

**Silicon NPN transistor epitaxial type
CP081**

[Applications]

General purpose

[Feature]

Low collector saturation voltage $V_{CE(sat)} = 0.4V(\text{Max.})$ at $I_C = 100\text{mA}$, $I_B = 10\text{mA}$

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	60	V
Collector-emitter voltage	VCEO	30	V
Emitter-base voltage	VEBO	5	V
Collector current	IC	0.5	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	60	-	-	V	$I_C = 10\mu\text{A}$, $I_E = 0\text{A}$
Collector-emitter breakdown voltage	BVCEO	30	-	-	V	$I_C = 10\text{mA}$, $I_B = 0\text{A}$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 10\mu\text{A}$, $I_C = 0\text{A}$
DC current gain 1	hFE 1	35	-	-	-	$V_{CE} = 10\text{V}$, $I_C = 0.1\text{mA}$
DC current gain 2	hFE 2	50	-	-	-	$V_{CE} = 10\text{V}$, $I_C = 1\text{mA}$
DC current gain 3	hFE 3	75	-	-	-	$V_{CE} = 10\text{V}$, $I_C = 10\text{mA}$
DC current gain 4	hFE 4	100	-	300	-	$V_{CE} = 10\text{V}$, $I_C = 150\text{mA}$
DC current gain 5	hFE 5	30	-	-	-	$V_{CE} = 10\text{V}$, $I_C = 500\text{mA}$
Collector-emitter saturation voltage 1	$V_{CE(sat)1}$	-	-	0.4	V	$I_C = 100\text{mA}$, $I_B = 10\text{mA}$
Collector-emitter saturation voltage 2	$V_{CE(sat)2}$	-	-	1.6	V	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$
Transition frequency	fT	250	-	-	MHz	$V_{CE} = 20\text{V}$, $I_E = -20\text{mA}$
Collector output capacitance	Cob	-	-	8	pF	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$, $I_E = 0\text{A}$

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.