

Description

- General purpose application.
- Switching application.

Features

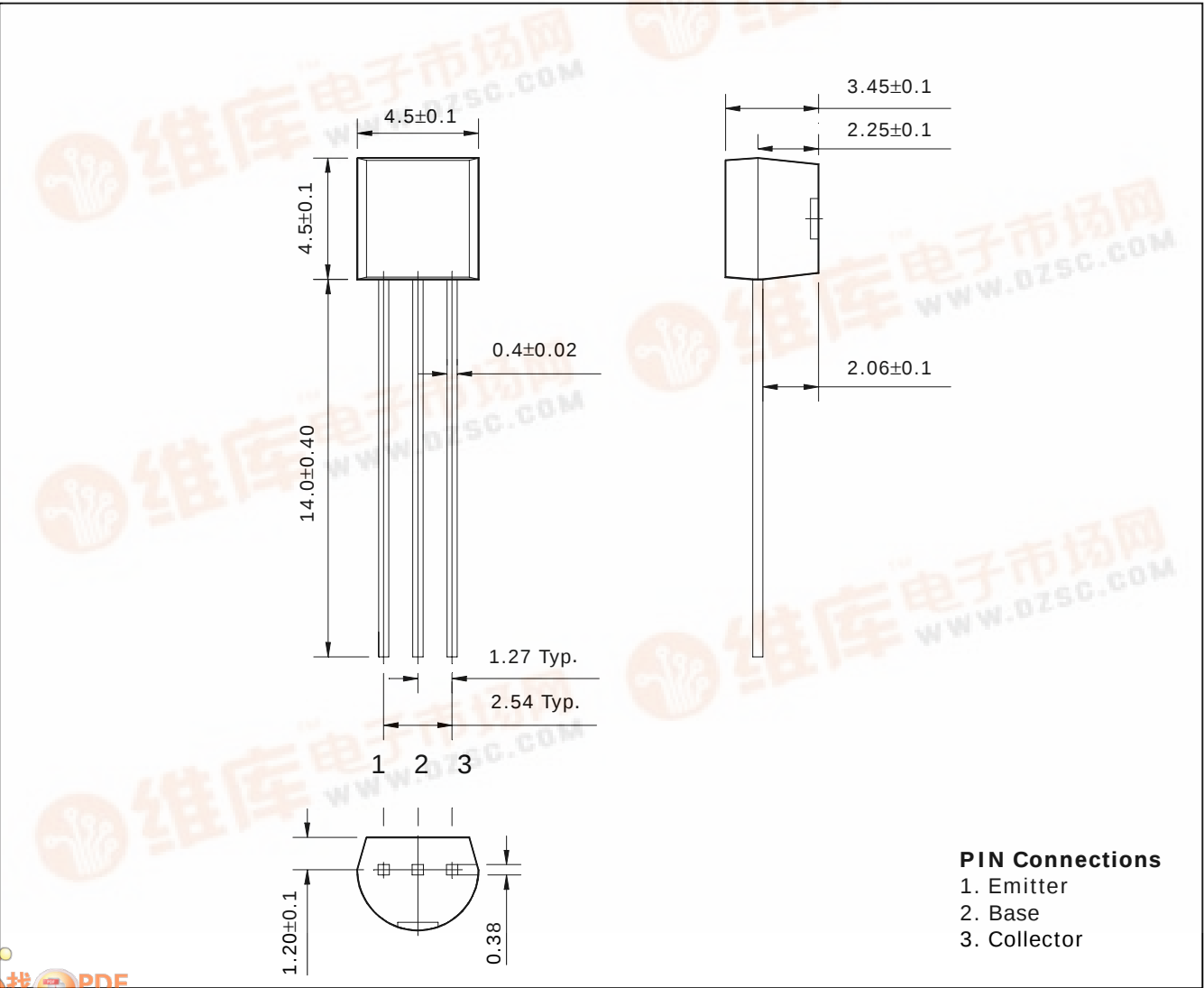
- Excellent h_{FE} linearity : $h_{FE}(I_C=0.1mA) / h_{FE}(I_C=2mA) = 0.95(Typ.)$
- Low noise : $NF = 10dB(Max.)$
- Complementary pair with STS9014

Ordering Information

Type NO.	Marking	Package Code
STS9015	STS9015	TO-92

Outline Dimensions

unit : mm



PIN Connections
1. Emitter
2. Base
3. Collector



Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-50	V
Collector-Emitter voltage	V_{CEO}	-50	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-150	mA
Emitter current	I_E	150	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.	Typ.	Max.	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$	-	-	-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$	-	-	-100	nA
DC current gain	h_{FE}^*	$V_{CE} = -5V, I_C = -1mA$	100	-	1000	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$	-	-0.1	-0.3	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -1mA$	60	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	4	7	pF
Noise figure	NF	$V_{CE} = -6V, I_C = -0.1mA$ $f = 1KHz, R_g = 10K\Omega$	-	-	10	dB

*: h_{FE} rank / B : 100~300, C : 200~600, D : 400~1000.

Electrical Characteristic Curves

Fig. 1 P_C - T_a

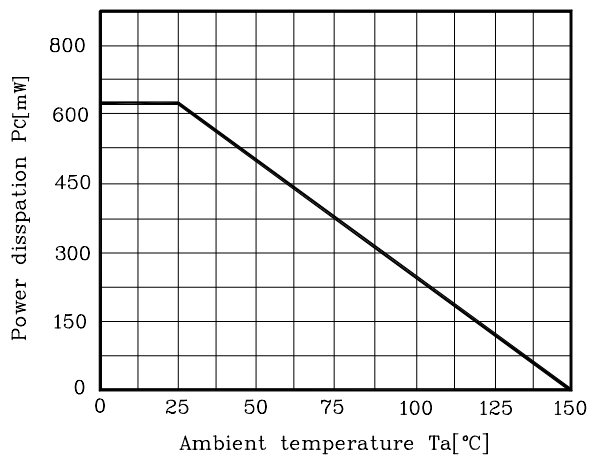


Fig. 2 I_C - V_{BE}

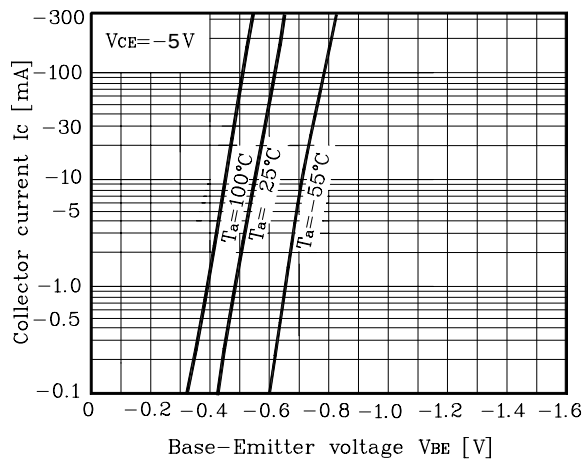


Fig. 3 I_C - V_{CE}

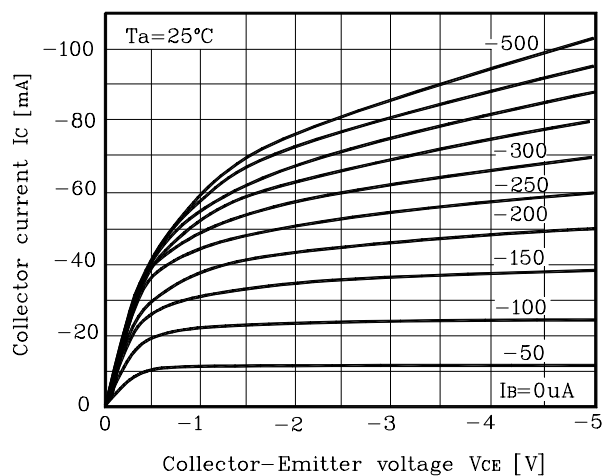


Fig. 4 h_{FE} - I_C

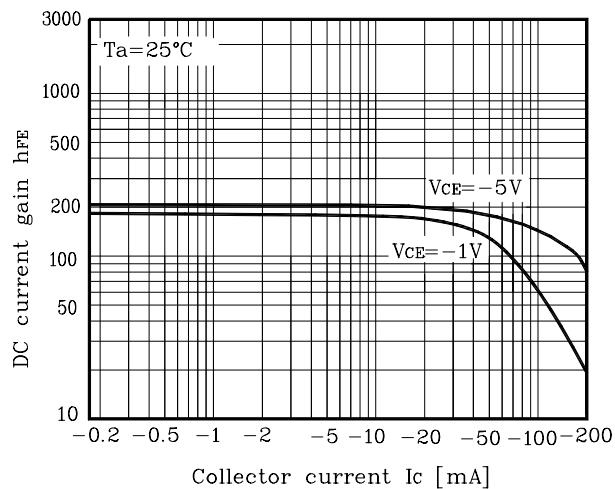


Fig. 5 $V_{CE(sat)}$ - I_C

