

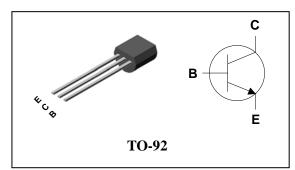
DN050

NPN Silicon Transistor

Features

- Extremely low collector-to-emitter saturation voltage (V_{CE(SAT)}=0.07V Typ. @I_C/I_B=100mA/10mA)
- Suitable for low voltage large current drivers
- Complementary pair with DP050
- Switching Application.

PIN Connection



Ordering Information

Type NO.	Marking	Package Code	
DN050	DN050	TO-92	

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	15	V
Collector-Emitter voltage	V_{CEO}	12	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I _C	500	mA
Collector dissipation	P _C	625	mW
Junction temperature	T _j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	$I_C = 50 \mu A, I_E = 0$	15	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	$I_C=1$ mA, $I_B=0$	12	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	$I_E = 50 \mu A, I_C = 0$	5	-	-	V
Collector cut-off current	I _{CBO}	$V_{CB} = 12V, I_{E} = 0$	-	-	0.1	μА
Emitter cut-off current	I _{EBO}	$V_{EB} = 5V$, $I_{C} = 0$	-	-	0.1	μА
DC current gain	h _{FE1}	$V_{CE} = 1V$, $I_{C} = 100 \text{mA}$	200	-	450	-
De current gant	h _{FE2}	$V_{CE} = 1V$, $I_{C} = 500 \text{mA}$	70	-	-	-
Collector-Emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =10mA	-	-	0.25	V
Base-Emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =10mA	-	-	1.2	V
Transition frequency	f _T	$V_{CE}=5V$, $I_{C}=20mA$	-	120	1	MHz
Collector output capacitance	C _{ob}	$V_{CB}=10V$, $I_{E}=0$, $f=1MHz$	-	4.5	-	pF

Electrical Characteristic Curves

Fig. 1 P_C - T_a

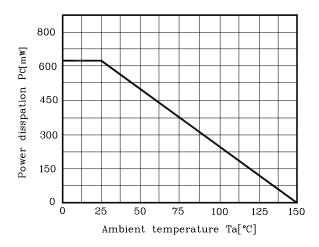


Fig. 3 $h_{FE}\ -\ I_{C}$

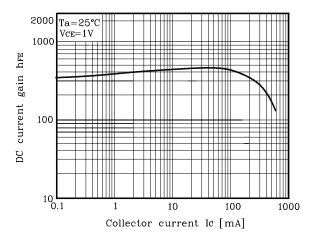


Fig. 5 $V_{CE(sat)}$ - I_C

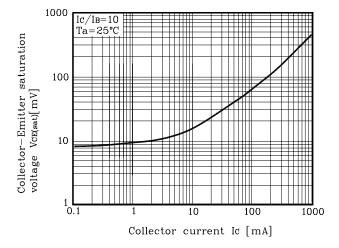


Fig. 2 $I_{C}\,$ - $\,V_{BE}\,$

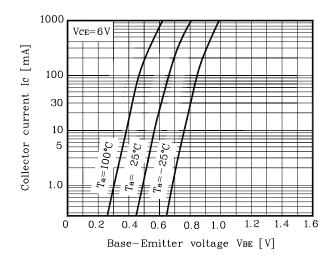
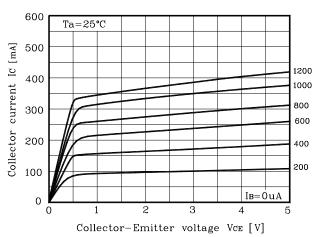
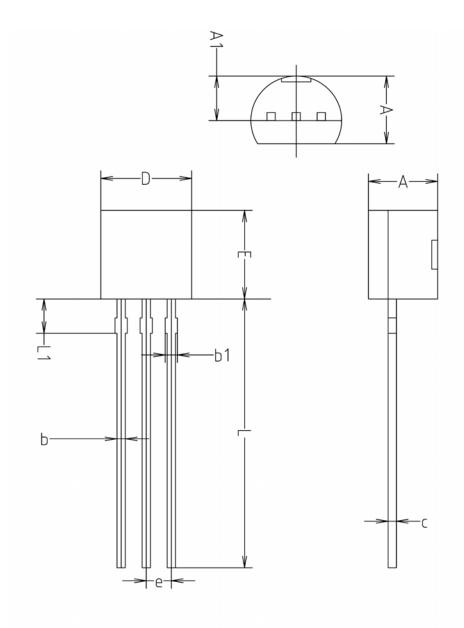


Fig. 4 I_C - V_{CE}



Outline Dimension



	MILLMETERS(mm)			
SYMBOL	MINIMUM	NOMINAL	MAXIMUM	
Α	3.40	3.50	3.66	
A1	2.46	2.51	2.59	
b	0.39	0.44	0.53	
b1	0.39	_	0.63	
С	0.35	0.42	0.47	
D	4.48	4.60	4.70	
Ε	4.48	4.60	4.70	
е	1.17	1.27	1.37	
L	13.70	14.00	14.77	
L1	1.55	1.70	2.15	

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