KODENSHI AUK

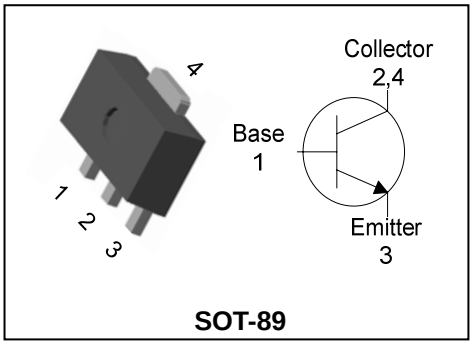
DN200F

NPN Silicon Transistor

Features

- Extremely low collector-to-emitter saturation voltage
  ($V_{CE(SAT)}$= 0.2V Typ. @I_C/I_B= 1A/50 ㎃)
- Suitable for low voltage large current drivers
- Complementary pair with DP200F
- Switching Application

PIN Connection



SOT-89

Ordering Information

Type NO.	Marking	Package Code
DN200F	N04 YWW	SOT-89

04: DEVICE CODE, YWW(Y : Year code, WW : Weekly code)

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	2	A(DC)
	I_{CP}*	4	A(Pulse)
Collector power dissipation	P_C	0.5	W
	P_C**	1	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~150	°C

* : Single pulse, tp= 300 ㎲

** : When mounted on ceramic substrate(250 ㎟×0.8t)

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C= 50 ㎂, I_E= 0	15	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C= 1 ㎃, I_B= 0	12	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E= 50 ㎂, I_C= 0	5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}= 12V, I_E= 0	-	-	0.1	㎂
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C= 0	-	-	0.1	㎂
DC current gain	h_{FE1}	V_{CE}= 1V, I_C= 100 ㎃	200	-	450	-
	h_{FE2}	V_{CE}= 1V, I_C= 2A	40	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C= 1A, I_B= 50 ㎃	-	-	0.3	V
Base-Emitter saturation voltage	$V_{BE(sat)}$	I_C= 1A, I_B= 50 ㎃	-	-	1.2	V
Transition frequency	f_T	V_{CE}= 5V, I_C= 50 ㎃	-	260	-	㎒
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0, f= 1 ㎒	-	5	-	pF

* hFE rank : 200~450 Only

Electrical Characteristic Curves

Fig. 1 P_C - T_a

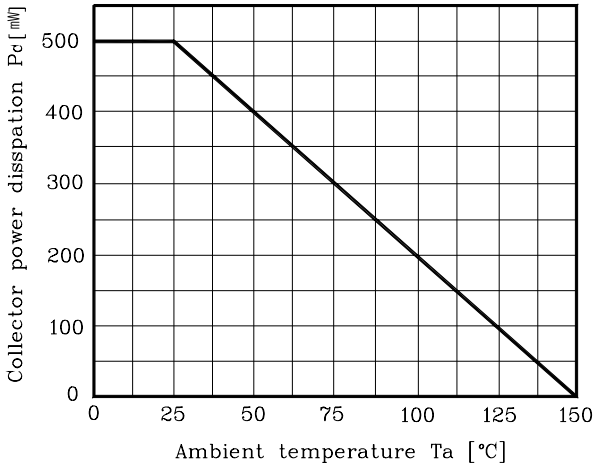


Fig. 2 I_C - V_{BE}

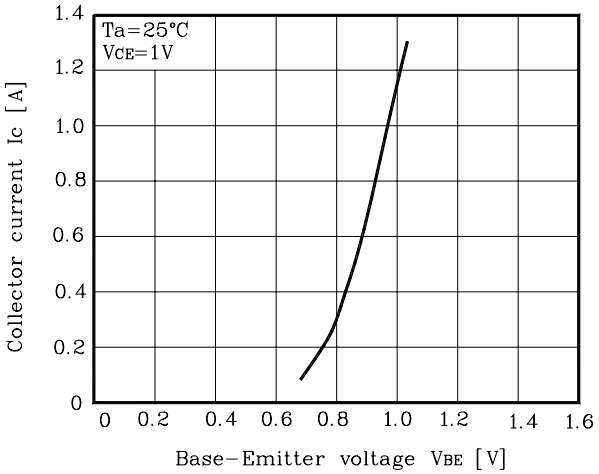


Fig. 3 h_{FE}-I_C

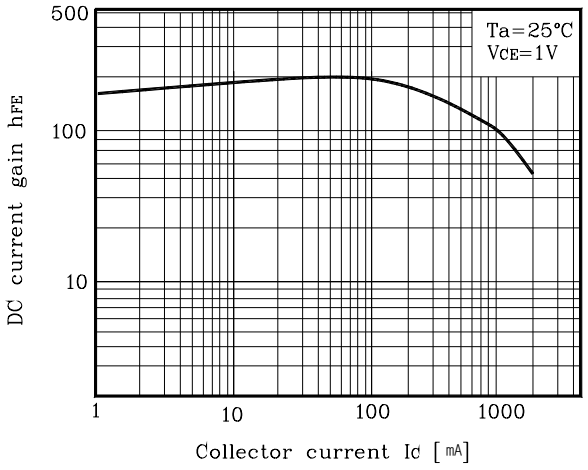
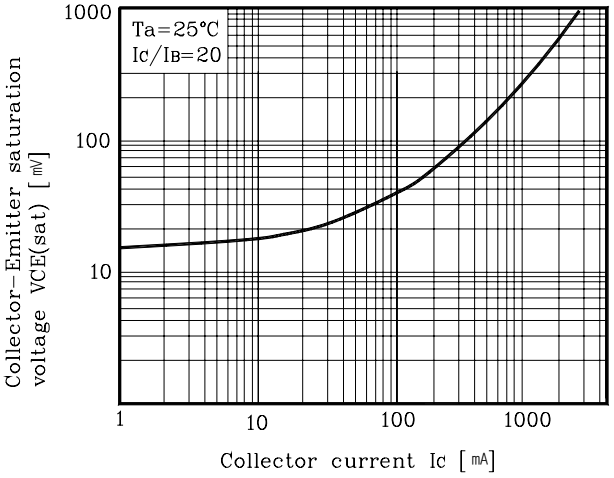
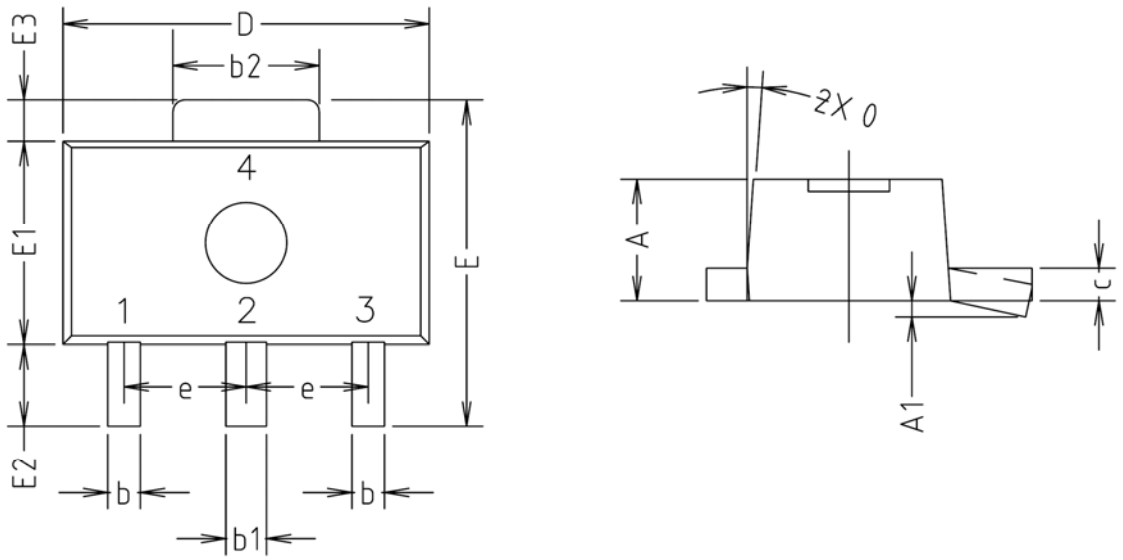


Fig. 4 $V_{CE(sat)}$-I_C

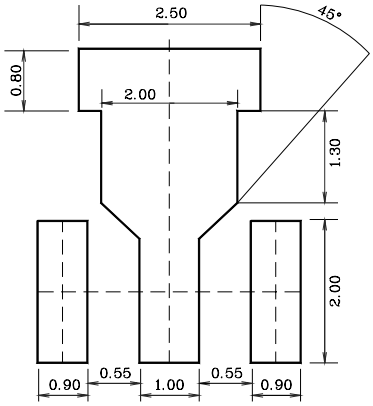


Outline Dimension(mm)



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.40	1.50	1.60	
A1	0.00	–	0.10	
b	0.38	0.42	0.48	
b1	0.48	0.52	0.58	
b2	1.79	1.82	1.87	
c	0.40	0.42	0.46	
D	4.40	4.50	4.70	
E	3.70	4.00	4.30	
E1	2.40	2.50	2.70	
E2	0.80	1.00	1.20	
E3	0.40	0.50	0.60	
e	1.50 TYP.			
θ	4° TYP.			

※Recommend PCB solder land [Unit: mm]



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