

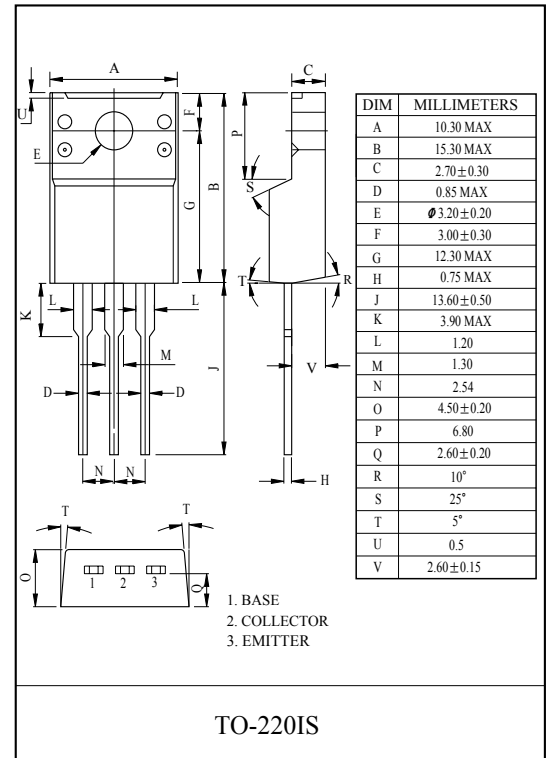
HIGH CURRENT SWITCHING APPLICATIONS.  
POWER AMPLIFIER APPLICATIONS.

### FEATURES

- High Collector Current :  $I_C = -7A$ .
- Low Collector-Emitter Saturation Voltage.  
:  $V_{CE(sat)} = -0.5V(\text{Max.})$  at  $I_C = -4A$ .

### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC                        | SYMBOL    | RATING    | UNIT |
|---------------------------------------|-----------|-----------|------|
| Collector-Base Voltage                | $V_{CBO}$ | -100      | V    |
| Collector-Emitter Voltage             | $V_{CEO}$ | -80       | V    |
| Emitter-Base Voltage                  | $V_{EBO}$ | -5        | V    |
| Collector Current                     | $I_C$     | -7        | A    |
| Base Current                          | $I_B$     | -1        | A    |
| Collector Power Dissipation (Tc=25°C) | $P_C$     | 30        | W    |
| Junction Temperature                  | $T_j$     | 150       | °C   |
| Storage Temperature Range             | $T_{stg}$ | -55 ~ 150 | °C   |

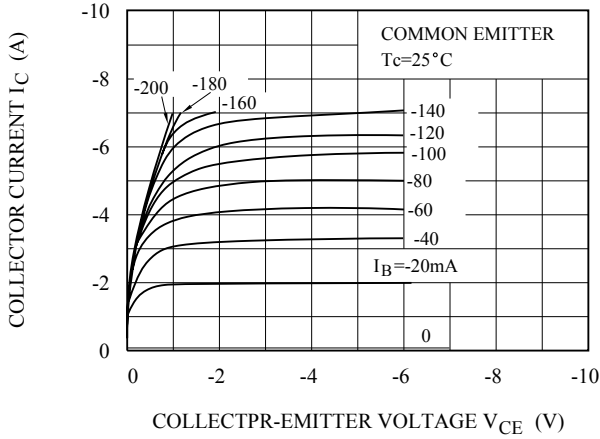


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

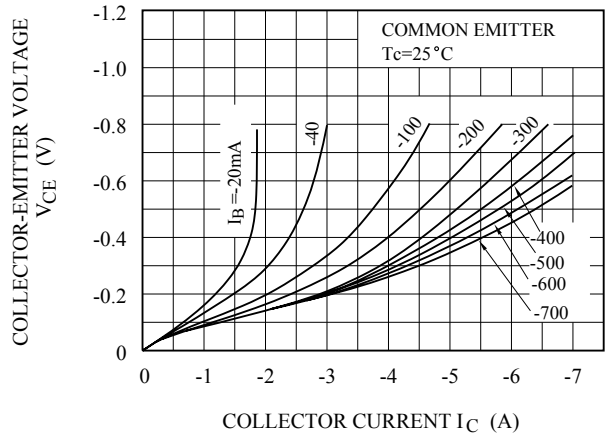
| CHARACTERISTIC                       |                    | SYMBOL        | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|--------------------|---------------|---|------|------|------|---------|
| Collector Cut-off Current            |                    | $I_{CBO}$     | $V_{CB} = -100V, I_E = 0$   | -    | -    | -5   | $\mu A$ |
| Emitter Cut-off Current              |                    | $I_{EBO}$     | $V_{EB} = -5V, I_C = 0$   | -    | -    | -5   | $\mu A$ |
| Collector-Emitter Breakdown Voltage  |                    | $V_{(BR)CEO}$ | $I_C = -50mA, I_B = 0$  | -80  | -    | -    | V       |
| DC Current Gain                      | $h_{FE(1)}$ (Note) |               | $V_{CE} = -1V, I_C = -1A$   | 70   | -    | 240  |         |
|                                      | $h_{FE(2)}$        |               | $V_{CE} = -1V, I_C = -4A$   | 30   | -    | -    |         |
| Collector-Emitter Saturation Voltage |                    | $V_{CE(sat)}$ | $I_C = -4A, I_B = -0.4A$  | -    | -0.3 | -0.5 | V       |
| Base-Emitter Saturation Voltage      |                    | $V_{BE(sat)}$ | $I_C = -4A, I_B = -0.4A$  | -    | -0.9 | -1.4 | V       |
| Transition Frequency                 |                    | $f_T$         | $V_{CE} = -4V, I_C = -1A$   | -    | 10   | -    | MHz     |
| Collector Output Capacitance         |                    | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$  | -    | 250  | -    | pF      |
| Switching Time                       | Turn-On Time       | $t_{on}$      | <p><math>-I_{B1} = I_{B2} = 0.3A</math><br/>DUTY CYCLE <math>\leq 1\%</math><br/><math>V_{CC} = -30V</math></p> | -    | 0.4  | -    | $\mu S$ |
|                                      | Storage Time       | $t_{stg}$     |   | -    | 2.5  | -    |         |
|                                      | Fall Time          | $t_f$         |   | -    | 0.5  | -    |         |

Note :  $h_{FE(1)}$  Classification O:70 ~ 140 , Y:120 ~ 240

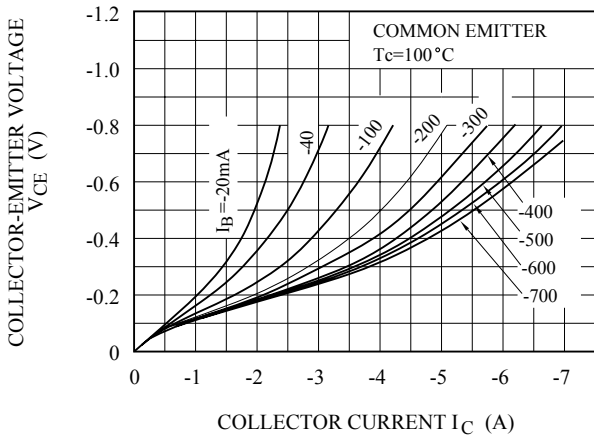
$I_C - V_{CE}$



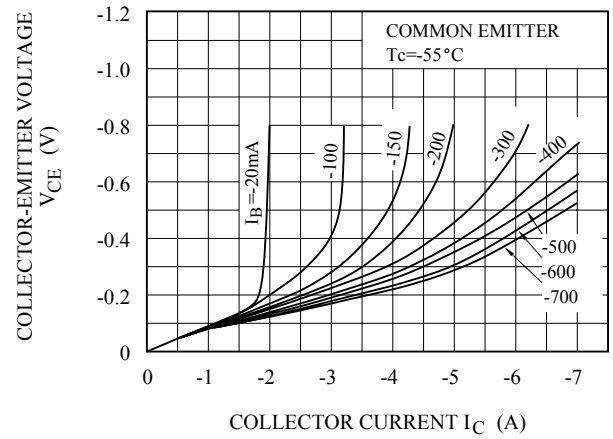
$V_{CE} - I_C$



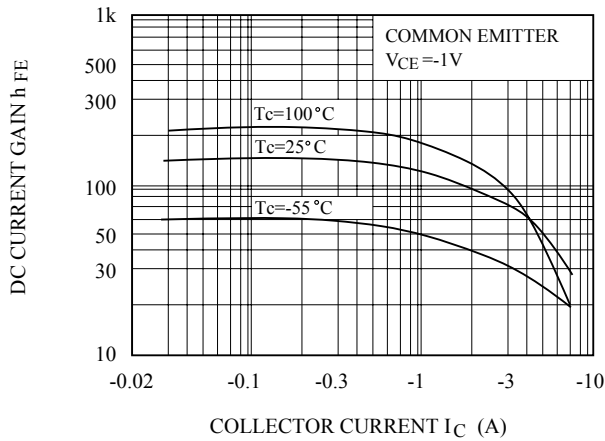
$V_{CE} - I_C$



$V_{CE} - I_C$



$h_{FE} - I_C$



$V_{CE(sat)} - I_C$

