

Silicon PNP transistor epitaxial type A5988

[Applications]

High current amplifier

[Feature]

Collector current $I_C = -5A$

Very low collector saturation voltage $V_{CE(sat)} = -460mV$ (Max.) at $I_C = -5A$, $I_B = -500mA$

Excellent gain characteristics specified up to -10 amperes

NPN complementary pair with C5988

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-100	V
Collector-emitter voltage	VCEO	-60	V
Emitter-base voltage	VEBO	-6	V
Collector current (DC)	IC	-5	A
Collector current (Pulse)	IC	-15	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	-100	-120	-	V	$I_C = -100\mu A$
Collector-emitter breakdown voltage	BVCEO	-60	-80	-	V	$I_C = -10mA$
Emitter-base breakdown voltage	BVEBO	-6	-9	-	V	$I_E = -100\mu A$
Collector cut-off current	ICBO	-	-	-50	nA	$V_{CB} = -80V$
Emitter cut-off current	IEBO	-	-	-10	nA	$V_{EB} = -6V$
DC current gain 1	hFE 1	100	-	-	-	$V_{CE} = -1V$, $I_C = -10mA$
DC current gain 2	hFE 2	120	200	300	-	$V_{CE} = -1V$, $I_C = -2A$
DC current gain 3	hFE 3	60	90	-	-	$V_{CE} = -1V$, $I_C = -5A$
DC current gain 4	hFE 4	-	20	-	-	$V_{CE} = -1V$, $I_C = -10A$
Collector-emitter saturation voltage 1	$V_{CE(sat)} 1$	-	-16	-50	mV	$I_C = -100mA$, $I_B = -10mA$
Collector-emitter saturation voltage 2	$V_{CE(sat)} 2$	-	-90	-140	mV	$I_C = -1A$, $I_B = -100mA$
Collector-emitter saturation voltage 3	$V_{CE(sat)} 3$	-	-160	-210	mV	$I_C = -2A$, $I_B = -200mA$
Collector-emitter saturation voltage 4	$V_{CE(sat)} 4$	-	-370	-460	mV	$I_C = -5A$, $I_B = -500mA$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-1.12	-1.27	V	$I_C = -5A$, $I_B = -500mA$
Base-emitter on voltage	$V_{BE(on)}$	-	-1	-1.2	V	$V_{CE} = -1V$, $I_C = -5A$
Transition frequency	fT	-	130	-	MHz	$V_{CE} = -10V$, $I_E = 100mA$
Collector output capacitance	Cob	-	72	-	pF	$V_{CB} = -10V$, $f = 1MHz$, $I_E = 0A$

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.

No. A5988-20090224

Fig.1 IC - VBE(on)
at VCE= -1V, Ta= 25C

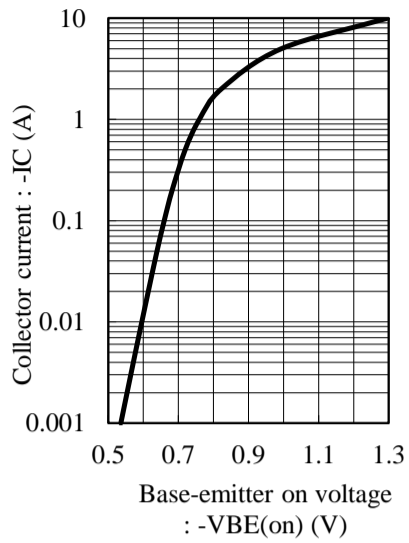


Fig.2 hFE - IC
at VCE= -1V, Ta= 25C

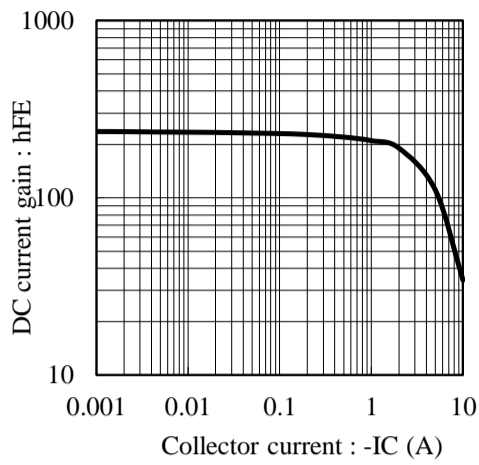


Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

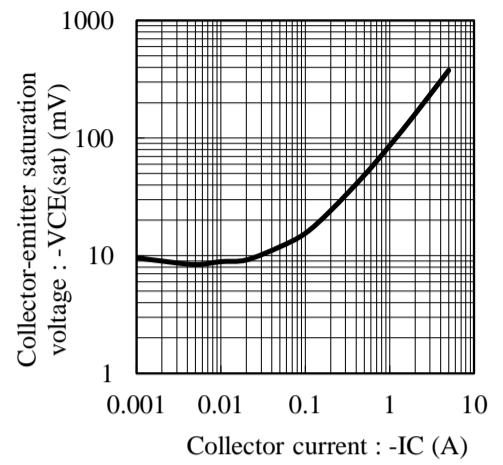


Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

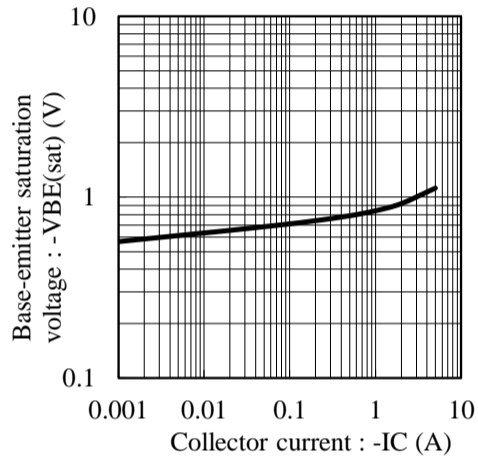


Fig.5 fT - IE
at VCE= -10V, Ta= 25C

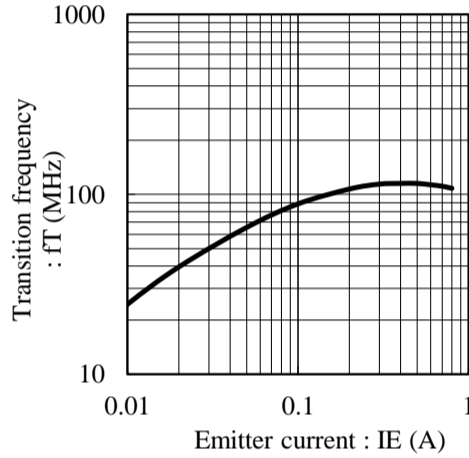


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

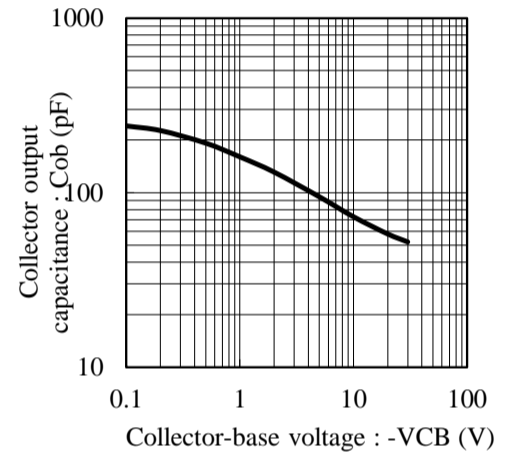


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

