

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

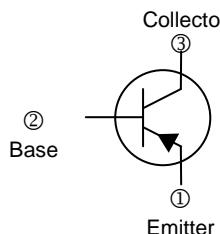
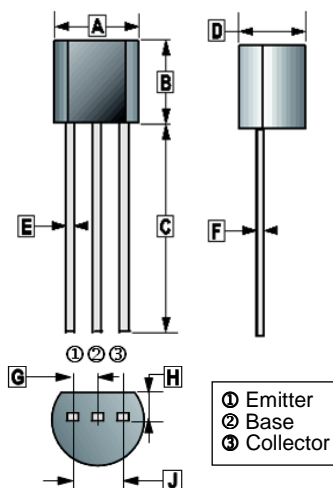
FEATURE

- Excellent h_{FE} Linearity

CLASSIFICATION OF $h_{FE(1)}$

Product-Rank	A94-A	A94-B1	A94-B2	A94-C
Range	80~100	100~150	150~200	200~300

TO-92



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	-	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56	K	0.36	0.76

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-400	V
Collector to Emitter Voltage	V_{CEO}	-400	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	625	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	200	$^{\circ}\text{C} / \text{W}$
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	-400	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-400	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -100\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -400\text{V}, I_E = 0$
Collector Cut-Off Current	I_{CEO}	-	-	-5	μA	$V_{CE} = -400\text{V}, I_B = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -4\text{V}, I_C = 0$
DC Current Gain	$h_{FE(1)}$	80	-	300		$V_{CE} = -10\text{V}, I_C = -10\text{mA}$
	$h_{FE(2)}$	70	-	-		$V_{CE} = -10\text{V}, I_C = -1\text{mA}$
	$h_{FE(3)}$	60	-	-		$V_{CE} = -10\text{V}, I_C = -100\text{mA}$
	$h_{FE(4)}$	80	-	-		$V_{CE} = -10\text{V}, I_C = -50\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	-	-	-0.2	V	$I_C = -10\text{mA}, I_B = -1\text{mA}$
	$V_{CE(sat)(2)}$	-	-	-0.3	V	$I_C = -50\text{mA}, I_B = -5\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-0.75	V	$I_C = -10\text{mA}, I_B = -1\text{mA}$
Transition Frequency	f_T	50	-	-	MHZ	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 30\text{MHZ}$