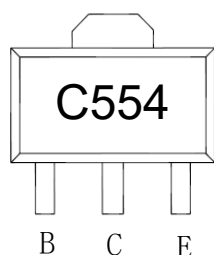
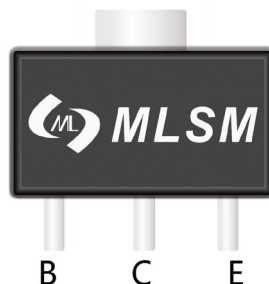


### Features

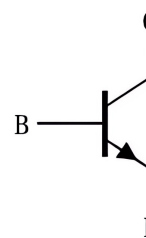
- Low Saturation Voltage
- High Speed Switching



Marking and pin assignment



SOT-89-3L top view



Schematic diagram



Halogen-Free

### Maximum Ratings (Ta=25°C unless otherwise noted)

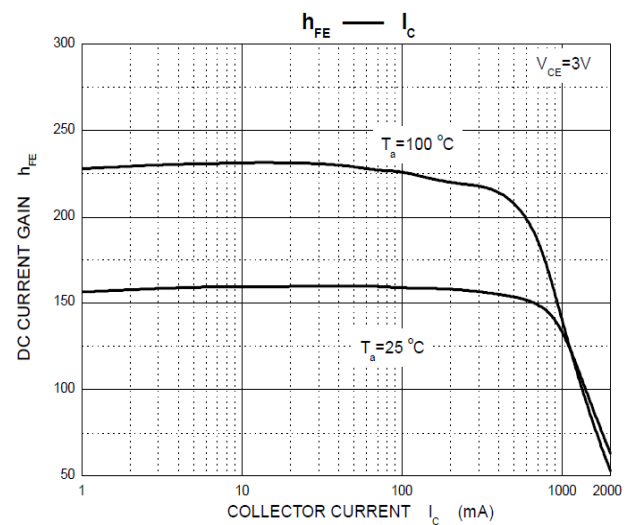
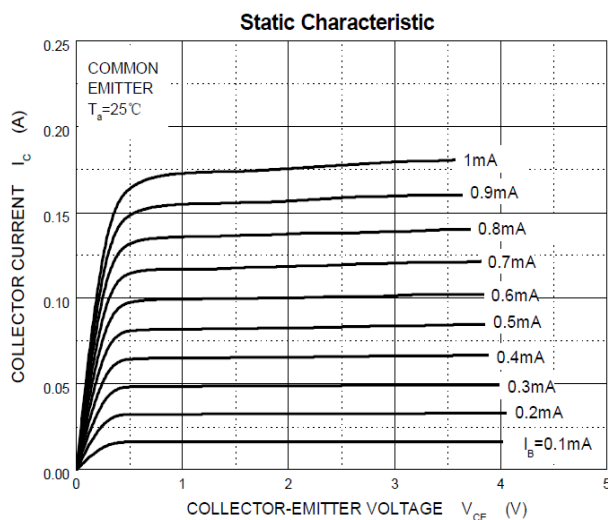
| Symbol          | Parameter                                        | Value    | Unit |
|-----------------|--------------------------------------------------|----------|------|
| $V_{CBO}$       | Collector-Base Voltage                           | 100      | V    |
| $V_{CEO}$       | Collector-Emitter Voltage                        | 100      | V    |
| $V_{EBO}$       | Emitter-Base Voltage                             | 6        | V    |
| $I_C$           | Collector Current                                | 2        | A    |
| $P_C$           | Collector Power Dissipation                      | 500      | mW   |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient      | 250      | °C/W |
| $T_J, T_{stg}$  | Operation Junction and Storage Temperature Range | -55~+150 | °C   |

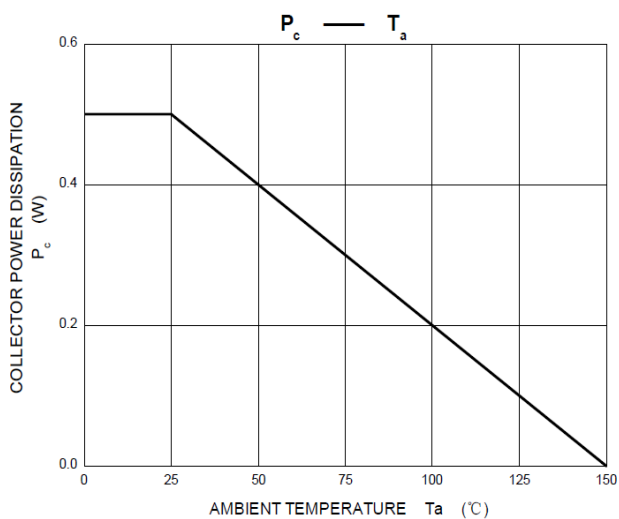
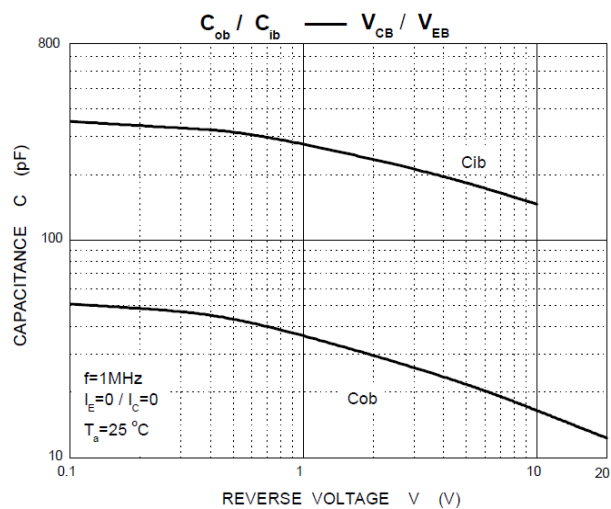
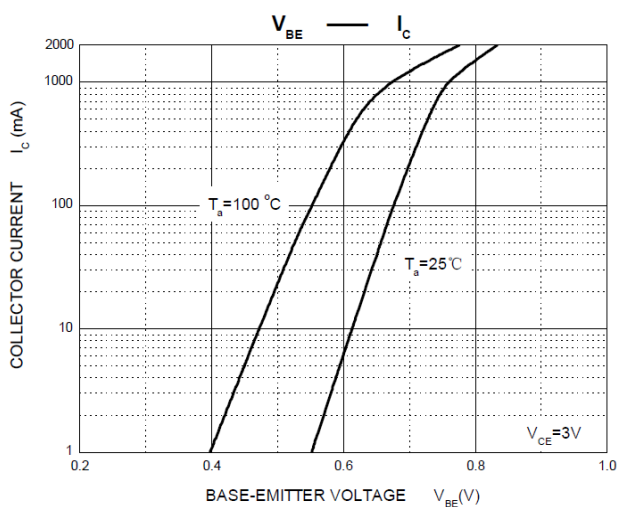
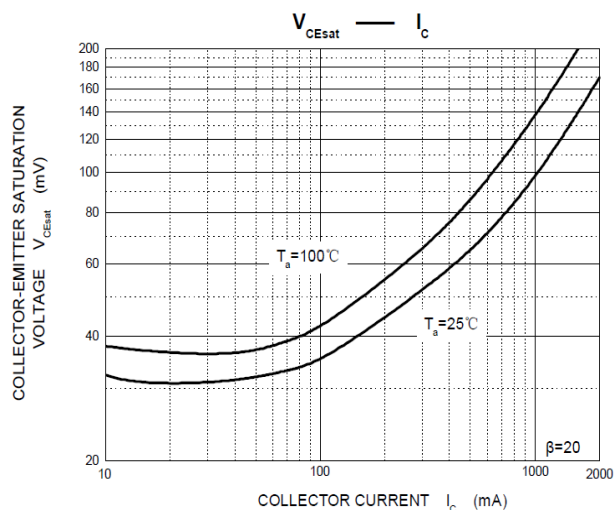
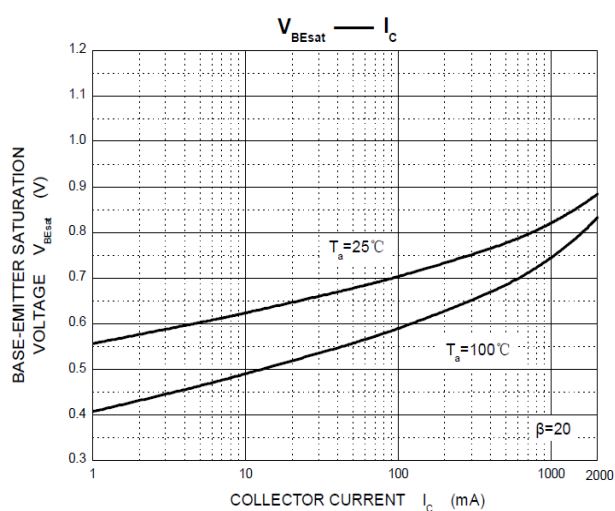
### Ordering Information (Example)

| Type   | Package   | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|--------|-----------|---------|----------------------|-------------------------|----------------------------|---------------|
| 2SC554 | SOT-89-3L | C554    | 1,000                | 10,000                  | 40,000                     | 7" reel       |

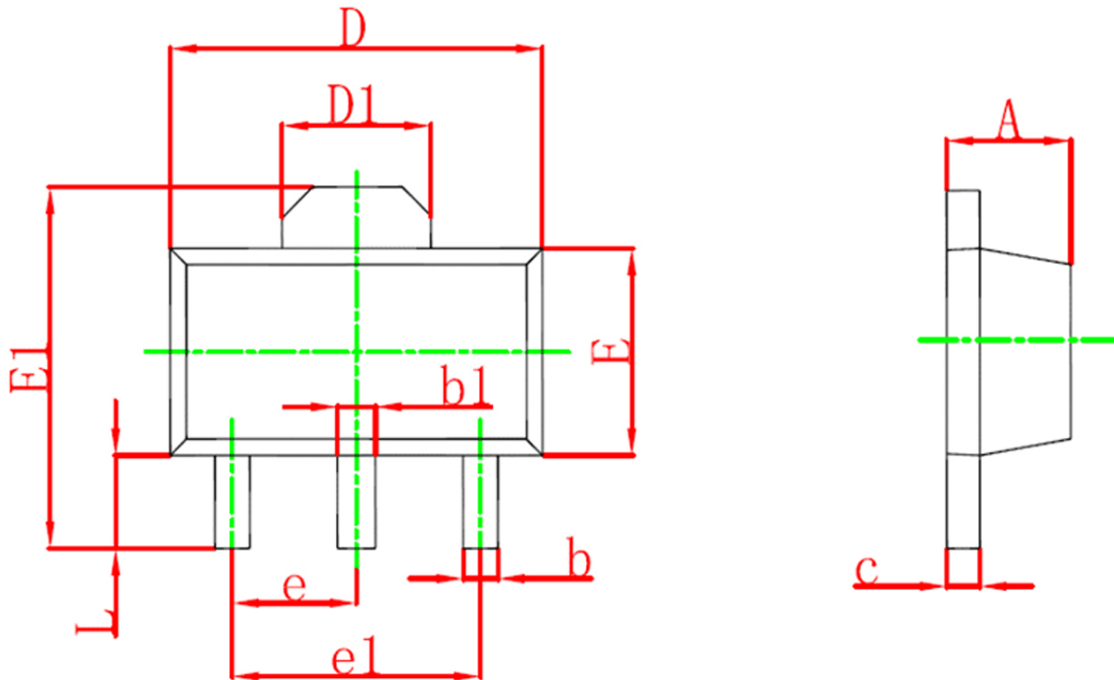
**Electrical Characteristics (Ta=25°C unless otherwise specified)**

| Symbol        | Parameter                            | Condition                   | Min | Typ | Max | Unit    |
|---------------|--------------------------------------|-----------------------------|-----|-----|-----|---------|
| $V_{(BR)CBO}$ | Collector-base breakdown voltage     | $I_C=0.1mA, I_E=0$          | 100 | --  | --  | V       |
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | $I_C=1mA, I_B=0$            | 100 | --  | --  | V       |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage       | $I_E=0.1mA, I_C=0$          | 6   | --  | --  | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=100V, I_E=0$        | --  | --  | 1   | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=4V, I_C=0$          | --  | --  | 1   | $\mu A$ |
| $H_{FE}$      | DC current gain                      | $V_{CE}=3V, I_C=100mA$      | 82  | --  | 270 |         |
| $V_{CE(sat)}$ | Collector-emitter saturation voltage | $I_C=500mA, I_B=25mA$       |     |     | 0.2 | V       |
|               |                                      | $I_C=1A, I_B=50mA$          | --  | --  | 0.3 | V       |
| $f_T$         | Transition frequency                 | $V_{CE}=5V, I_C=100mA$      | 30  | --  | --  | MHz     |
| $C_{ob}$      | Collector output capacitance         | $V_{CB}=10V, I_E=0, f=1MHz$ | --  | 16  | --  | pF      |

**Typical Characteristics**




SOT-89-3L Package information



| Symbol | Dimensions in Millimeters(mm) |       | 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 |