

**Silicon NPN transistor epitaxial type  
CP041**

**[ Applications ]**

General purpose

**[ Feature ]**

Low collector saturation voltage  $V_{CE(sat)} = 0.5V(\text{Max.})$  at  $I_C = 50\text{mA}$ ,  $I_B = 5\text{mA}$

**[ Absolute maximum ratings (Ta=25C) ]**

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	120	V
Collector-emitter voltage	VCEO	120	V
Emitter-base voltage	VEBO	5	V
Collector current	IC	50	mA
Junction temperature	Tj	125	C
Storage temperature	Tstg	-55 to 125	C

**[ Electrical characteristics (Ta=25C) ]**

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	120	-	-	V	$I_C = 50\mu\text{A}$ , $I_E = 0\text{A}$
Collector-emitter breakdown voltage	BVCEO	120	-	-	V	$I_C = 1\text{mA}$ , $I_B = 0\text{A}$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 50\mu\text{A}$ , $I_C = 0\text{A}$
Collector cutoff current	ICBO	-	-	500	nA	VCB= 100V
Emitter cutoff current	IEBO	-	-	500	nA	VEB= 4V
DC current gain	hFE	180	-	560	-	VCE= 6V, IC= 2mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.5	V	IC= 50mA, IB= 5mA
Transition frequency	fT	-	140	-	MHz	VCE= 12V, IE= -2mA
Collector output capacitance	Cob	-	3.2	-	pF	VCB= 12V, f= 1MHz, IE= 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.