

**Silicon NPN transistor epitaxial type**  
**C5843**

**[ Applications ]**

Low VCE(sat) Driver

**[ Feature ]**

Very low collector saturation voltage VCE(sat)= 0.2V (Max.) at IC= 0.15A, IB= 15mA

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	140	V
Collector-emitter voltage	VCEO	80	V
Emitter-base voltage	VEBO	7	V
Collector current (DC)	IC	1	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	140	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	80	-	-	V	IC= 30mA
Emitter-base breakdown voltage	BVEBO	7	-	-	V	IE= 100uA
Collector cut-off current	ICBO	-	-	10	nA	VCB= 90V
Emitter cut-off current	IEBO	-	-	10	nA	VEB= 5V
DC current gain 1	hFE1	50	-	-	-	VCE= 10V, IC= 0.1mA
DC current gain 2	hFE2	90	-	-	-	VCE= 10V, IC= 10mA
DC current gain 3	hFE3	100	-	300	-	VCE= 10V, IC= 0.15A
DC current gain 4	hFE4	50	-	-	-	VCE= 10V, IC= 0.5A
DC current gain 5	hFE5	15	-	-	-	VCE= 10V, IC= 1A
Collector-emitter saturation voltage 1	VCE(sat)1	-	-	0.2	V	IC= 0.15A, IB= 15mA
Collector-emitter saturation voltage 2	VCE(sat)2	-	-	0.5	V	IC= 0.5A, IB= 50mA
Base-emitter saturation voltage	VBE(sat)	-	-	1.1	V	IC= 0.15A, IB= 15mA
Transition frequency	fT	100	-	-	MHz	VCE= 10V, IE= -50mA
Collector output capacitance	Cob	-	-	12	pF	VCB= 10V, f = 1MHz, IE= 0A
Collector input capacitance	Cib	-	-	60	pF	VEB= 0.5V, 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.

