AUK Semiconductor

DP500F

PNP Silicon Transistor

Description

- Extremely low collector-to-emitter saturation voltage
  ($V_{CE(SAT)}$=-0.2V Typ. @I_C / I_B=-3A/-150mA)
- Suitable for low voltage large current drivers
- Excellent h_{FE} Linearity
- Complementary pair with DN500F

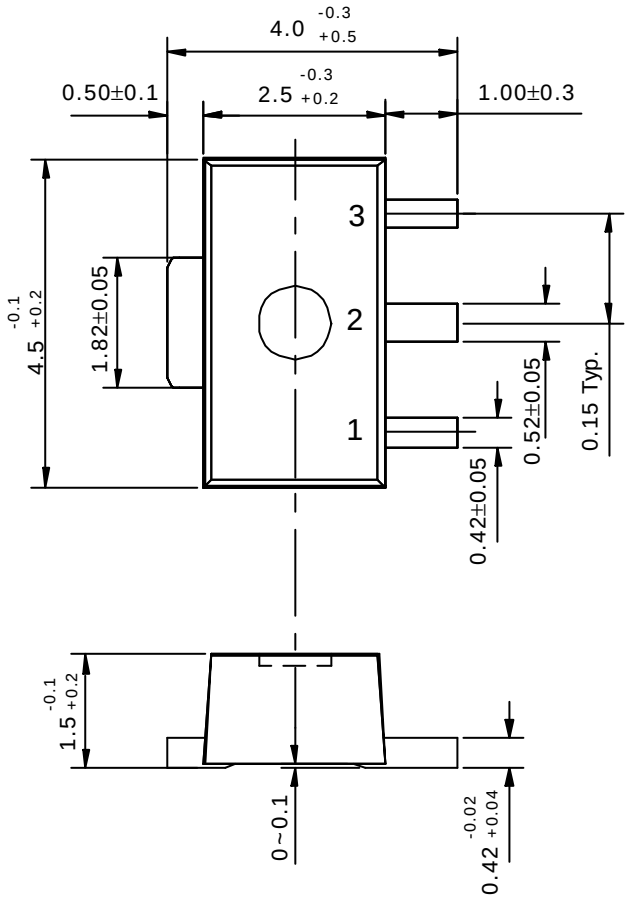
Ordering Information

Type NO.	Marking	Package Code
DP500F	P5□□	SOT-89

□□ : h_{FE} rank, monthly code

Outline Dimensions

unit : mm



PIN Connections
1. Base
2. Collector
3. Emitter

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	-5	A
Collector dissipation	P_C	0.5	W
	P_C*	2	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

* : When mounted on 40×40×0.8mm ceramic substate

Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=-50μA, I_E=0	-15	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=-1mA, I_B=0	-12	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=-50μA, I_C=0	-5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=-12V, I_E=0	-	-	-1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-1	μA
DC current gain	h_{FE1}*	V_{CE}=-1V, I_C=-100mA	120	-	700	-
	h_{FE2}	V_{CE}=-1V, I_C=-3A	40	-	-	-
Collector-Emitter on voltage	$V_{CE(sat1)}$	I_C=-3A, I_B=-150mA	-	-	-0.3	V
Base-Emitter on voltage	$V_{BE(sat)}$	I_C=-3A, I_B=-150mA	-	-	-1.2	V
Transition frequency	f_T	V_{CB}=-5V, I_C=-500mA	-	150	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	-	50	pF

* : h_{FE} rank / O : 120 ~ 240, Y : 200 ~ 400, G : 350 ~ 700

Electrical Characteristic Curves

Fig. 1 Pc - Ta

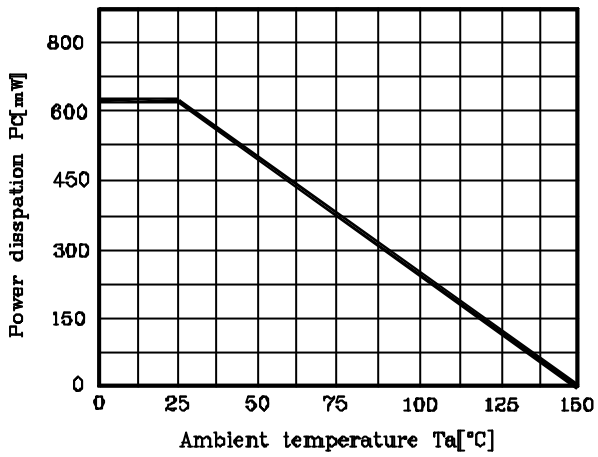


Fig. 2 Ic - V_{BE}

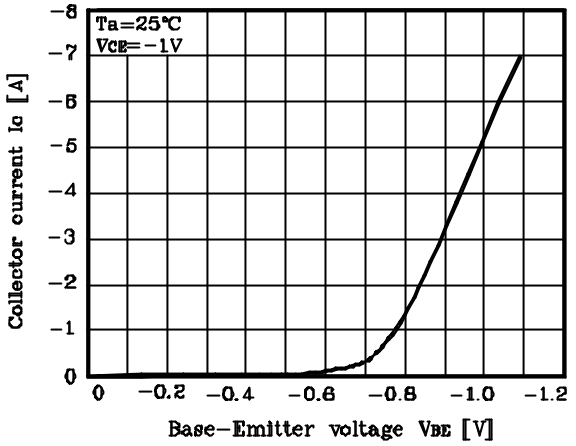


Fig. 3 h_{FE} - I_C

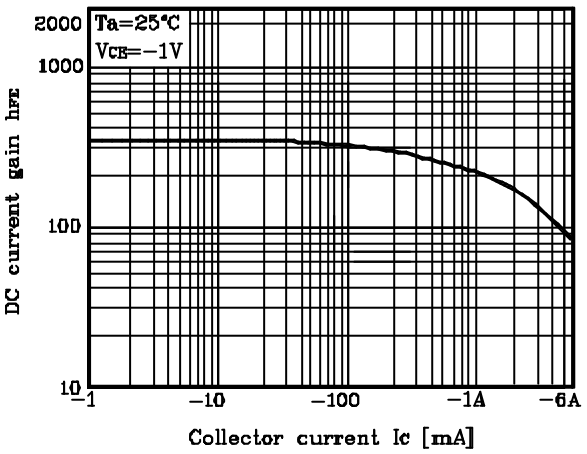


Fig. 4 $V_{CE(sat)}$ - I_C