电查网（IC5.CN）—百万电子工程师爱用电查网

AUK Semiconductor

STS9014

NPN Silicon Transistor

Description

- General purpose application
- Switching application

Features

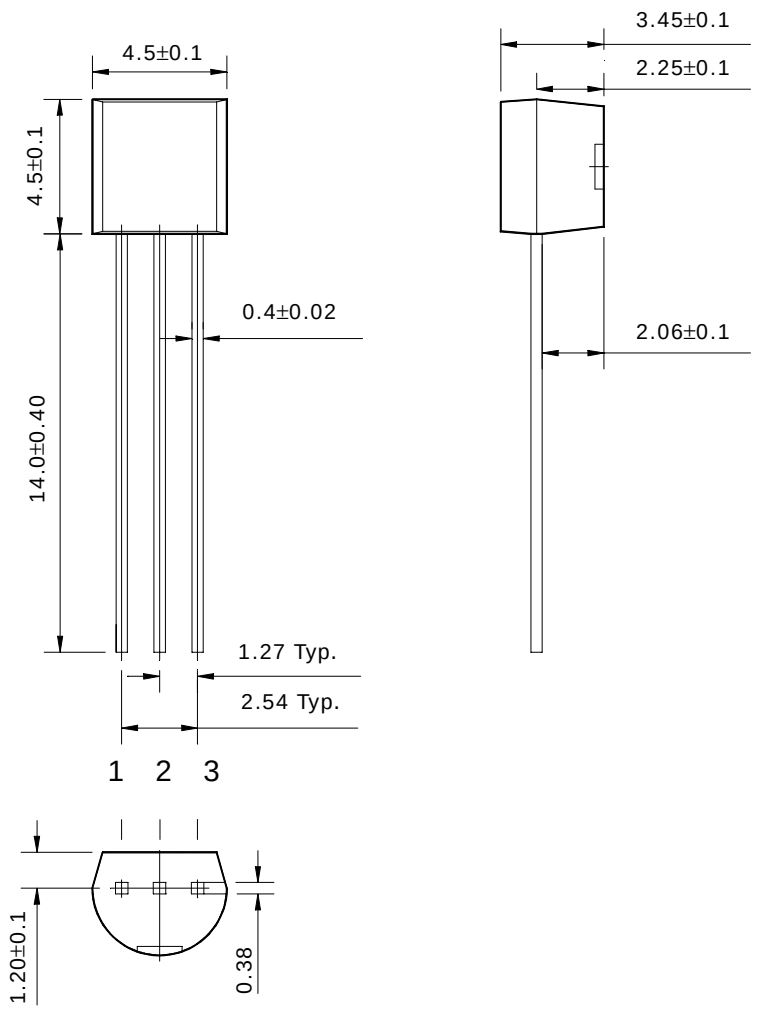
- Excellent h_{FE} linearity : $h_{FE}(I_C=0.1\ mA)$ / $h_{FE}(I_C=2\ mA)$ = 0.95(Typ.)
- Low noise : NF=10dB(Max.) at f=1KHz
- Complementary pair with STS9015

Ordering Information

Type NO.	Marking	Package Code
STS9014	STS9014	TO-92

Outline Dimensions

unit : mm



PIN Connections
1. Emitter
2. Base
3. Collector

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Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	60	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	0.25	V
Transistion frequency	f_T	V_{CE}=10V, I_C=1mA	60	-	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	2	3.5	pF
Noise figure	NF	V_{CB}=6V, I_C=0.1mA, f=1KHz, Rg=10KΩ	-	-	10	dB

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

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Electrical Characteristic Curves

Fig. 1 P_C –T_a

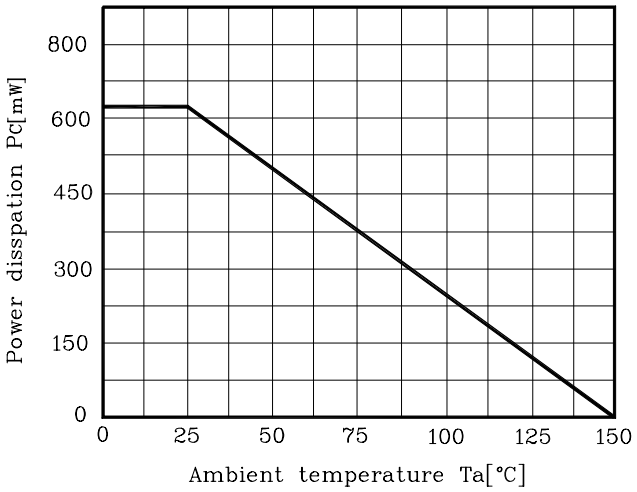


Fig. 2 I_C -V_{BE}

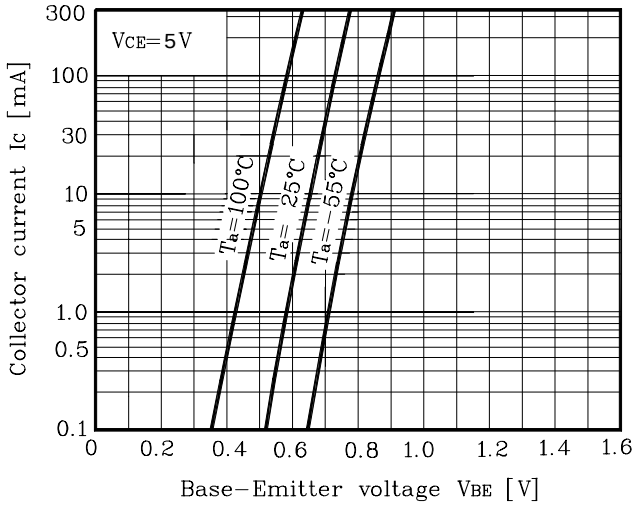


Fig. 3 I_C -V_{CE}

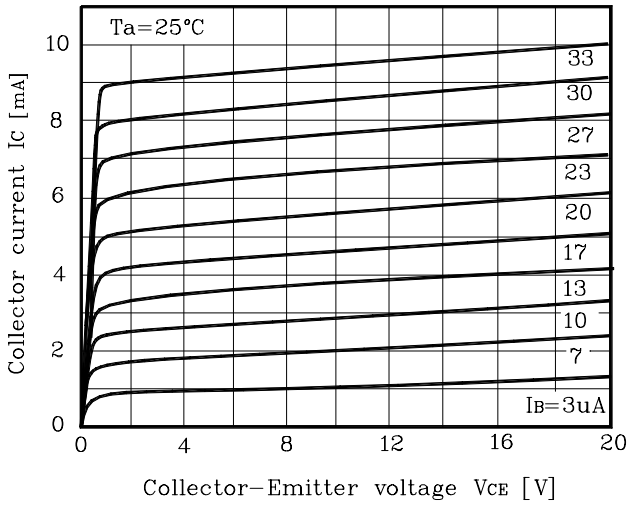


Fig. 4 h_{FE} -I_C

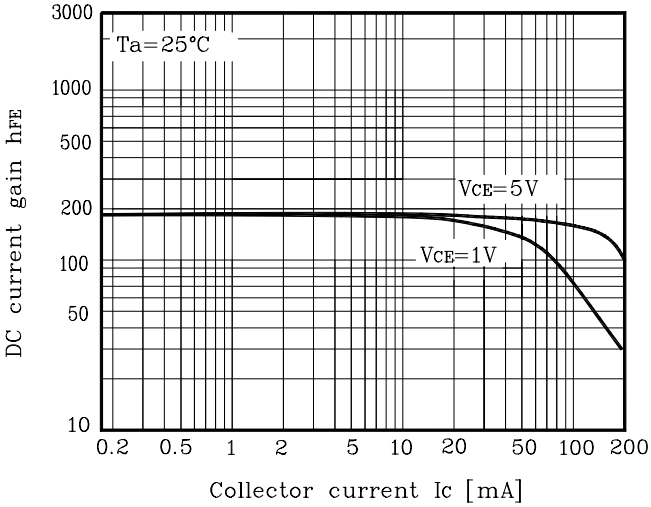
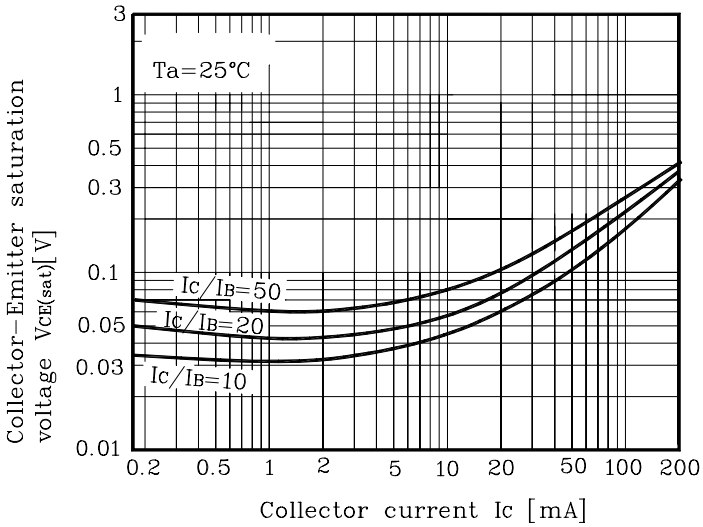


Fig. 5 $V_{CE(sat)}$ -I_C



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