## / Descriptions

TO-251 NPN Silicon NPN transistor in a TO-251 Plastic Package.

## / Features

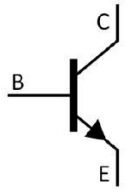
, KTA1042I

Low collector-emitter saturation voltage, complementary to KTA1042I.

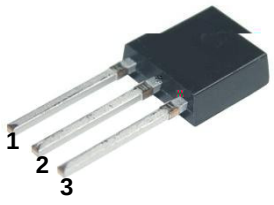
## / Applications

General purpose amplifier.

## / Equivalent Circuit




## / Pinning




PIN1 Base PIN 2 Collector PIN 3 Emitter

## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications Symbol | O | Y |
|---|---|---|
| $h_{FE}$ Range | 70 140 | 120 240 |

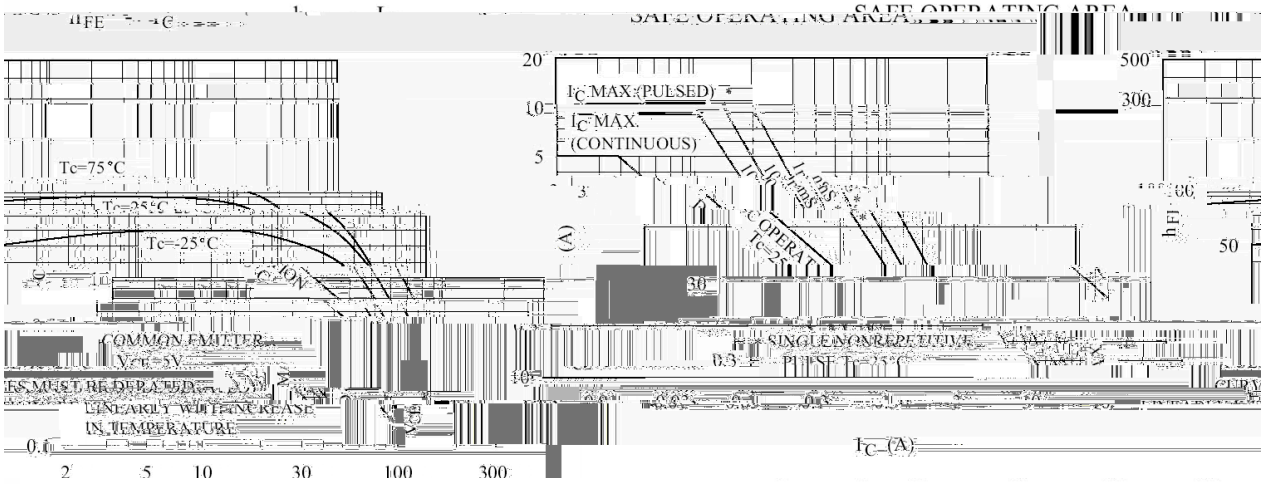
## / Absolute Maximum Ratings(Ta=25 )

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 100 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 100 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 5 | V |
| Collector Current - Continuous | $I_C$ | 5 | A |
| Base Current - Continuous | $I_B$ | 0.5 | A |
| Collector Power Dissipation | $P_C$ | 20 | W |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

## / Electrical Characteristics(Ta=25 )

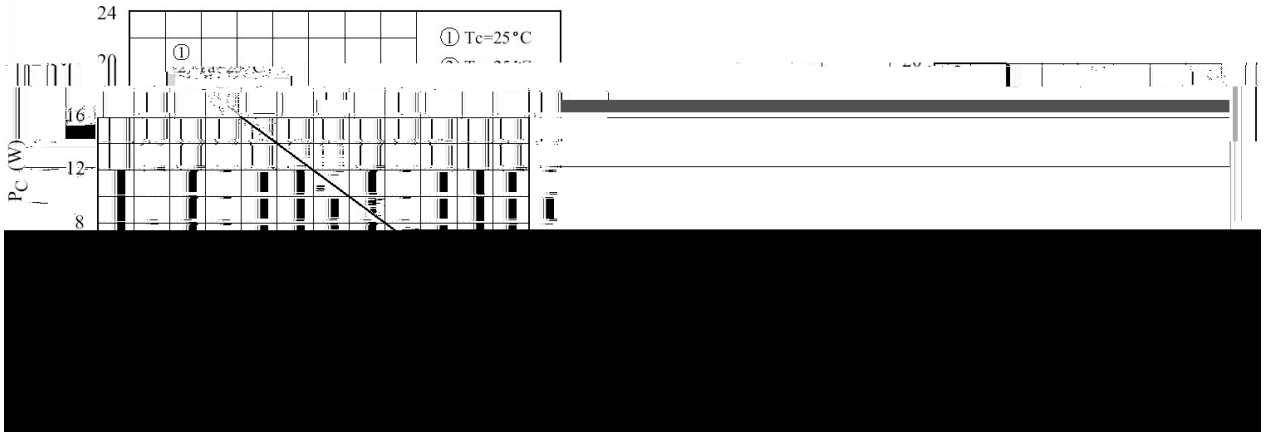
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=50mA $I_B$=0 | 100 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=100V $I_E$=0 | | | 100 | μA |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=5V $I_C$=0 | | | 1 | mA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}$=5V $I_C$=1A | 70 | | 240 | |
| | $h_{FE(2)}$ | $V_{CE}$=5V $I_C$=4A | 20 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=4A $I_B$=0.4A | | | 2 | V |
| Base to Emitter Voltage | $V_{BE}$ | $V_{CE}$=5V $I_C$=1A | | | 1.5 | V |
| Transition Frequency | $f_T$ | $V_{CE}$=5V $I_C$=1A | | 30 | | MHz |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$=10V $I_E$=0 f=1MHz | | 40 | | pF |

## / Electrical Characteristic Curve

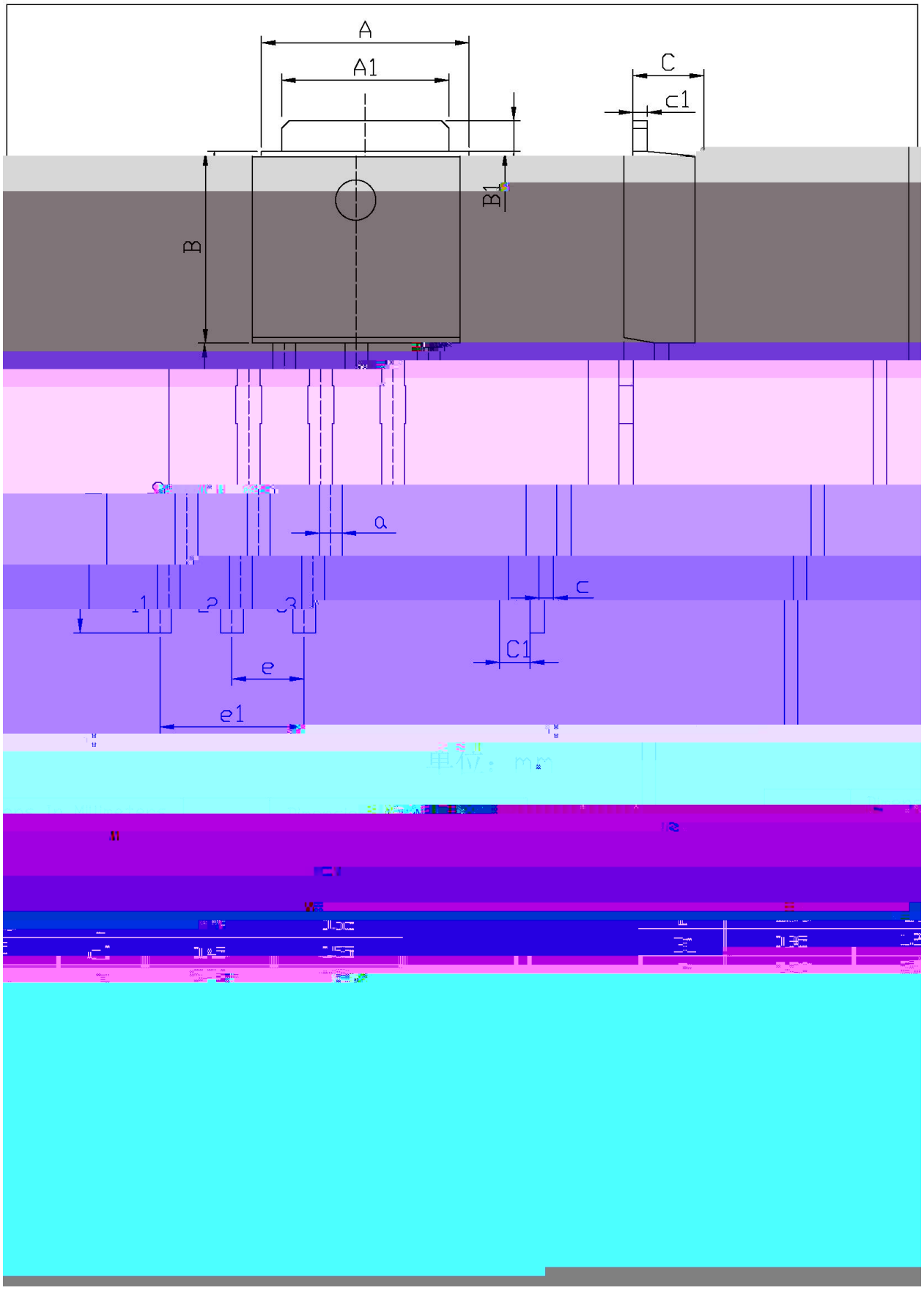




Pc - Ta

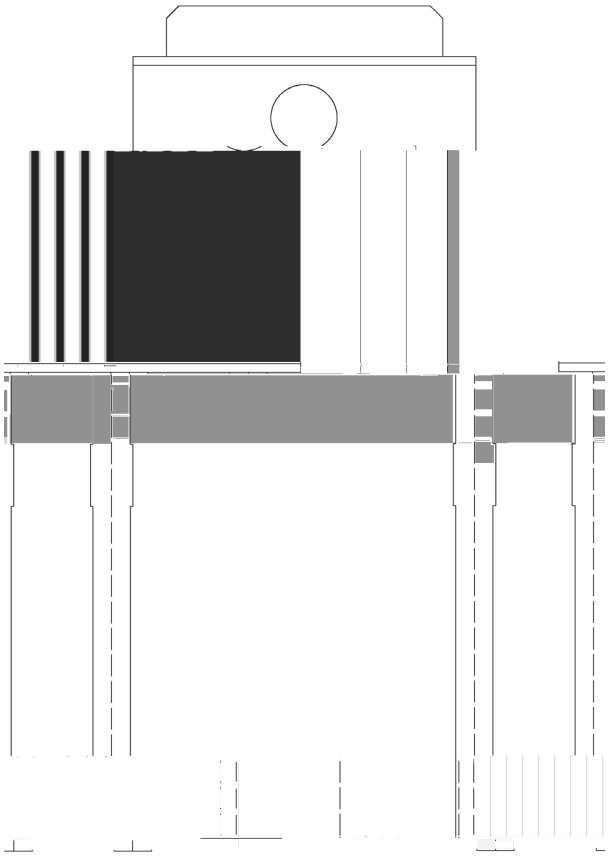
$V_{CE}$ (V)



## / Package Dimensions



## / Marking Instructions



BR

C2022I

Y: $h_{FE}$

****

Note:

| | |
|---|---|
| BR: | Company Code |
| C2022I: | Product Type. |
| Y: | $h_{FE}$ Classifications Symbol |
| ****: | Lot No. Code, code change with Lot No. |

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