

**Silicon NPN transistor epitaxial type
DP922**

[Applications]

General purpose amplifier, Switching

[Feature]

Low collector-emitter saturation voltage $V_{CE(sat)}= 1.2V(\text{Max.})$ at $I_C/I_B= 3A/0.375A$

Low transition frequency $f_T= 3MHz(\text{Min.})$ at $V_{CE}= 10V, I_E= -0.5A$

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	V _{CB0}	100	V
Collector-emitter voltage	V _{CEO}	100	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _C	3	A
Junction temperature	T _j	150	C
Storage temperature	T _{stg}	-55 to 150	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	B _V CB0	100	-	-	V	I _C = 100uA
Collector-emitter breakdown voltage	B _V CEO	100	-	-	V	I _C = 30mA
Emitter-base breakdown voltage	B _V EB0	5	-	-	V	I _E = 100uA
Collector cut-off current	I _{CBO}	-	-	1	uA	V _{CB} = 80V
Collector cut-off current	I _{CEO}	-	-	1	uA	V _{CE} = 80V
Emitter cut-off current	I _{EB0}	-	-	1	uA	V _{EB} = 5V
DC current gain 1	h _{FE} 1	20	-	-	-	V _{CE} = 4V, I _C = 10mA
DC current gain 2	h _{FE} 2	25	-	-	-	V _{CE} = 4V, I _C = 1A
DC current gain 3	h _{FE} 3	10	-	50	-	V _{CE} = 4V, I _C = 3A
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	1.2	V	I _C = 3A, I _B = 0.375A
Base-emitter on voltage	V _{BE(on)}	-	-	1.8	V	V _{CE} = 4V, I _C = 3A
Transition frequency	f _T	3	-	-	MHz	V _{CE} = 10V, I _E = -0.5A

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= 4V, Ta= 25C

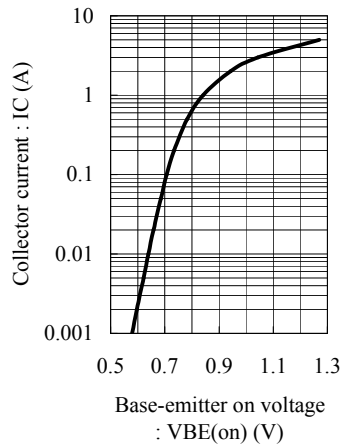


Fig.2 hFE - IC
at VCE= 4V, Ta= 25C

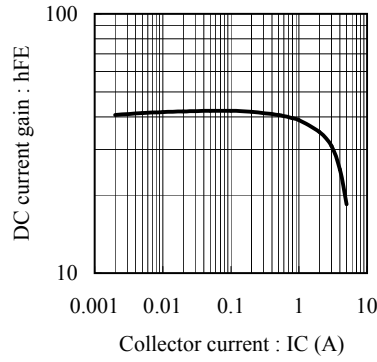


Fig.3 VCE(sat) - IC
at IC/IB= 8, Ta= 25C

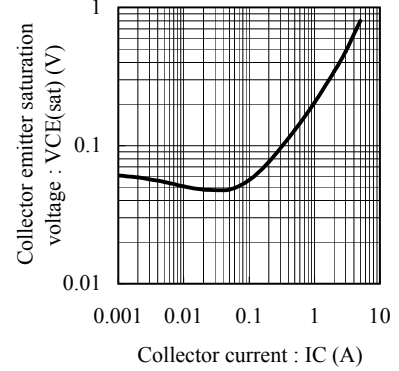


Fig.4 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

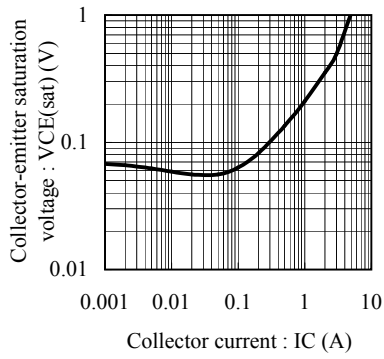


Fig.5 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

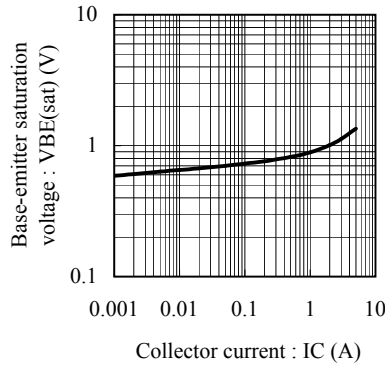


Fig.6 fT - IE
at VCE= 10V, Ta= 25C

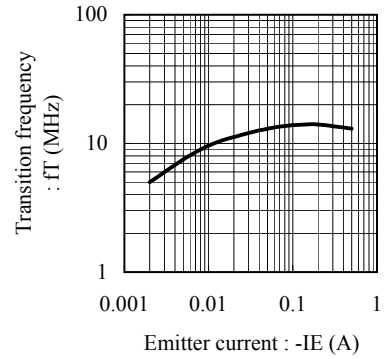


Fig.7 Cob - VCB
at f= 1MHz, Ta= 25C

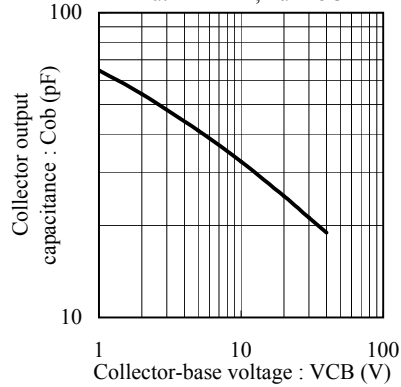


Fig.8 Cib - VEB
at f= 1MHz, Ta= 25C

