

**Silicon NPN transistor epitaxial type
D5023**

[Applications]

General purpose

[Feature]

Low collector saturation voltage $V_{CE(sat)} = 0.8V(\text{Max.})$ at $I_C = 2A, I_B = 0.2A$

[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	2	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	$I_C = 50\mu A, I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	32	-	-	V	$I_C = 1mA, I_B = 0A$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 50\mu A, I_C = 0A$
Collector cut-off current	ICBO	-	-	1	μA	$V_{CB} = 20V$
Emitter cut-off current	IEBO	-	-	1	μA	$V_{EB} = 4V$
DC current gain	hFE	82	-	360	-	$V_{CE} = 3V, I_C = 0.5A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.8	V	$I_C = 2A, I_B = 0.2A$
Transition frequency	fT	-	100	-	MHz	$V_{CE} = 5V, I_E = -0.5A$
Collector output capacitance	Cob	-	30	-	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.

