

POWER AMPLIFIER APPLICATIONS.
POWER SWITCHING APPLICATIONS.

FEATURES

- Low Saturation Voltage
: $V_{CE(sat)}=0.5V(\text{Max.}) (I_C=1A)$
- High Speed Switching Time : $t_{stg}=1.0 \mu S(\text{Typ.})$
- $P_C=1 \sim 2W$ (Mounted on Ceramic Substrate)
- Small Flat Package.
- Complementary to KTA1666.
- Suffix U : Qualified to AEC-Q101.
ex) KTC4379-Y-RTF/HU

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|-----------|------------|
| Collector-Base Voltage | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 2 | A |
| Base Current | I_B | 0.4 | A |
| Collector Power Dissipation | P_C | 500 | mW |
| | P_C^* | 1 | W |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | $^\circ C$ |

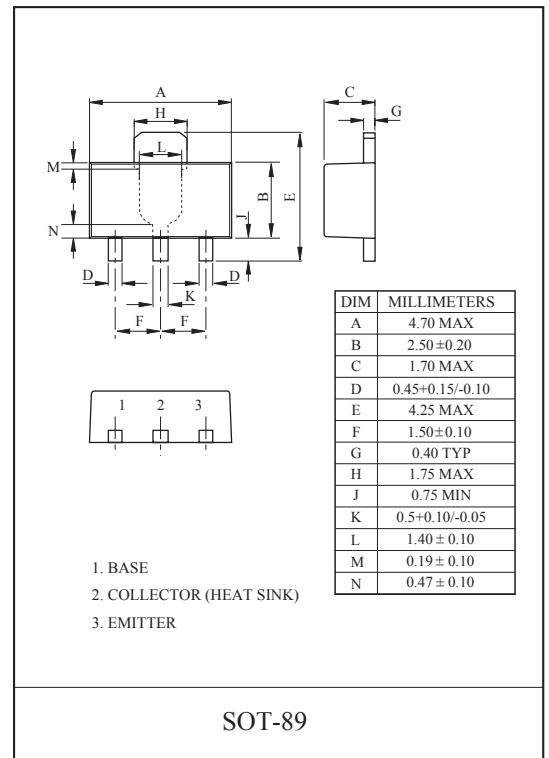
P_C^* : KTC4379 mounted on ceramic substrate (250mm²x0.8t)

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

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|--------------------------------------|---------------------|--------------------------------|------|------|------|---------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=50V, I_E=0$ | - | - | 0.1 | μA | |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 0.1 | μA | |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | 50 | - | - | V | |
| DC Current Gain | $h_{FE}(1)$ (Note2) | $V_{CE}=2V, I_C=0.5A$ (Note 1) | 70 | - | 240 | | |
| | $h_{FE}(2)$ | $V_{CE}=2V, I_C=1.5A$ (Note 1) | 40 | - | - | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=0.05A$ (Note 1) | - | - | 0.5 | V | |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=1A, I_B=0.05A$ (Note 1) | - | - | 1.2 | V | |
| Transition Frequency | f_T | $V_{CE}=2V, I_C=0.5A$ | - | 120 | - | MHz | |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | - | 30 | - | pF | |
| Switching Time | Turn-on Time | t_{on} | | - | 0.1 | - | μS |
| | Storage Time | t_{stg} | | - | 1.0 | - | |
| | Fall Time | t_f | | - | 0.1 | - | |

Note 1 : Pulse width $\leq 300 \mu S$, Duty Cycle $\leq 1\%$

Note 2 : $h_{FE}(1)$ Classification 0:70 ~ 140, Y:120 ~ 240



Marking

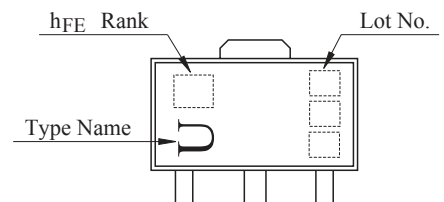


Fig 1. $V_{CE} - I_C$

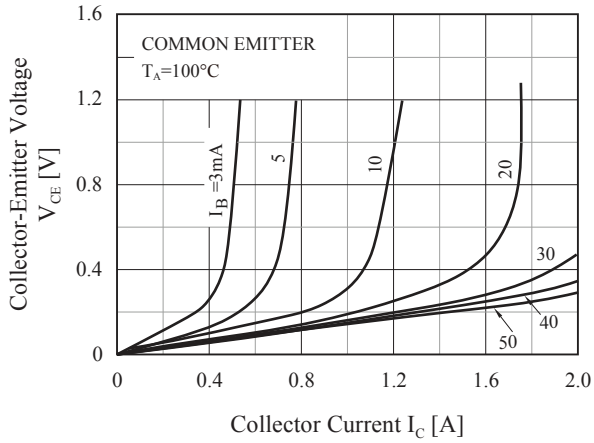


Fig 2. $V_{CE} - I_C$

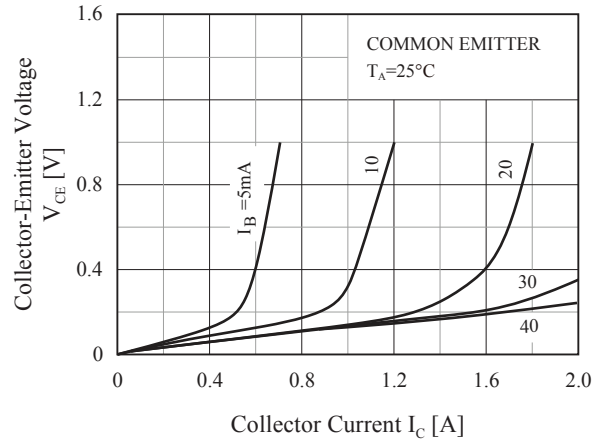


Fig 3. $V_{CE} - I_C$

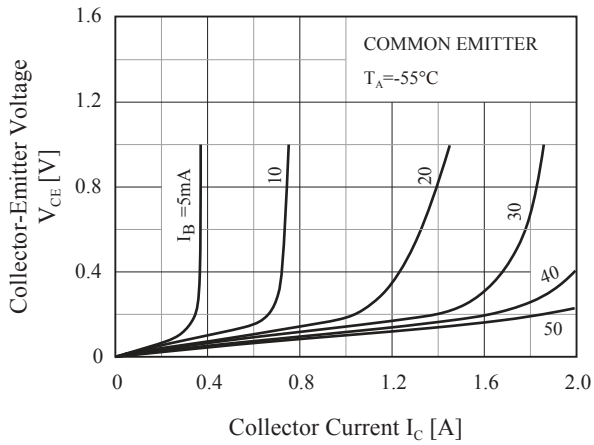


Fig 4. $h_{FE} - I_C$

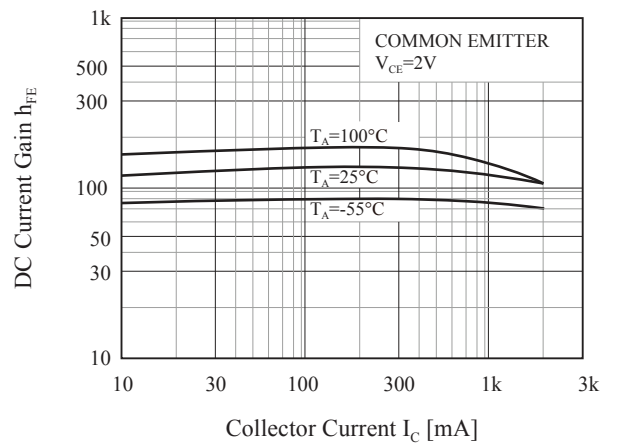


Fig 5. $V_{CE(sat)} - I_C$

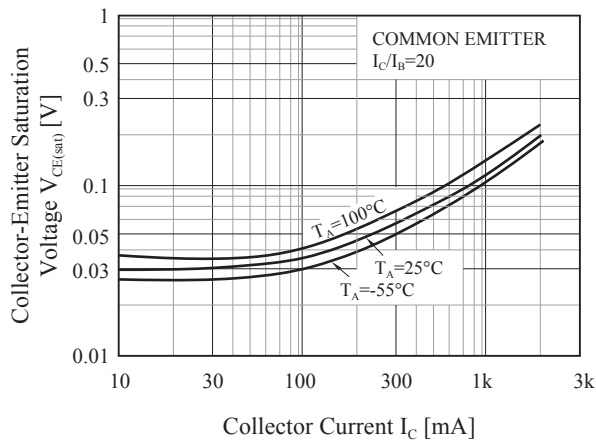


Fig 6. $V_{BE(sat)} - I_C$

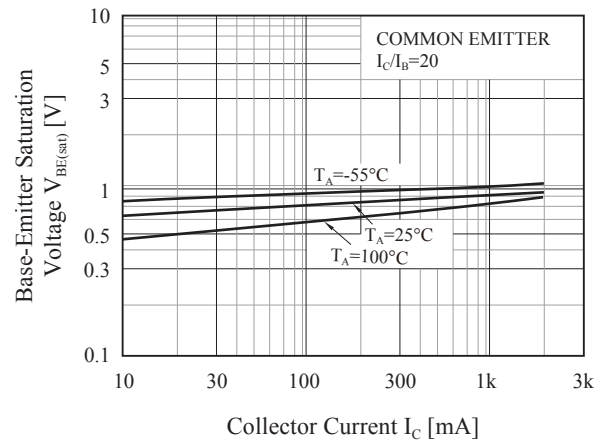


Fig 7. $I_C - V_{BE}$

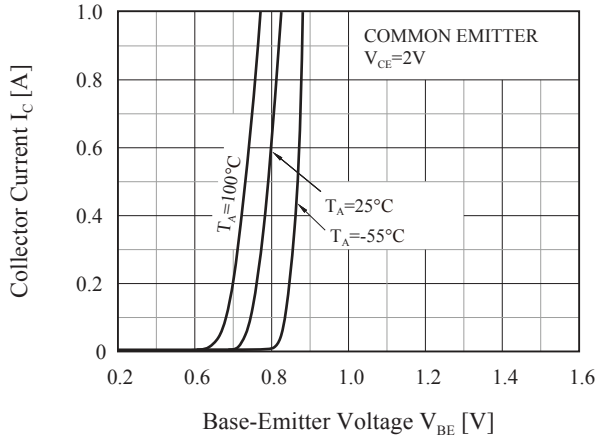


Fig 8. Safe Operating Area

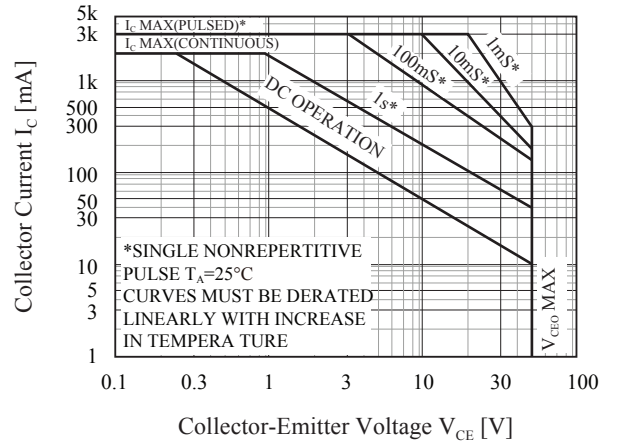


Fig 9. $P_C - T_A$

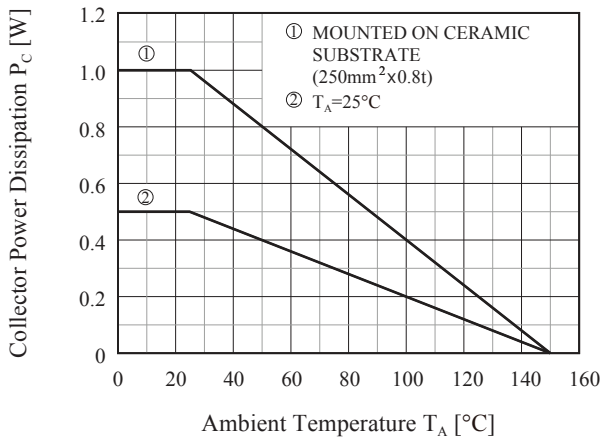
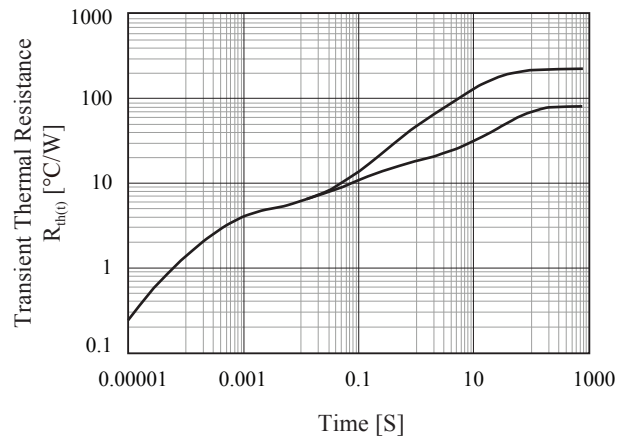


Fig 10. $R_{th(t)} - t$



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