

Silicon PNP transistor epitaxial type
A5987

[Applications]

High current amplifier

[Feature]

Collector current $I_C = -5A$

Very low collector saturation voltage $V_{CE(sat)} = -420mV$ (Max.) at $I_C = -4A$, $I_B = -400mA$

Excellent gain characteristics specified up to -10 amperes

NPN complementary pair with C5987

[Absolute maximum ratings (Ta=25°C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-140	V
Collector-emitter voltage	VCEO	-100	V
Emitter-base voltage	VEBO	-6	V
Collector current (DC)	I_C	-5	A
Collector current (Pulse)	I_C	-10	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to 150	°C

[Electrical characteristics (Ta=25°C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	-140	-170	-	V	$I_C = -100\mu A$
Collector-emitter breakdown voltage	BVCEO	-100	-120	-	V	$I_C = -10mA$
Emitter-base breakdown voltage	BVEBO	-6	-9	-	V	$I_E = -100\mu A$
Collector cut-off current	ICBO	-	-	-50	nA	$V_{CB} = -100V$
Emitter cut-off current	IEBO	-	-	-10	nA	$V_{EB} = -6V$
DC current gain 1	h_{FE1}	100	-	-	-	$V_{CE} = -1V$, $I_C = -10mA$
DC current gain 2	h_{FE2}	120	200	300	-	$V_{CE} = -1V$, $I_C = -1A$
DC current gain 3	h_{FE3}	50	70	-	-	$V_{CE} = -1V$, $I_C = -3A$
DC current gain 4	h_{FE4}	30	45	-	-	$V_{CE} = -1V$, $I_C = -4A$
DC current gain 5	h_{FE5}	-	15	-	-	$V_{CE} = -1V$, $I_C = -10A$
Collector-emitter saturation voltage 1	$V_{CE(sat)1}$	-	-20	-50	mV	$I_C = -100mA$, $I_B = -10mA$
Collector-emitter saturation voltage 2	$V_{CE(sat)2}$	-	-90	-120	mV	$I_C = -1A$, $I_B = -100mA$
Collector-emitter saturation voltage 3	$V_{CE(sat)3}$	-	-170	-220	mV	$I_C = -2A$, $I_B = -200mA$
Collector-emitter saturation voltage 4	$V_{CE(sat)4}$	-	-320	-420	mV	$I_C = -4A$, $I_B = -400mA$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-1.06	-1.2	V	$I_C = -4A$, $I_B = -400mA$
Base-emitter on voltage	$V_{BE(on)}$	-	-0.97	-1.16	V	$V_{CE} = -1V$, $I_C = -4A$
Transition frequency	f_T	-	150	-	MHz	$V_{CE} = -10V$, $I_E = 100mA$
Collector output capacitance	C_{ob}	-	45	-	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.

