

**Silicon NPN transistor epitaxial type (darlington)  
DP054**

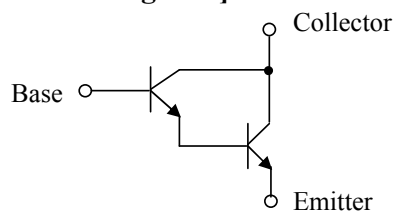
**[ Applications ]**

Motor driver

**[ Feature ]**

Darlington connection for a high hFE hFE= 10k(min.) at VCE= 5V, IC= 100mA  
High input impedance

**[ Circuit diagram ]**



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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	100	V
Collector-emitter voltage	VCES	100	V
Emitter-base voltage	VEBO	12	V
Collector current	IC	500	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	100	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCES	100	-	-	V	IC= 100uA
Emitter-base breakdown voltage	BVEBO	12	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	100	nA	VCB= 80V
Collector cut-off current	ICES	-	-	500	nA	VCE= 80V
Emitter cut-off current	IEBO	-	-	100	nA	VEB= 10V
DC current gain 1	hFE 1	10k	-	-	-	VCE= 5V, IC= 10mA
DC current gain 2	hFE 2	10k	-	-	-	VCE= 5V, IC= 100mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	1.2	V	IC= 10mA, IB= 10uA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	1.5	V	IC= 100mA, IB= 100uA
Base-emitter on voltage	VBE(on)	-	-	2	V	VCE= 5V, IC= 100mA
Base-emitter on voltage	fT	125	-	-	MHz	VCE= 5V, IE= -10mA
Base-emitter on voltage	Cob	-	-	8	pF	VCB= 10V, 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.