

HIGH VOLTAGE APPLICATION

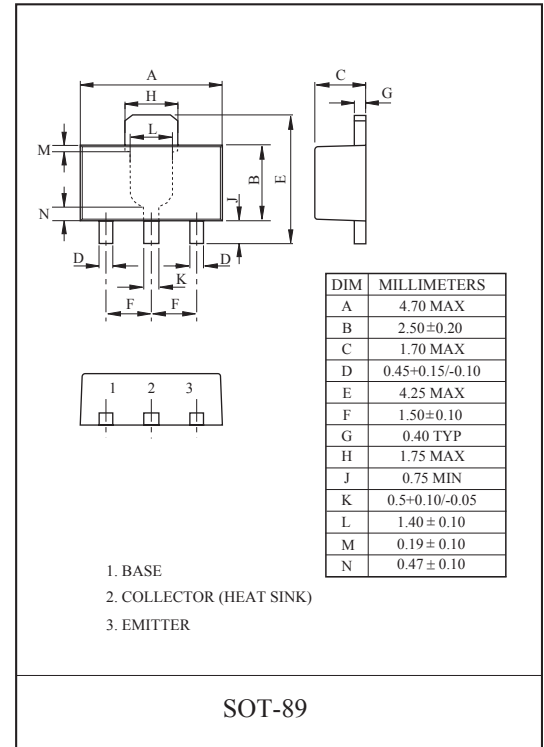
FEATURES

- High Voltage : $V_{CEO}=160V$.
- Large Continuous Collector Current Capability.
- Recommended for LED Drive Application.

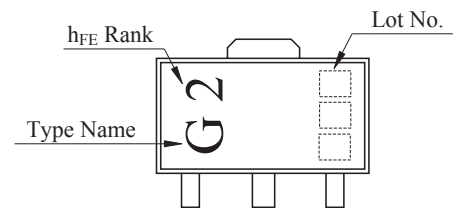
MAXIMUM RATING ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|---------------|-----------|--------------|
| Collector-Base Voltage | V_{CBO} | 160 | V |
| Collector-Emitter Voltage | V_{CEO} | 160 | V |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 1 | A |
| Base Current | I_B | 0.5 | A |
| Collector Power Dissipation | P_C | 0.5 | W |
| | P_C^* | 1 | |
| Thermal Resistance | $R_{th(j-c)}$ | 20 | $^\circ C/W$ |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | $^\circ C$ |

* : Mounted on ceramic substrate ($250mm^2 \times 0.8t$)



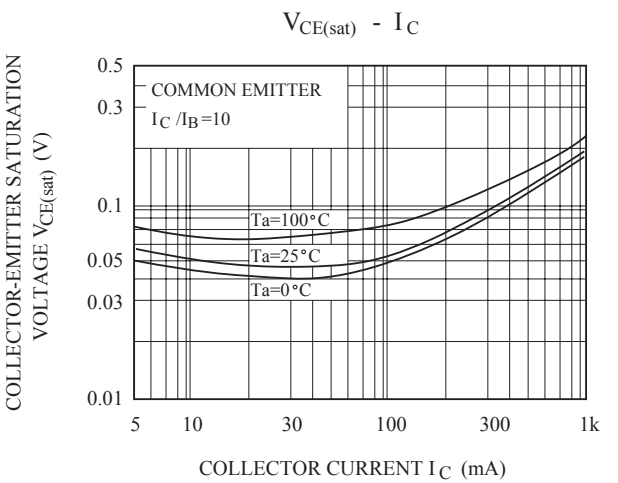
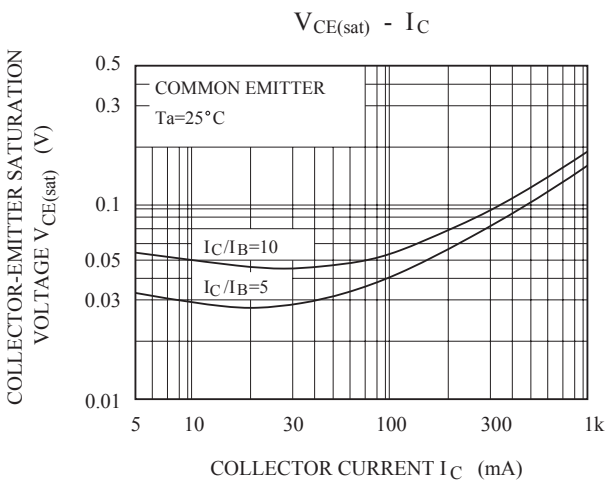
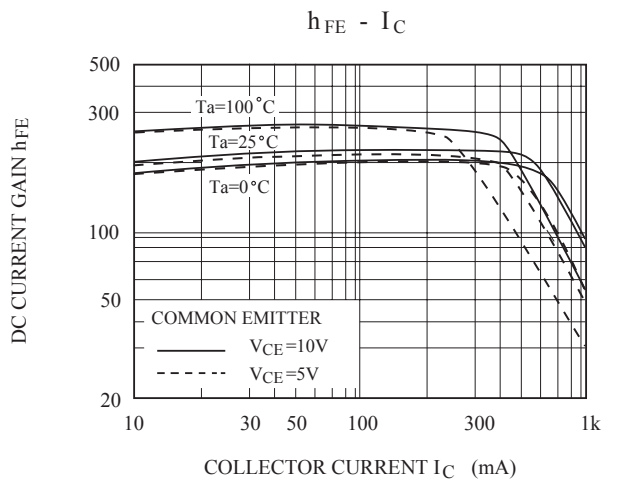
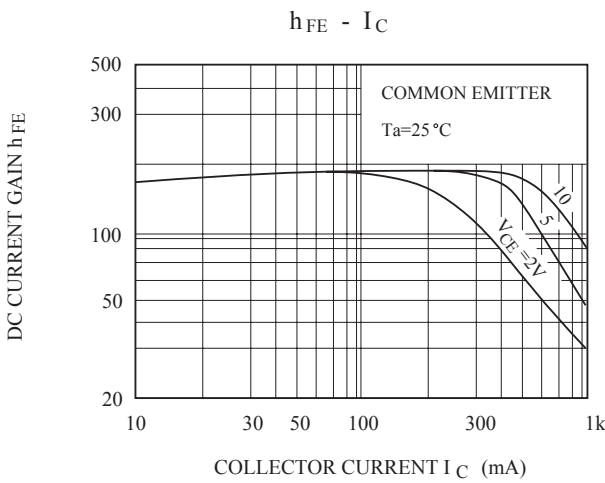
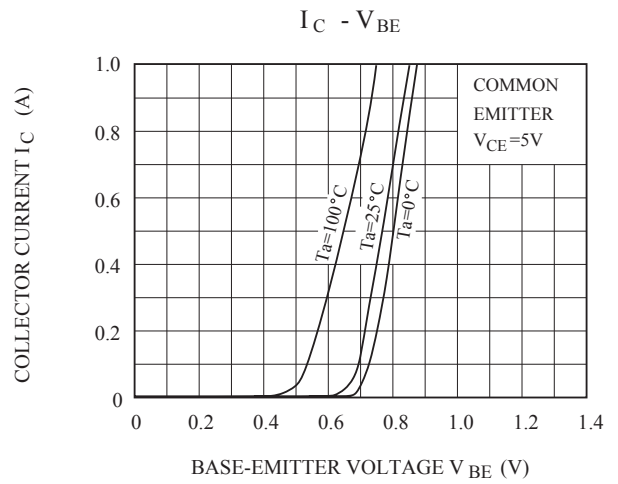
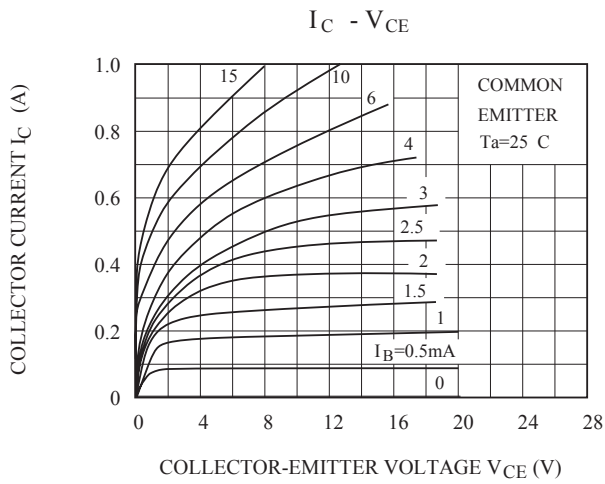
Marking



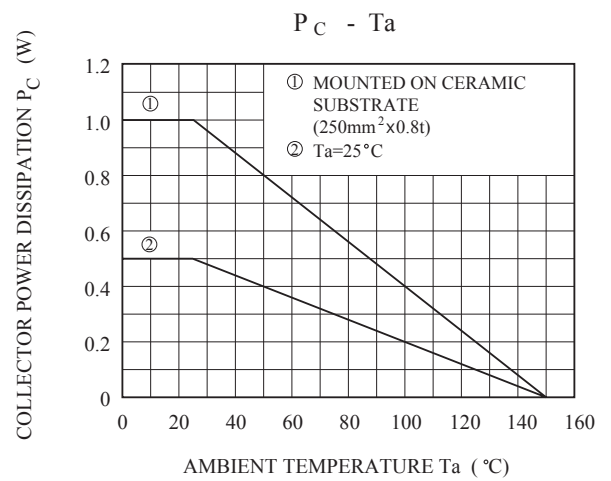
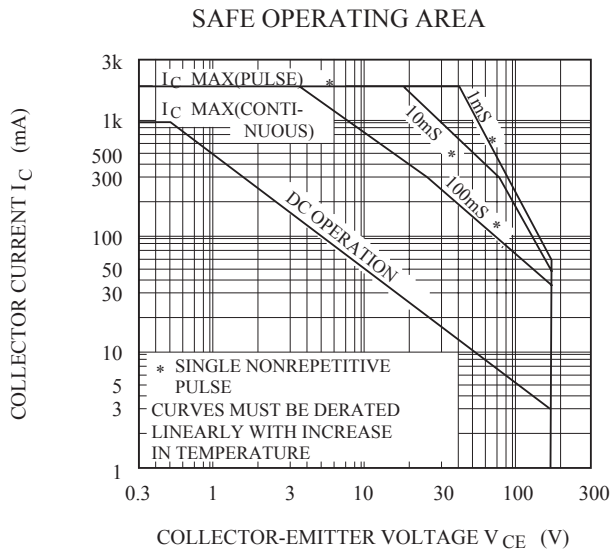
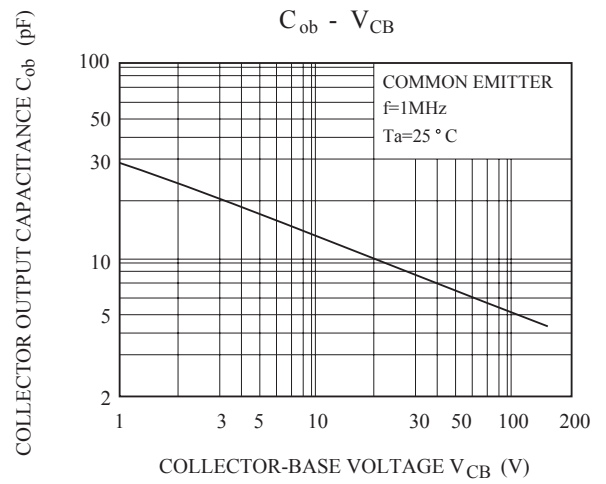
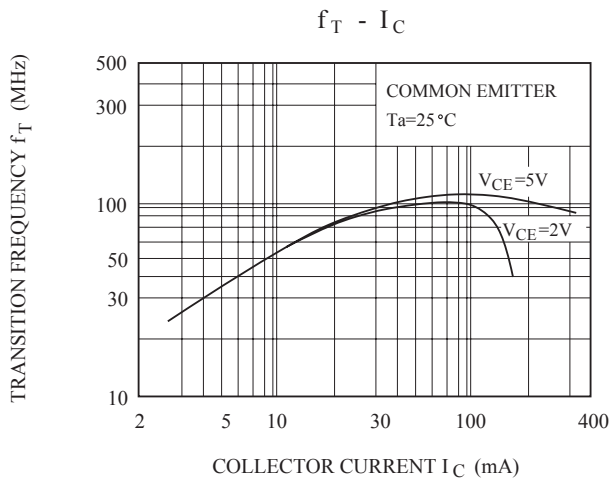
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|------------------|-----------------------------|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=160V, I_E=0$ | - | - | 1.0 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=6V, I_C=0$ | - | - | 1.0 | μA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | 160 | - | - | V |
| DC Current Gain | h_{FE} (Note) | $V_{CE}=5V, I_C=200mA$ | 160 | - | 320 | - |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)(1)}$ | $I_C=100mA, I_B=10mA$ | - | 0.05 | 0.1 | V |
| | $V_{CE(sat)(2)}$ | $I_C=500mA, I_B=50mA$ | - | - | 1.5 | V |
| | $V_{CE(sat)(3)}$ | $I_C=120mA, I_B=2mA$ | - | 0.13 | - | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=5V, I_C=5mA$ | 0.45 | - | 0.75 | V |
| Transition Frequency | f_T | $V_{CE}=5V, I_C=200mA$ | - | 100 | - | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | - | 15 | - | pF |

KTC4380



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