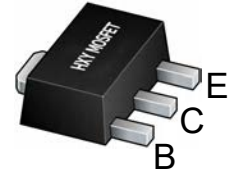




Features

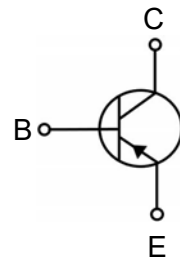
- Collector Current: $I_C = -1A$
- Power Dissipation of 1.5w



SOT89-3L

Package Marking and Ordering Information

| Product ID | Pack | Marking | Qty(PCS) |
|------------|----------|---------|----------|
| BCP51 | SOT89-3L | BCP51 | 1000 |
| BCP52 | SOT89-3L | BCP52 | 1000 |
| BCP53 | SOT89-3L | BCP53 | 1000 |



Maxmim Ratings (Ta=25 unless otherwise noted)

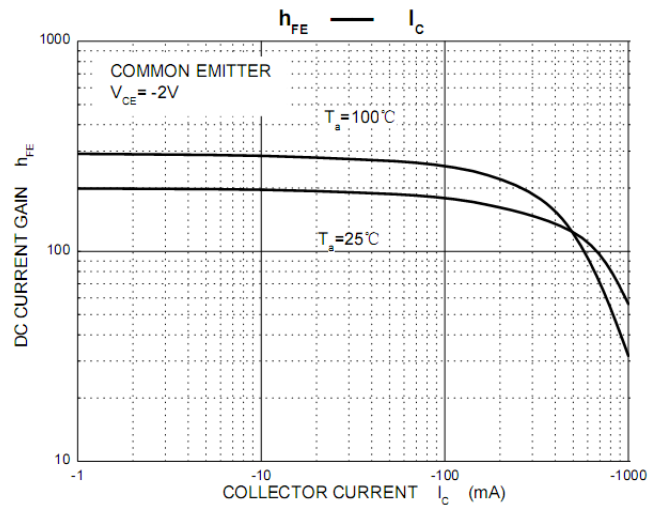
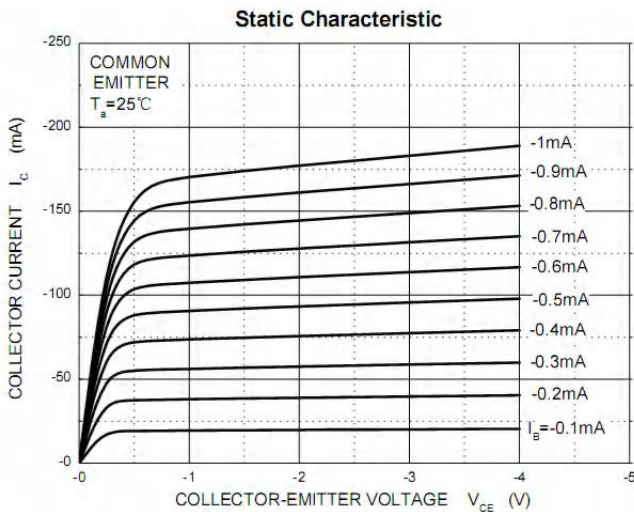
| Parameter | Symbol | Limit | Unit |
|---|-----------------|----------|------|
| Collector-Base Voltage | BCP51 | -45 | V |
| | BCP52 | -60 | |
| | BCP53 | -100 | |
| Collector-Emitter Voltage | BCP51 | -45 | V |
| | BCP52 | -60 | |
| | BCP53 | -80 | |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -1 | A |
| Collector Power Dissipation | P_C | 1.5 | W |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 94 | °C/W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55~+150 | °C |

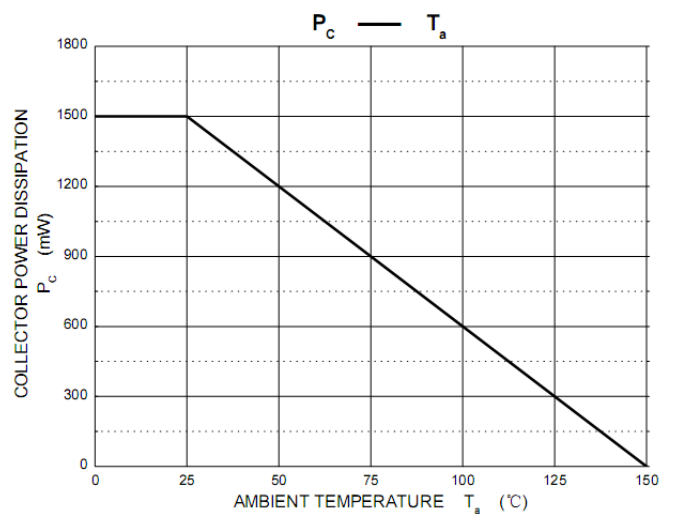
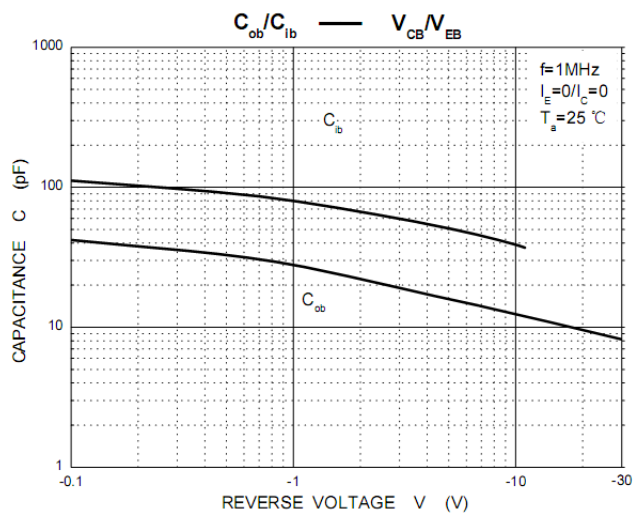
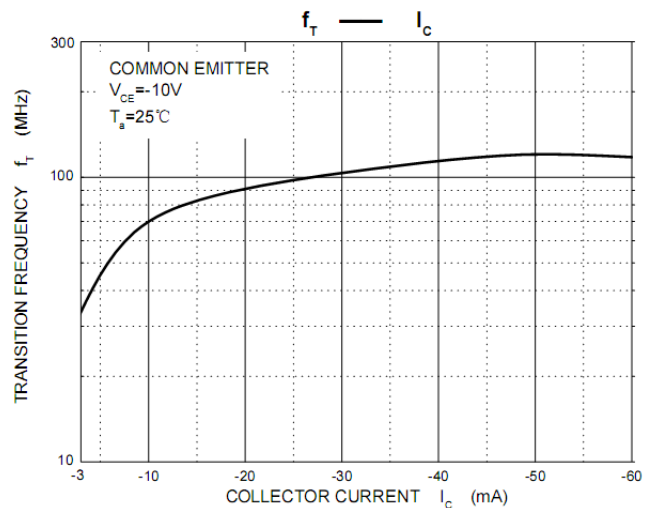
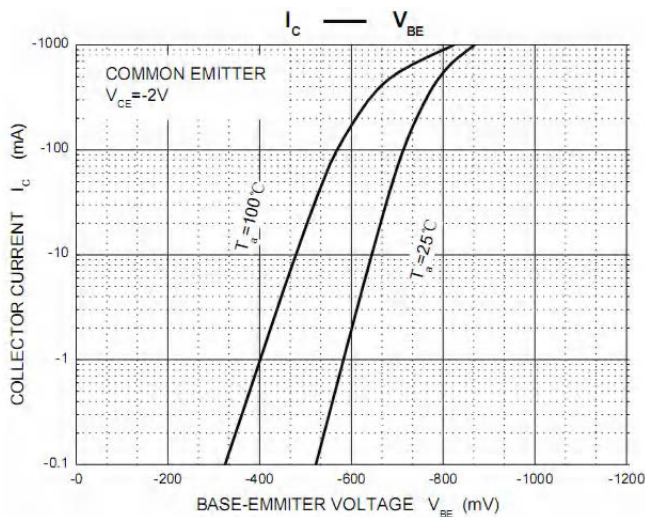
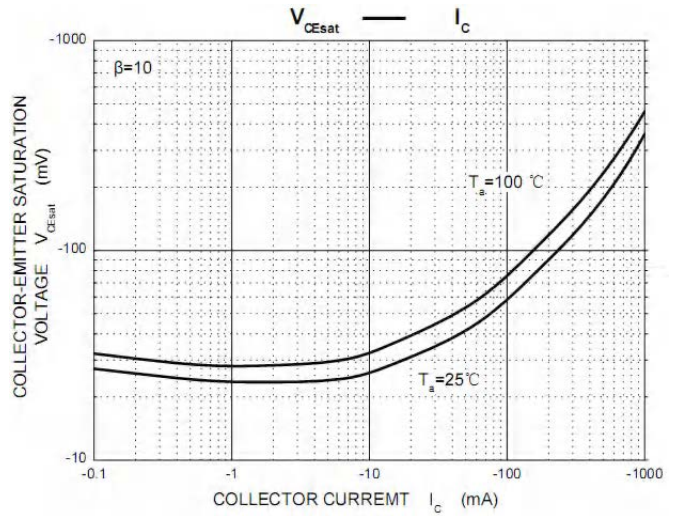
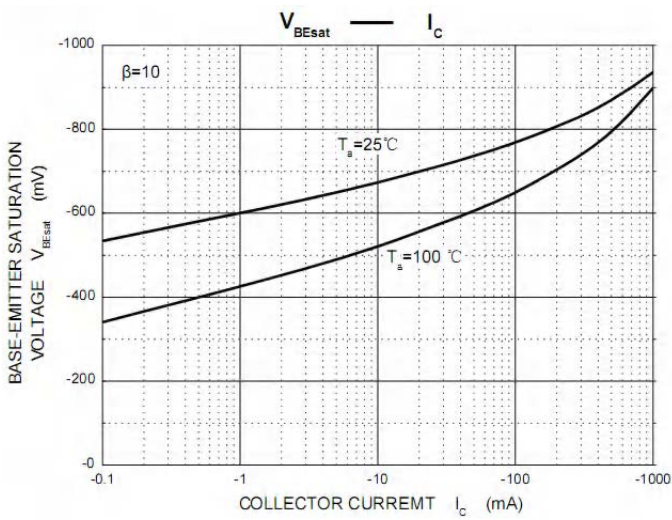


Electrcal Charcteristics ($T_a=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|---------------|---|------|------|------|
| Collector-base breakdown voltage | BCP51 | $I_C = -0.1\text{mA}, I_E = 0$ | -45 | | V |
| | BCP52 | | -60 | | |
| | BCP53 | | -100 | | |
| Collector-emitter breakdown voltage | BCP51 | $I_C = -10\text{mA}, I_B = 0$ | -45 | | V |
| | BCP52 | | -60 | | |
| | BCP53 | | -80 | | |
| Base-emitter breakdown voltage | $V_{(BR)EBO}$ | $I_E = -10\mu\text{A}, I_C = 0$ | -5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -30\text{V}, I_E = 0$ | | -100 | nA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -2\text{V}, I_C = -5\text{mA}$ | 25 | | |
| | $h_{FE(2)}$ | $V_{CE} = -2\text{V}, I_C = -150\text{mA}$ | 63 | 250 | |
| | $h_{FE(3)}$ | $V_{CE} = -2\text{V}, I_C = -500\text{mA}$ | 25 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}, I_B = -50\text{mA}$ | | -0.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = -2\text{V}, I_C = -500\text{mA}$ | | -1 | V |
| Transition frequency | f_T | $V_{CE} = -10\text{V}, I_C = -50\text{mA}, f = 100\text{MHz}$ | 100 | | MHz |

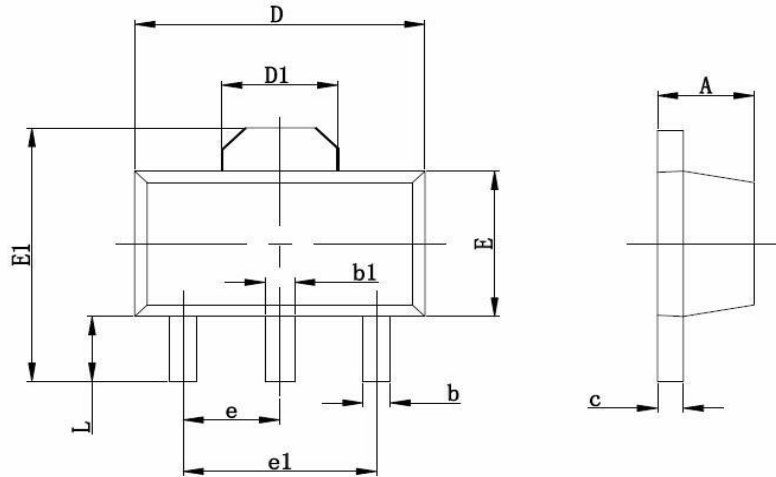
Typical Characteristics







SOT89-3L 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 |



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