

## TO-92L Plastic-Encapsulate Transistors

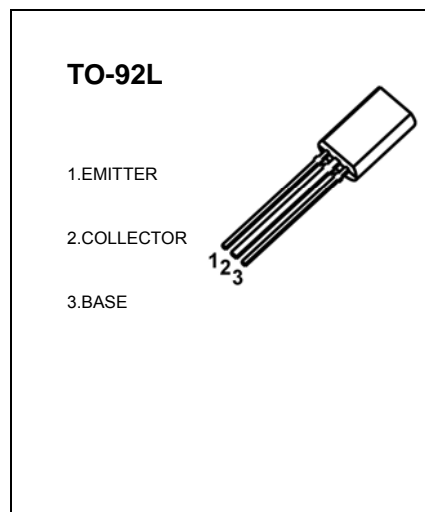
### 2SC2655 TRANSISTOR (NPN)

#### FEATURES

- Low Saturation Voltage:  $V_{CE(sat)}=0.5V(\text{Max})(I_C=1A)$
- High Speed Switching Time:  $t_{stg}=1\mu s(\text{Typ.})$
- Complementary to 2SA1020

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

| Symbol    | Parameter                     | Symbol  | Unit             |
|-----------|-------------------------------|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage        | 50      | V                |
| $V_{CEO}$ | Collector-Emitter Voltage     | 50      | V                |
| $V_{EBO}$ | Emitter-Base Voltage          | 5       | V                |
| $I_C$     | Collector Current –Continuous | 2       | A                |
| $P_C$     | Collector Power Dissipation   | 0.9     | 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     | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$       | 50  |      |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$           | 50  |      |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$       | 5   |      |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=50V, I_E=0$         |   |      | 1   | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5V, I_C=0$          |   |      | 1   | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE}=2V, I_C=500mA$      | 70  |      | 240 |         |
|                                      | $h_{FE(2)}$   | $V_{CE}=2V, I_C=1.5A$       | 40  |      |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=0.05A$         |   |      | 0.5 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C=1A, I_B=0.05A$         |   |      | 1.2 | V       |
| Transition frequency                 | $f_T$         | $V_{CE}=2V, I_C=0.5A$       |   | 100  |     | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$ |   | 30   |     | pF      |
| Switch time                          | Tune on Time  | $t_{on}$                    |   | 0.15 |     | $\mu s$ |
|                                      | Storage Time  | $t_{stg}$                   | $V_{CC}=30V, I_C=1A,$<br>$I_{B1}=-I_{B2}=0.05A$ | 2    |     |         |
|                                      | Fall Time     | $t_f$                       |   | 0.15 |     |         |

#### CLASSIFICATION OF $h_{FE(1)}$

| Rank  | O      | Y       |
|-------|--------|---------|
| Range | 70-140 | 120-240 |

### Static Characteristic

