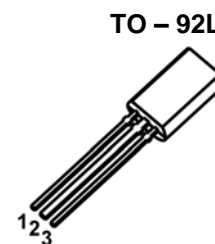


BIPOLAR TRANSISTOR (NPN)

FEATURES

- Complementary to BC307B
- Excellent h_{FE} Linearity
- Surface Mount device

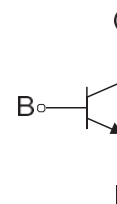


1. EMITTER 2. COLLECTOR 3. BASE

MECHANICAL DATA

- Case: TO-92
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.008 grams (approximate)

Equivalent Circuit



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

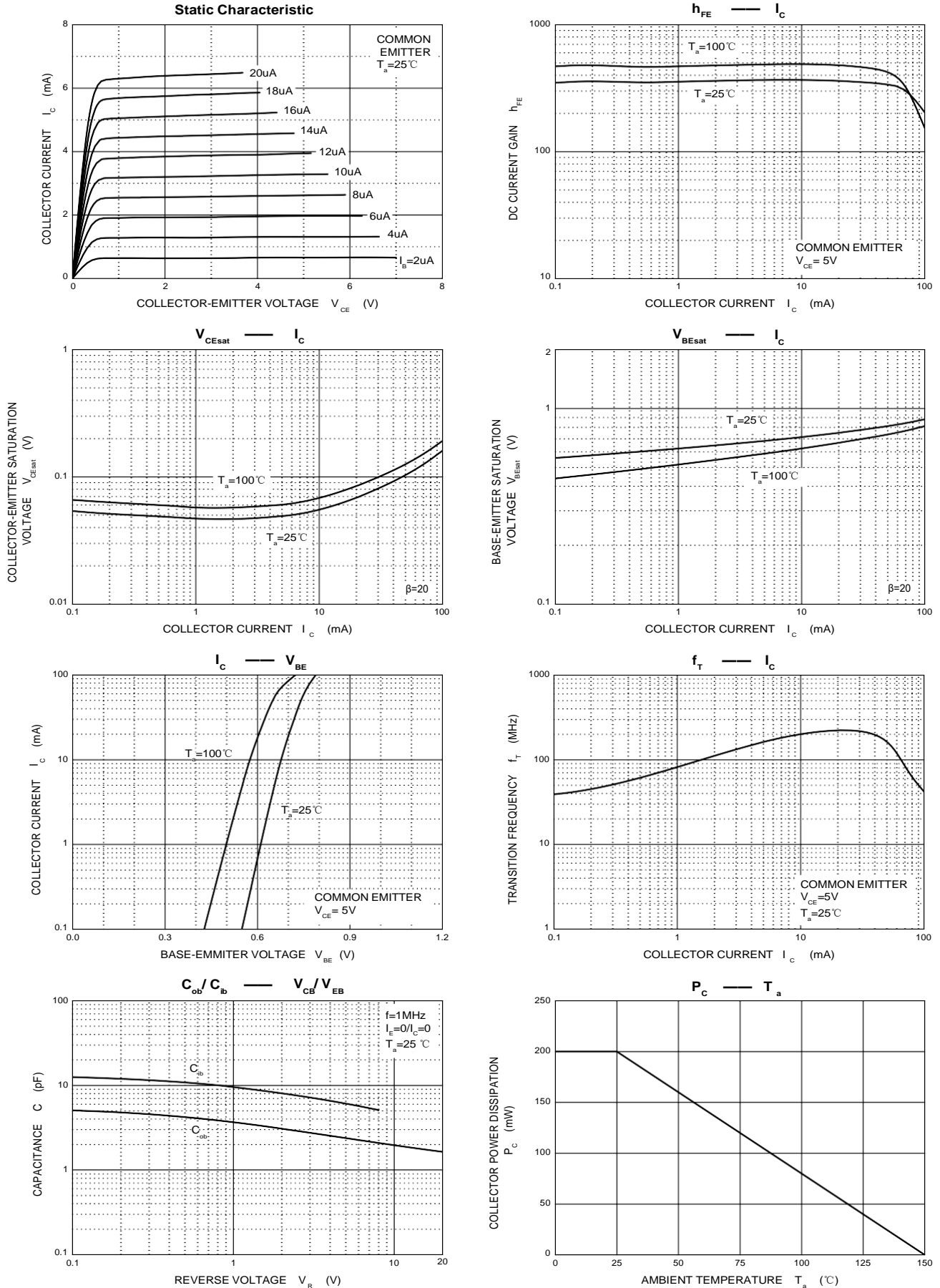
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	900	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	139	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~+150	$^\circ\text{C}$

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

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	50			V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	45			V	$I_C=1\text{mA}$, $I_B=0$
Emitter-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	$V_{CB}=50\text{V}$, $I_E=0$
Collector cut-off current	I_{CEO}			1	μA	$V_{CE}=35\text{V}$, $I_B=0$
Emitter cut-off current	I_{EBO}			0.1	μA	$V_{EB}=5\text{V}$, $I_C=0$
DC current gain	h_{FE1}	200		450		$V_{CE}=5\text{V}$, $I_C=1\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$			0.3	V	$I_C=100\text{mA}$, $I_B=10\text{mA}$
Base-emitter saturation voltage	$V_{BE(sat)}$			1	V	$I_C=100\text{mA}$, $I_B=10\text{mA}$
Transition frequency	f_T	150			MHz	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=30\text{MHz}$

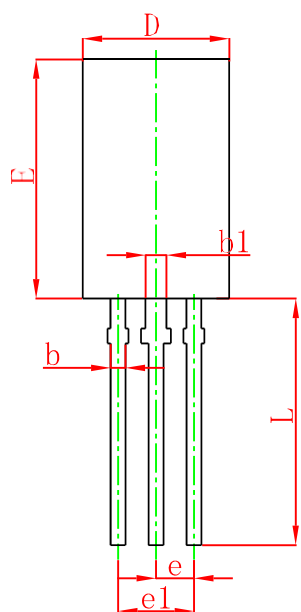
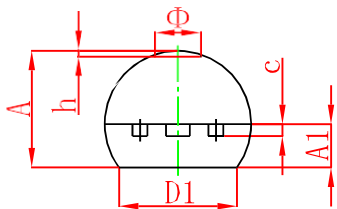
BIPOLAR TRANSISTOR (NPN)

Typical Characteristics



BIPOLAR TRANSISTOR (NPN)

TO-92L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	3.750	4.050	0.148	0.159
A1	1.280	1.580	0.050	0.062
b	0.380	0.550	0.015	0.022
b1	0.620	0.780	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.750	5.050	0.187	0.199
D1	4.000		0.157	
E	7.850	8.150	0.309	0.321
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.300	0.000	0.012