

**Silicon NPN transistor epitaxial type
C5902**

[Applications]

CFL inverter driver

[Feature]

High current gain characteristic

Low collector-emitter saturation voltage $V_{CE(sat)} = 0.2V(\text{Max.})$ at $I_C/I_B = 500mA/50mA$

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	60	V
Collector-emitter voltage	VCEO	60	V
Emitter-base voltage	VEBO	7	V
Collector current (DC)	IC	5	A
Collector current (Pulse*)	ICP	8	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	60	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	60	-	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	7	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	10	uA	VCB= 50V
Emitter cut-off current	IEBO	-	-	10	uA	VEB= 7V
DC current gain 1	hFE 1	60	-	-	-	VCE= 1V, IC= 0.1A
DC current gain 2	hFE 2	200	-	400	-	VCE= 1V, IC= 2A
DC current gain 3	hFE 3	50	-	-	-	VCE= 1V, IC= 5A
Collector-emitter saturation voltage	VCE(sat)	-	0.1	0.3	V	IC= 2A, IB= 0.2A
Base-emitter saturation voltage	VBE(sat)	-	0.9	1.2	V	IC= 2A, IB= 0.2A
Transition frequency	fT	-	70	-	MHz	VCE= 10V, IE= -50mA
Collector output capacitance	Cob	-	70	-	pF	VCB= 10V, f= 1MHz, IE= 0A
Turn on time	ton	-	0.2	1	us	VCC= 10V, IC= 2A
Storage time	tstg	-	1.1	2.5	us	IB1= -IB2= 0.2A
Fall time	tf	-	0.2	1	us	

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.

