

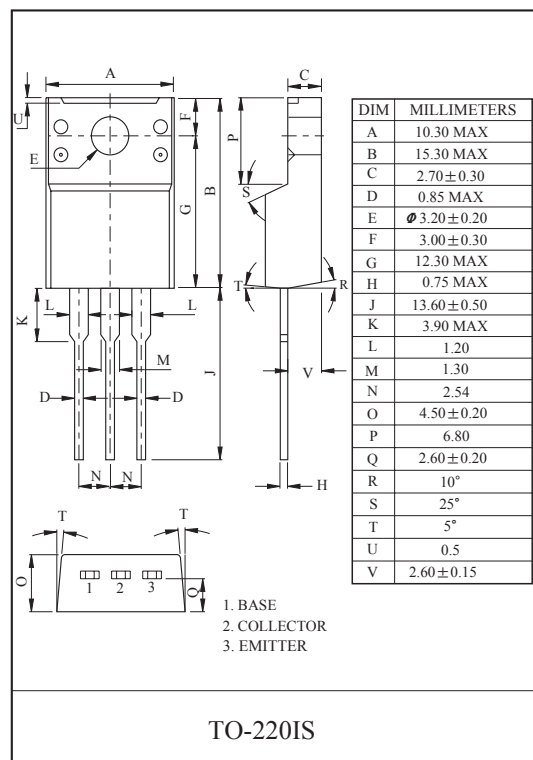
GENERAL PURPOSE APPLICATION.

#### FEATURES

- Complementary to TIP32CF.

#### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              |         | SYMBOL    | RATING    | UNIT |
|-----------------------------|---------|-----------|-----------|------|
| Collector-Base Voltage      |         | $V_{CBO}$ | 100       | V    |
| Collector-Emitter Voltage   |         | $V_{CEO}$ | 100       | V    |
| Emitter-Base Voltage        |         | $V_{EBO}$ | 5         | V    |
| Collector Current           | DC      | $I_C$     | 3         | A    |
|                             | Pulse   | $I_{CP}$  | 5         |      |
| Base Current                |         | $I_B$     | 1         | A    |
| Collector Power Dissipation | Ta=25°C | $P_C$     | 2         | W    |
|                             | Tc=25°C |           | 25        | W    |
| Junction Temperature        |         | $T_j$     | 150       | °C   |
| Storage Temperature Range   |         | $T_{stg}$ | -55 ~ 150 | °C   |



#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                       | SYMBOL         | TEST CONDITION                  | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|----------------|---------------------------------|------|------|------|------|
| Collector Emitter Sustaining Voltage | $V_{CEO(SUS)}$ | $I_C=30mA, I_B=0$               | 100  | -    | -    | V    |
| Collector Cut-off Current            | $I_{CEO}$      | $V_{CE}=60V, I_B=0$             | -    | -    | 0.3  | mA   |
| Collector Cut-off Current            | $I_{CES}$      | $V_{CE}=100V, V_{EB}=0$         | -    | -    | 200  | μA   |
| Emitter Cut-off Current              | $I_{EBO}$      | $V_{BE}=5V, I_C=0$              | -    | -    | 1    | mA   |
| DC Current Gain                      | $h_{FE}$       | $V_{CE}=4V, I_C=1A$             | 25   | -    | -    |      |
|                                      |                | $V_{CE}=4V, I_C=3A$             | 10   | -    | 50   |      |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$  | $I_C=3A, I_B=375mA$             | -    | -    | 1.2  | V    |
| Base-Emitter On Voltage              | $V_{BE(on)}$   | $V_{CE}=4V, I_C=3A$             | -    | -    | 1.8  | V    |
| Transition Frequency                 | $f_T$          | $V_{CE}=10V, I_C=500mA, f=1MHz$ | 3.0  | -    | -    | MHz  |

# TIP31CF

