

**Silicon PNP transistor epitaxial type  
B5838**

**[ Applications ]**

High side switches  
Medium power amplifier  
DC-DC converter

**[ Feature ]**

Correspond to BCP69  
High collector current  $I_C = -1A$   
Small collector-emitter saturation voltage  $V_{CE(sat)} = -180mV(Typ.)$  at  $I_C = -1A, I_B = -100mA$   
Small output capacitance  $C_{ob} = 18pF(Typ.)$  at  $V_{CB} = -10V$

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-32	V
Collector-emitter voltage	VCEO	-20	V
Emitter-base voltage	VEBO	-5	V
Collector current (DC)	IC	-1	A
Collector current (Pulse)	ICP	-2	A
Base current (Pulse)	IBP	-200	mA
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	-32	-	-	V	$I_C = -10\mu A, I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	-20	-	-	V	$I_C = -1mA, I_B = 0A$
Emitter-base breakdown voltage	BVEBO	-5	-	-	V	$I_E = -10\mu A, I_C = 0A$
Collector cut-off current	ICBO	-	-	-100	nA	$V_{CB} = -25V, I_E = 0A$
Emitter cut-off current	IEBO	-	-	-100	nA	$V_{EB} = -5V, I_E = 0A$
DC current gain 1	hFE 1	50	-	-	-	$V_{CE} = -10V, I_C = -5mA$
DC current gain 2	hFE 2	85	175	375	-	$V_{CE} = -1V, I_C = -0.5A$
DC current gain 3	hFE 3	60	-	-	-	$V_{CE} = -1V, I_C = -1A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-180	-500	mV	$I_C = -1A, I_B = -0.1A$
Base-emitter on voltage 1	$V_{BE(on)1}$	-	-	-700	mV	$V_{CE} = -10V, I_C = -5mA$
Base-emitter on voltage 2	$V_{BE(on)2}$	-	-	-1	V	$V_{CE} = -1V, I_C = -1A$
Transition frequency	f T	40	140	-	MHz	$V_{CE} = -5V, I_E = 50mA$
Collector output capacitance	Cob	-	18	-	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.

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