

FEATURES

- Low collector saturation voltage
- Excellent current-to-gain characteristics

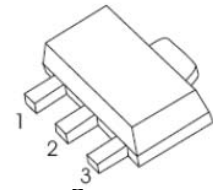
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-30	V
V _{CE0}	Collector-Emitter Voltage	-20	V
V _{EB0}	Emitter-Base Voltage	-6	V
I _C	Continuous Collector Current	-5	A
I _{CP} *	Pulsed Collector Current	-10	A
P _C	Collector Power Dissipation	0.5	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C

*Single pulse, P_w=10ms

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



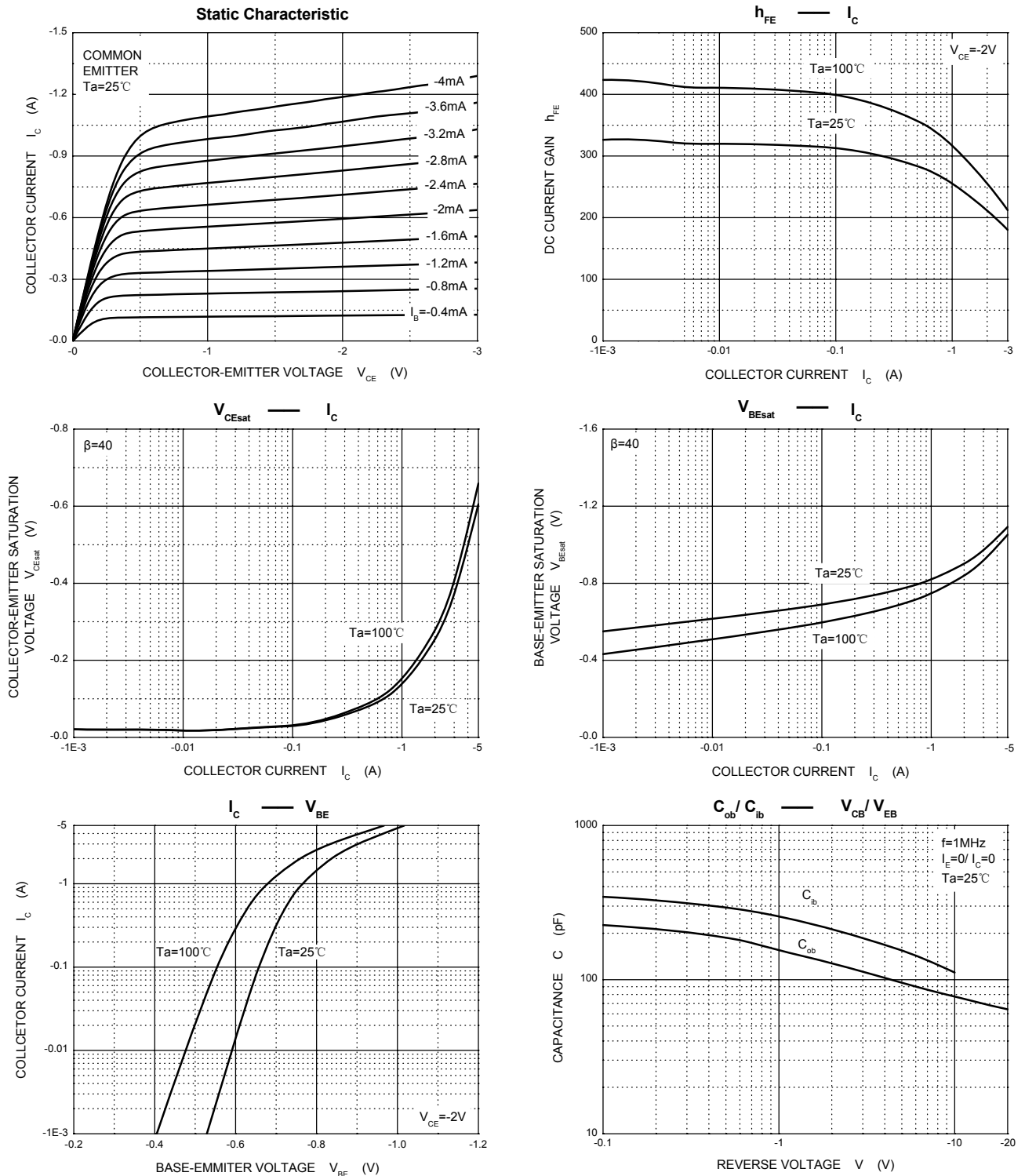
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

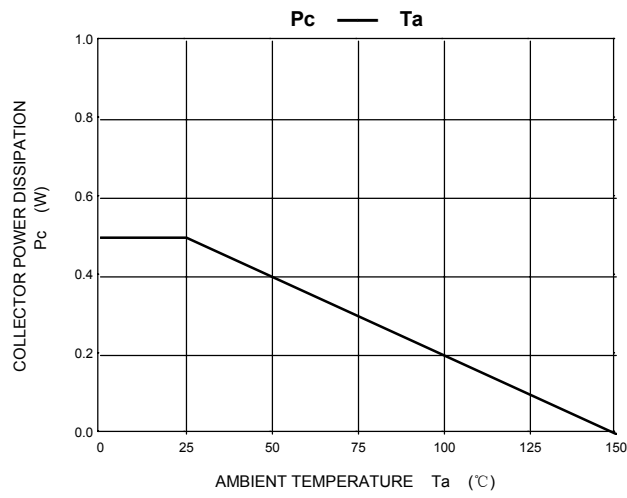
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-30			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-6			V
Collector cut-off current	I _{CB0}	V _{CB} =-20V, I _E =0			-0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-0.5	μA
DC current gain	h _{FE}	V _{CE} =-2V, I _C =-500mA	82		390	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-4A, I _B =-100mA			-1	V
Transition frequency	f _T	V _{CE} =-6V, I _C =-50mA, f=30MHz		120		MHz
Collector output capacitance	C _{ob}	V _{CB} =-20V, I _E =0, f=1MHz		60		pF

CLASSIFICATION OF h_{FE}

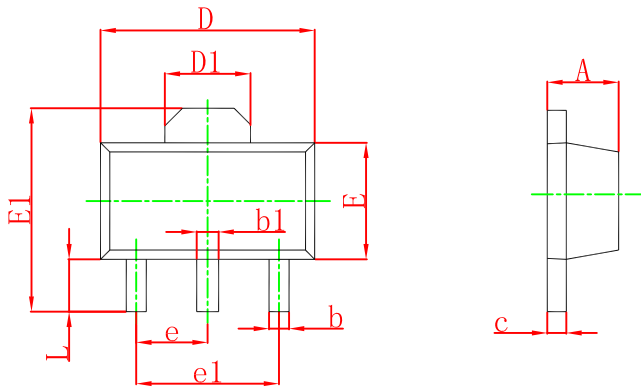
Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	BHP	BHQ	BHR

Typical Characteristics



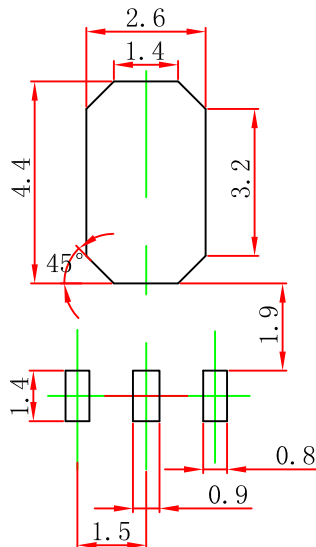


SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.