

**Silicon NPN transistor epitaxial type  
DP010****[ 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	40	V
Collector-emitter voltage	VCEO	32	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	40	-	-	V	$I_C = 100\mu\text{A}$ , $I_E = 0\text{A}$
Collector-emitter breakdown voltage	BVCEO	32	-	-	V	$I_C = 1\text{mA}$ , $I_B = 0\text{A}$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 100\mu\text{A}$ , $I_C = 0\text{A}$
Collector-cut off current	ICBO	-	-	1	$\mu\text{A}$	$V_{CB} = 20\text{V}$ , $I_E = 0\text{A}$
Emitter-cut off current	IEBO	-	-	1	$\mu\text{A}$	$V_{EB} = 4\text{V}$ , $I_C = 0\text{A}$
DC current gain	hFE	82	-	390	-	$V_{CE} = 3\text{V}$ , $I_C = 10\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C = 100\text{mA}$ , $I_B = 10\text{mA}$
Transition frequency	fT	-	250	-	MHz	$V_{CE} = 5\text{V}$ , $I_E = -20\text{mA}$
Collector output capacitance	Cob	-	6.2	-	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.