

Silicon NPN transistor epitaxial type CP380

[Applications]

General purpose

[Feature]

Low collector saturation voltage $V_{CE(sat)} = 0.4V(\text{Max.})$ at $I_C = 10\text{mA}$, $I_B = 1\text{mA}$

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	35	V
Collector-emitter voltage	VCEO	30	V
Emitter-base voltage	VEBO	4	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	35	-	-	V	$I_C = 100\mu\text{A}$, $I_E = 0\text{A}$
Collector-emitter breakdown voltage	BVCEO	30	-	-	V	$I_C = 1\text{mA}$, $I_B = 0\text{A}$
Emitter-base breakdown voltage	BVEBO	4	-	-	V	$I_E = 100\mu\text{A}$, $I_C = 0\text{A}$
Collector cutoff current	ICBO	-	-	100	nA	$V_{CB} = 35\text{V}$
Emitter cutoff current	IEBO	-	-	1	μA	$V_{EB} = 4\text{V}$
DC current gain	hFE	36	-	265	-	$V_{CE} = 12\text{V}$, $I_C = 2\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$
Transition frequency	fT	100	150	-	MHz	$V_{CE} = 10\text{V}$, $I_E = -1\text{mA}$
Collector output capacitance	Cob	-	2	3.2	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.

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