

TO-220-3L Plastic-Encapsulate Transistors

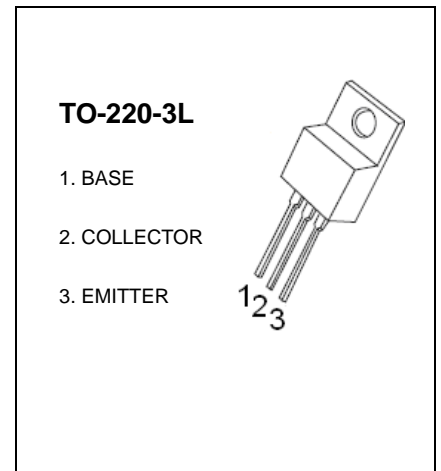
2SB834 TRANSISTOR (PNP)

FEATURES

- Low Collector -Emitter Saturation Voltage
 $V_{CE(sat)}=1.0V(\text{Max}) @ I_C=-3A, I_B=-0.3A$
- DC current Gain
 $h_{FE} =60-200 @ I_C=0.5A$
- Complementary to NPN 2SD880

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector- Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current -Continuous	-3	A
P_C	Collector Power Dissipation	1.5	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-1\text{mA}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C =-50\text{mA}, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\text{mA}, I_C=0$	-7			V
Collector cut-off current	I_{CBO}	$V_{CB}=-60\text{V}, I_E=0$			-100	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-7\text{V}, I_C=0$			-100	μA
DC current gain	$h_{FE(1)*}$	$V_{CE}=-5\text{V}, I_C=-500\text{mA}$	60		200	
	$h_{FE(2)*}$	$V_{CE}=-5\text{V}, I_C=-3\text{A}$	20			
Collector-emitter saturation voltage	$V_{CE(sat)*}$	$I_C=-3\text{A}, I_B=-0.3\text{A}$			-1	V
Base-emitter voltage	V_{BE*}	$V_{CE}=-5\text{V}, I_C=-500\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-500\text{mA}, f=1\text{MHz}$		9		MHz
Turn-on Time	t_{on}	$V_{CC}=-30\text{V}, I_C=-2\text{A}, I_{B1}=I_{B2}=-0.2\text{A}$		0.4		μs
Storage Time	t_{stg}			1.7		μs
Turn-off Time	t_{off}			0.5		μs

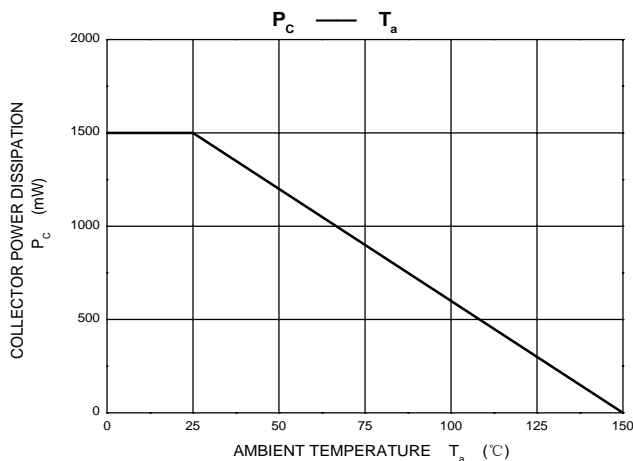
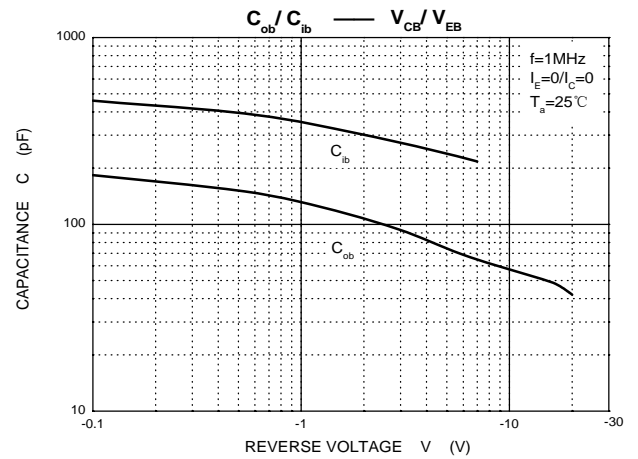
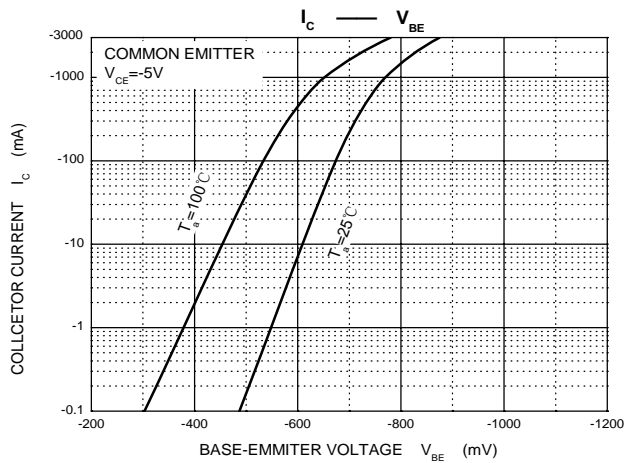
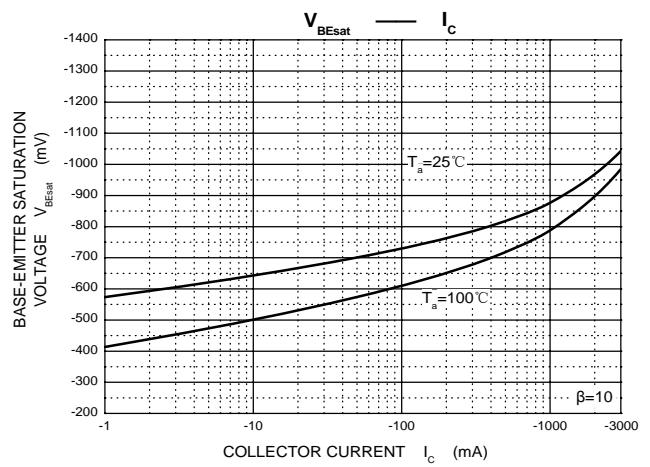
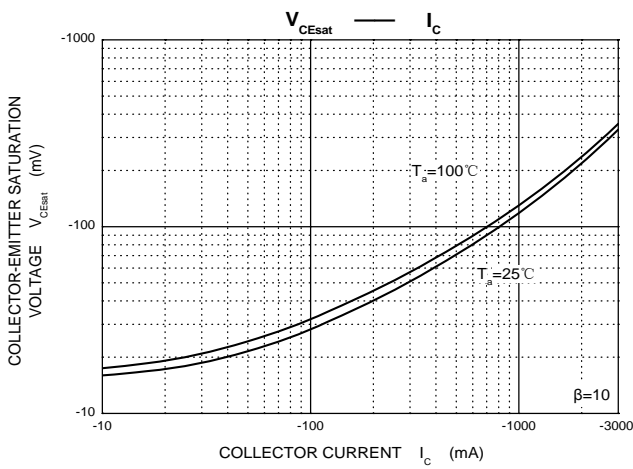
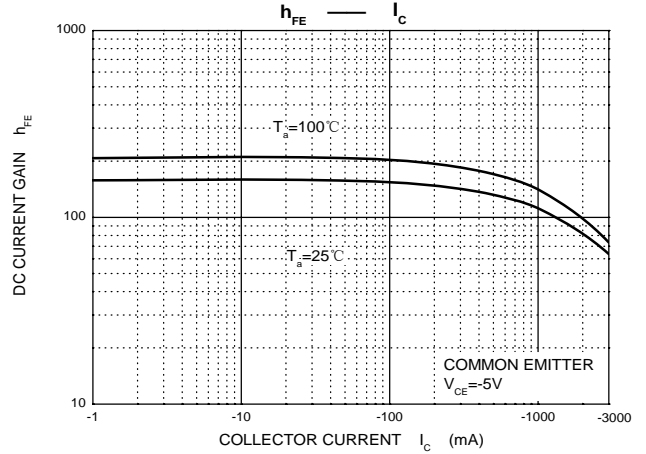
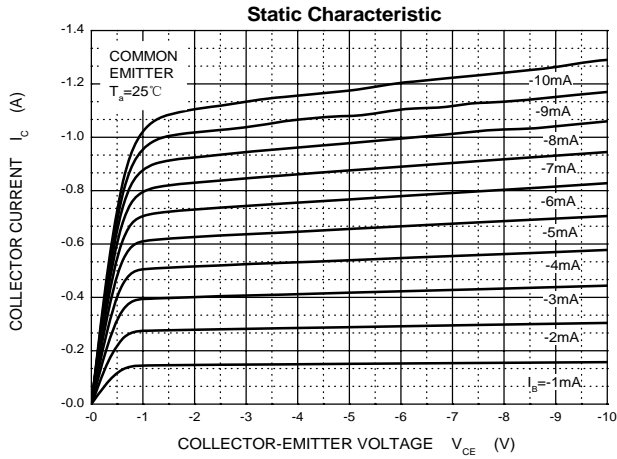
*Pulse test.

CLASSIFICATION OF $h_{FE(1)}$

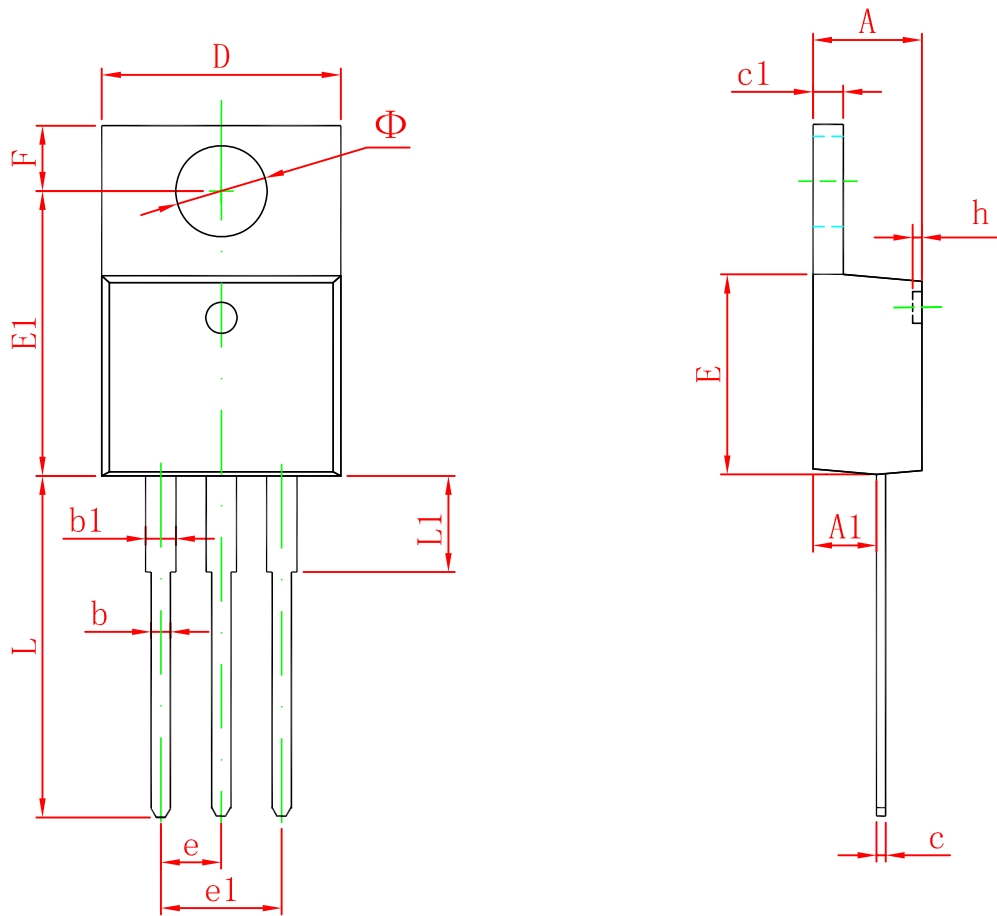
Rank	O	Y
Range	60-120	100-200

Typical Characteristics

2SB834



TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155