



NPN Silicon Transistor

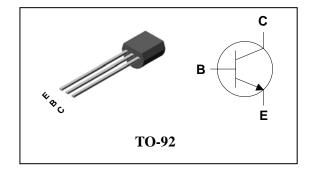
Description

- General purpose application
- Switching application

Features

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

Ordering Information



PIN Connection

Type NO.	Marking	Package Code	
STS9014	STS9014	TO-92	

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	60	V
Collector-Emitter voltage	$V_{\sf CEO}$	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)}	$I_C = 100 \text{mA}, I_B = 10 \text{mA}$	-	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	$V_{CB}=6V$, $I_{C}=0.1mA$, $f=1KHz$, $Rg=10K\Omega$	-	-	10	dB

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

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

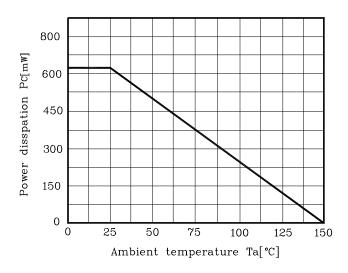


Fig. 2 I_{C} -V $_{\text{BE}}$

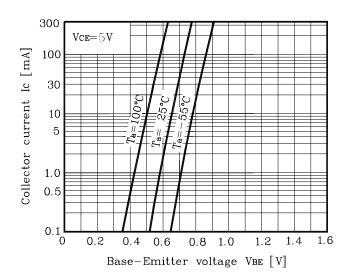


Fig. 3 I_C - V_{CE}

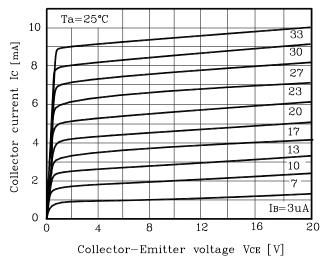


Fig. 4 h_{FE} - I_C

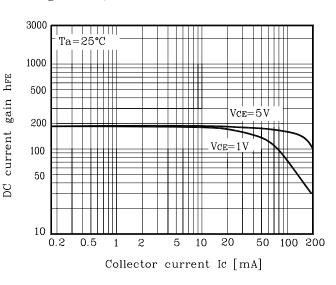
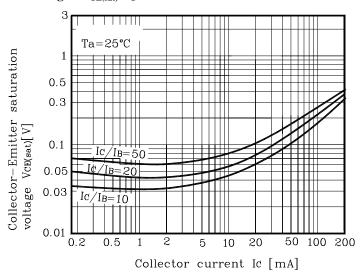


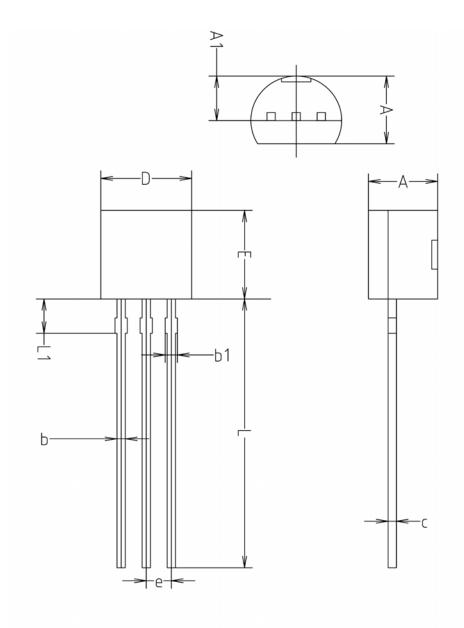
Fig. 5 $V_{\text{CE}(\text{sat})}$ -I $_{\text{C}}$



KSD-T0A048-000

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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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