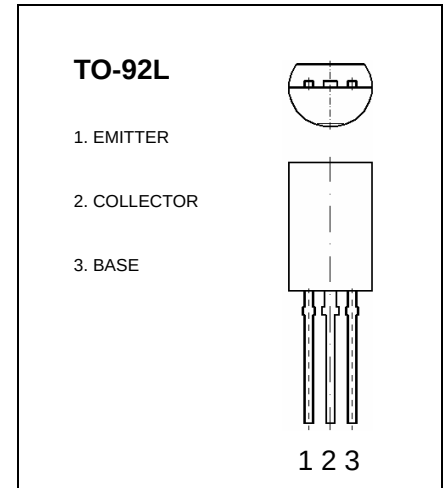


### FEATURES

- Low Saturation Voltage:  $V_{CE(sat)}=0.5V(Max)(I_C=1A)$
- High Speed Switching Time:  $t_{stg}=1\mu s(Typ.)$
- Complementary to FTA1020

### MAXIMUM RATINGS ( $T_a=25^\circ C$ 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     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature           | -55-150 | $^\circ C$ |



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ 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  | $V_{CC}=30V, I_C=1A, I_{B1}=-I_{B2}=0.05A$ |     | 0.15 |     | $\mu s$ |
|                                      | Storage Time  |                                            |     | 1    |     |         |
|                                      | Fall Time     |                                            |     | 0.15 |     |         |

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

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

