 25C

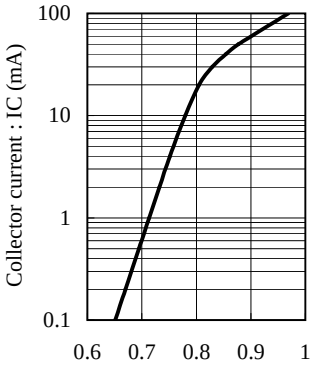

Fig.2 hFE - IC
at VCE=10V, Ta= 25C

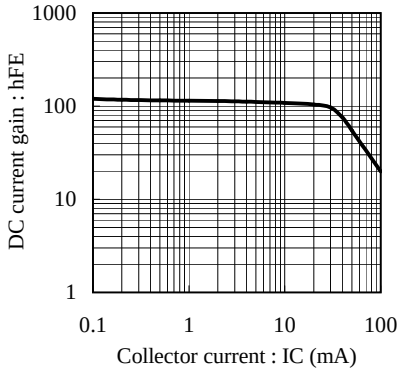

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

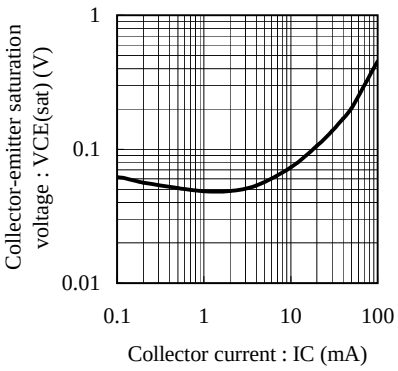

Fig.4 fT - IE
at VCE= 10V, Ta= 25C

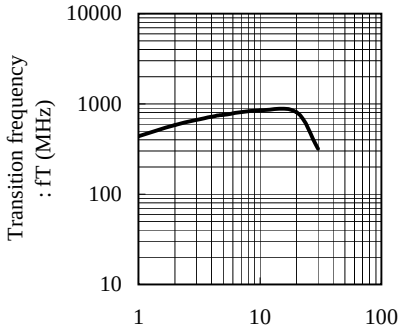

Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C

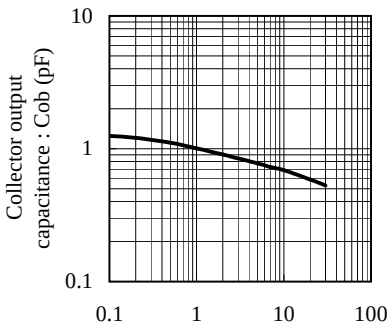

Fig.6 Cib - VEB
at f= 1MHz, Ta= 25C