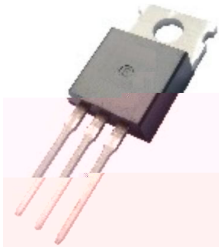
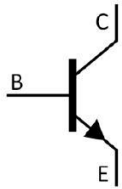


Silicon NPN transistor in a TO-220 Plastic Package.

High speed switching, high SOA.

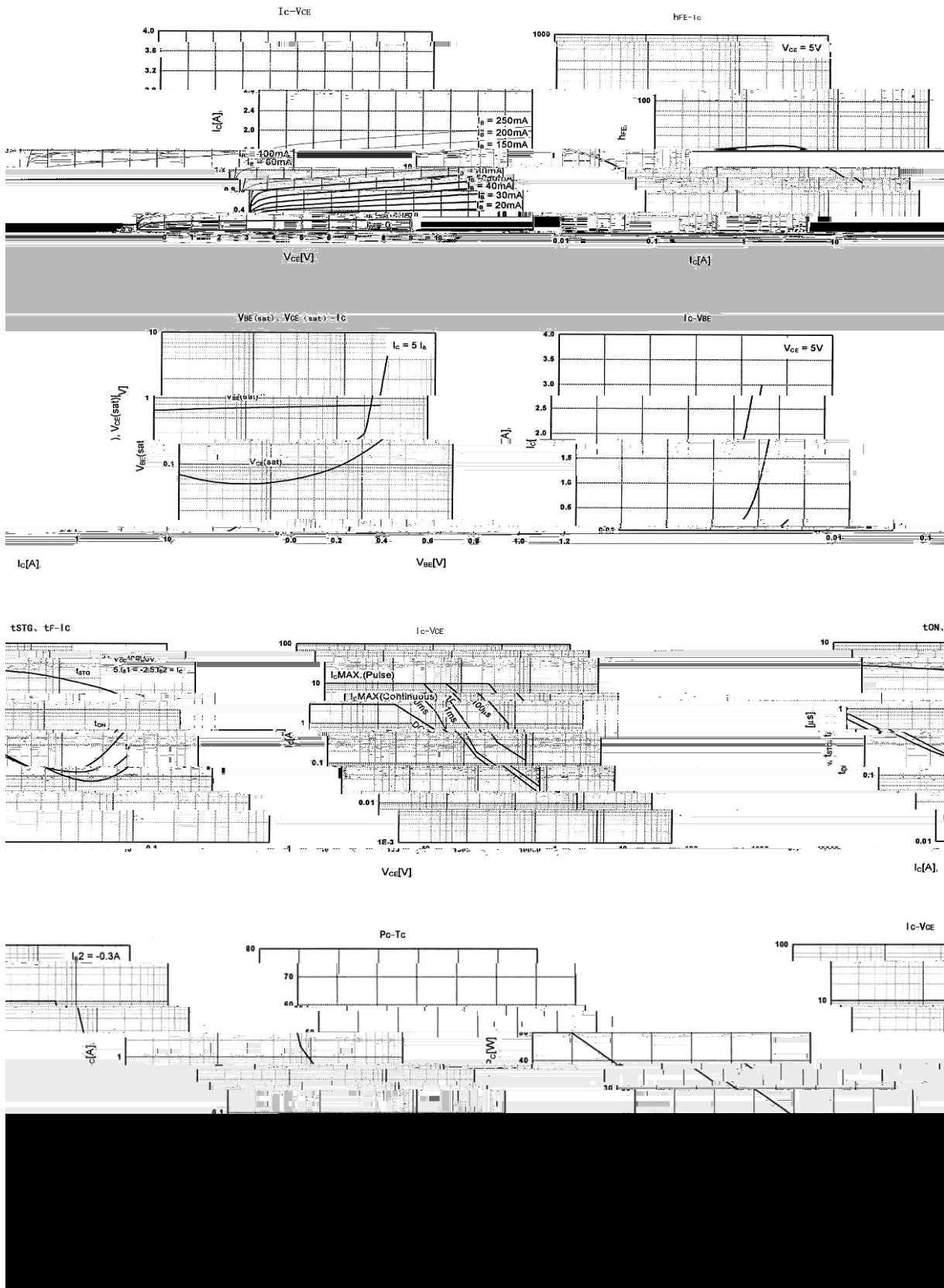
High voltage switching and amplifier applications.

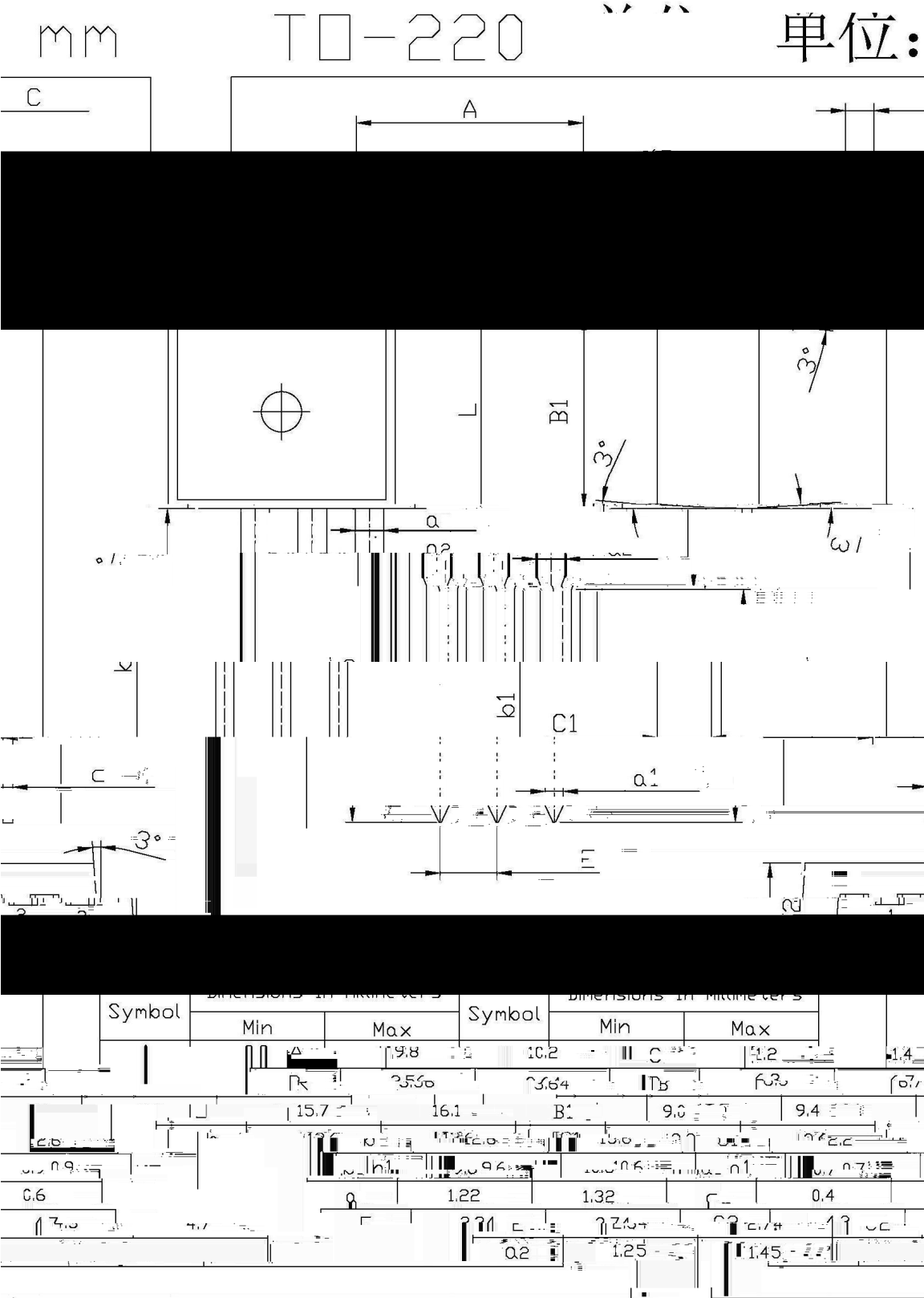


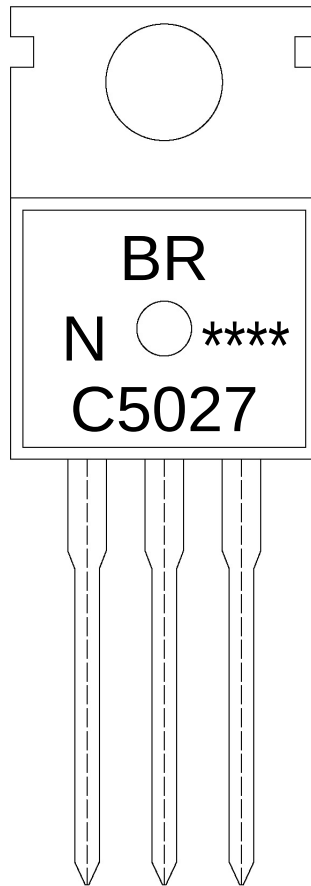
PIN1 Base      PIN 2 Collector      PIN 3 Emitter

| Parameter                             | Symbol                      | Rating    | Unit |
|---------------------------------------|-----------------------------|-----------|------|
| Collector to Base Voltage             | $V_{CBO}$                   | 1100      | V    |
| Collector to Emitter Voltage          | $V_{CEO}$                   | 800       | V    |
| Emitter to Base Voltage               | $V_{EBO}$                   | 7.0       | V    |
| Collector Current - Continuous        | $I_C$                       | 3.0       | A    |
| Collector Current – Continuous(Pulse) | $I_{CP}$                    | 10        | A    |
| Base Current - Continuous             | $I_B$                       | 1.5       | A    |
| Collector Power Dissipation           | $P_C(T_C=25^\circ\text{C})$ | 50        | W    |
| Junction Temperature                  | $T_j$                       | 150       |      |
| Storage Temperature Range             | $T_{stg}$                   | -55 ~ 150 |      |

| Parameter                               | Symbol        | Test Conditions                                                                          | Min  | Typ | Max | Unit          |
|-----------------------------------------|---------------|------------------------------------------------------------------------------------------|------|-----|-----|---------------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=1.0\text{mA}$ $I_E=0$                                                               | 1100 |     |     | V             |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=5.0\text{mA}$ $I_B=0$                                                               | 800  |     |     | V             |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=1.0\text{mA}$ $I_C=0$                                                               | 7.0  |     |     | V             |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=800\text{V}$ $I_E=0$                                                             |      |     | 10  | $\mu\text{A}$ |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=5.0\text{V}$ $I_C=0$                                                             |      |     | 10  | $\mu\text{A}$ |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE}=5.0\text{V}$ $I_C=0.2\text{A}$                                                   | 10   |     | 40  |               |
|                                         | $h_{FE(2)}$   | $V_{CE}=5.0\text{V}$ $I_C=1.0\text{A}$                                                   | 8.0  |     |     |               |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1.5\text{A}$ $I_B=0.3\text{A}$                                                      |      |     | 2.0 | V             |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=1.5\text{A}$ $I_B=0.3\text{A}$                                                      |      |     | 1.5 | V             |
| Transition Frequency                    | $f_T$         | $V_{CE}=10\text{V}$ $I_C=0.2\text{A}$                                                    |      | 15  |     | MHz           |
| Collector output capacitance            | $C_{ob}$      | $V_{CB}=10\text{V}$ $I_E=0$<br>$f=1.0\text{MHz}$                                         |      | 60  |     | pF            |
| Turn-On Time                            | $T_{on}$      | $V_{CC}=400\text{V}$ $R_L=200\Omega$<br>$I_C=5\text{I}_{B1}=-2.5\text{I}_{B2}=2\text{A}$ |      |     | 0.5 | $\mu\text{s}$ |
| Storage Time                            | $T_{stg}$     |                                                                                          |      |     | 3.0 |               |
| Fall Time                               | $T_{off}$     |                                                                                          |      |     | 0.3 |               |







Note:

BR: Company Code

C5027: Product Type.

N:  $h_{FE}$  Classifications Symbol

\*\*\*\*: Lot No. Code, code change with Lot No.



Note:

- |   |     |     |    |         |                                         |
|---|-----|-----|----|---------|-----------------------------------------|
| 1 | 25  | 150 | 60 | 90sec;  | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 255 | 5   | 5  | 0.5sec; | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 |     | 2   | 10 | /sec.   | 3. Cooling Speed: 2~10 /sec.            |

270 5                      10 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ BULK

| Package Type<br>封装形式 | Units 包装数量       |                       |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Bag<br>只/袋 | Bags/Inner Box<br>袋/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Bag 袋                                   | Inner Box 盒 | Outer Box 箱 |
| TO-220/F             | 200              | 10                    | 2,000                  | 5                            | 10,000                 | 135×190                                 | 237×172×102 | 560×245×195 |

/ TUBE

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Tube<br>只/套管 | Tubes/Inner Box<br>套管/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Tube 套管                                 | Inner Box 盒 | Outer Box 箱 |
| TO-220/F             | 50                 | 20                      | 1,000                  | 5                            | 5,000                  | 532×31.4×5.5                            | 555×164×50  | 575×290×180 |