

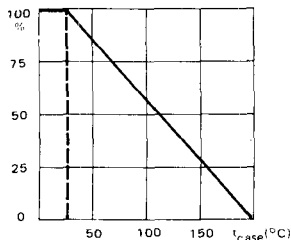
2N 3054 compl. of BDY 14

* Preferred device
 Dispositif recommandé

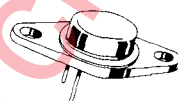
- LF large signal power amplification
 Amplification BF grands signaux de puissance
- High current switching
 Commutation fort courant

| | | |
|-----------------|----------|---------|
| V_{CE0} | 55 V | |
| I_C | 4 A | |
| P_{tot} | 25 W | 2N 3054 |
| | 29 W | BDY 71 |
| $h_{21E}(0,5A)$ | 25 - 100 | 2N 3054 |
| | 80 - 200 | BDY 71 |
| f_T | 0,8 MHz | min. |

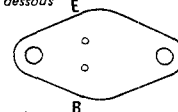
Dissipation derating
 Variation de dissipation



Case TO-66 - See outline drawing CB-72 on last pages
 Boîtier Voir dessin coté CB-72 dernières pages



Bottom view
 Vue de dessous



Bottom view
 Vue de dessous

Weight : 6,4 g.
 Masse

Collector is connected to case
 Le collecteur est relié au boîtier

ABSOLUTE RATINGS (LIMITING VALUES)
 VALEURS LIMITES ABSOLUES D'UTILISATION

$t_{amb} = +25^\circ C$

(Unless otherwise stated)
 (Sauf indications contraires)

| | | 2N 3054 | | BDY 71 | |
|--|-------------------------|-----------|------|--------|----|
| Collector-base voltage Tension collecteur-base | | V_{CB0} | 90 | 90 | V |
| Collector-emitter voltage Tension collecteur-émetteur | | V_{CE0} | 55 | 55 | V |
| Collector-emitter voltage Tension collecteur-émetteur | $R_{BE} = 100 \Omega$ | V_{CER} | 60 | 60 | V |
| Collector-emitter voltage Tension collecteur-émetteur | $V_{BE} = -1,5 V$ | V_{CEX} | 90 | 90 | V |
| Emitter-base voltage Tension émetteur-base | | V_{EBO} | 7 | 7 | V |
| Collector current Courant collecteur | | I_C | 4 | 4 | A |
| Base current Courant base | | I_B | 2 | 2 | A |
| Power dissipation Dissipation de puissance | $t_{case} = 25^\circ C$ | P_{tot} | 25 | 29 | W |
| Junction temperature Température de jonction | max | t_j | 200 | 200 | °C |
| Storage temperature Température de stockage | min | t_{stg} | -65 | -65 | °C |
| | max | | +200 | +200 | °C |

STATIC CHARACTERISTICS
CARACTERISTIQUES STATIQUES

$t_{case} = 25^{\circ}C$

(Unless otherwise stated)
 (Sauf indications contraires)

| | Test conditions <i>Conditions de mesure</i> | | | Min. | Typ. | Max. | |
|---|---|------------------|---------|-------|------|------|----|
| Collector-emitter cut-off current <i>Courant résiduel collecteur-émetteur</i> | $V_{CE} = 30\text{ V}$ $I_B = 0$ | I_{CEO} | | | 0,5 | | mA |
| Collector-emitter cut-off current <i>Courant résiduel collecteur-émetteur</i> | $V_{CE} = 90\text{ V}$ $V_{BE} = -1,5\text{ V}$ | I_{CEX} | | | 1 | | mA |
| | $V_{CE} = 30\text{ V}$ $V_{BE} = -1,5\text{ V}$ $t_{case} = 150^{\circ}C$ | | BDY 71 | | 5 | | mA |
| | $V_{CE} = 90\text{ V}$ $V_{BE} = -1,5\text{ V}$ $t_{case} = 150^{\circ}C$ | | 2N 3054 | | 6 | | mA |
| Emitter-base cut-off current <i>Courant résiduel émetteur-base</i> | $V_{EB} = 7\text{ V}$ $I_C = 0$ | I_{EBO} | | | 1 | | mA |
| Collector-emitter breakdown voltage <i>Tension de claquage collecteur-émetteur</i> | $I_C = 100\text{ mA}$ $I_B = 0$ | $V_{CEO(sus)}$ * | | 55 | | | V |
| Collector-emitter breakdown voltage <i>Tension de claquage collecteur-émetteur</i> | $I_C = 100\text{ mA}$ $R_{BE} = 100\ \Omega$ | $V_{CER(sus)}$ * | | 60 | | | V |
| Emitter-base breakdown voltage <i>Tension de claquage émetteur-base</i> | $I_E = 1\text{ mA}$ $I_C = 0$ | $V_{(BR)EBO}$ * | | 7 | 4 | | V |
| Static forward current transfer ratio <i>Valeur statique du rapport de transfert direct du courant</i> | $V_{CE} = 4\text{ V}$ $I_C = 0,5\text{ A}$ | h_{21E} | 2N 3054 | 25 | 100 | | |
| | $V_{CE} = 4\text{ V}$ $I_C = 3\text{ A}$ | | | 5 | | | |
| | $V_{CE} = 4\text{ V}$ $I_C = 0,5\text{ A}$ | | BDY 71 | 80 | 200 | | |
| Collector-emitter saturation voltage <i>Tension de saturation collecteur-émetteur</i> | $I_C = 0,5\text{ A}$ $I_B = 0,05\text{ A}$ | V_{CEsat} * | | | 1 | | V |
| | $I_C = 3\text{ A}$ $I_B = 1\text{ A}$ | | 2N 3054 | | 6 | | V |
| Base-emitter voltage <i>Tension base-émetteur</i> | $V_{CE} = 4\text{ V}$ $I_C = 0,5\text{ A}$ | V_{BE} * | | | 1,7 | | V |
| Second breakdown collector current <i>Courant collecteur de second claquage</i> | $V_{CE} = 55\text{ V}$ $t = 1\text{ s}$ | $I_{S/B}$ | 2N 3054 | 0,455 | | | A |

* Pulsed $t_p = 300\ \mu s$ $\delta \leq 2\%$
 Impulsions

DYNAMIC CHARACTERISTICS (for large signals)
CARACTERISTIQUES DYNAMIQUES (pour grands signaux)

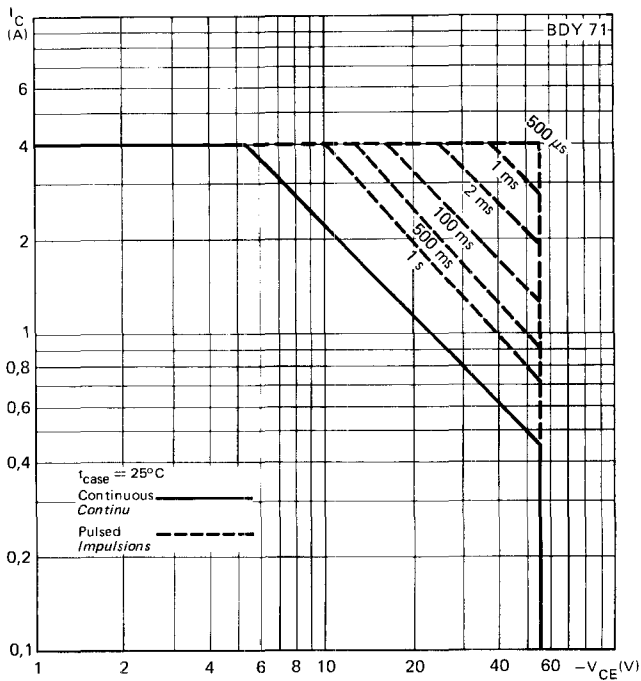
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 (Sauf indications contraires)

| | Test conditions <i>Conditions de mesure</i> | | Min. Typ. Max. | |
|--|--|-------|----------------|-----|
| Transition frequency <i>Fréquence de transition</i> | $V_{CE} = 10\text{ V}$ $I_C = 0,2\text{ A}$ $f = 1\text{ MHz}$ | f_T | 0,8 | MHz |

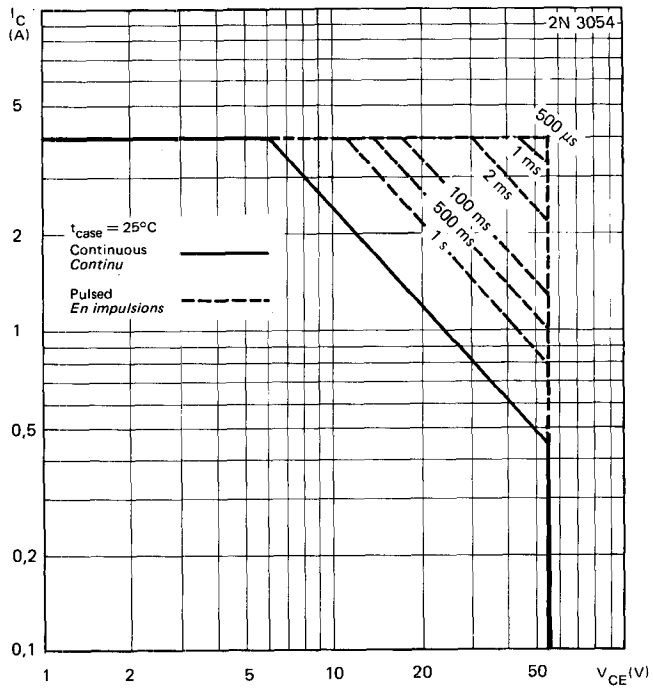
THERMAL CHARACTERISTICS
CARACTERISTIQUES THERMIQUES

| | | | | |
|--|---------------|-------------------|---|----------------------|
| Junction-case thermal resistance <i>Résistance thermique (jonction-boîtier)</i> | $R_{th(j-c)}$ | 2N 3054 BDY 71 | 7 | $^{\circ}\text{C/W}$ |
| | | | 6 | $^{\circ}\text{C/W}$ |

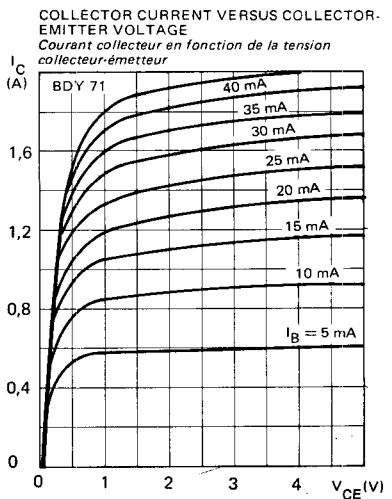
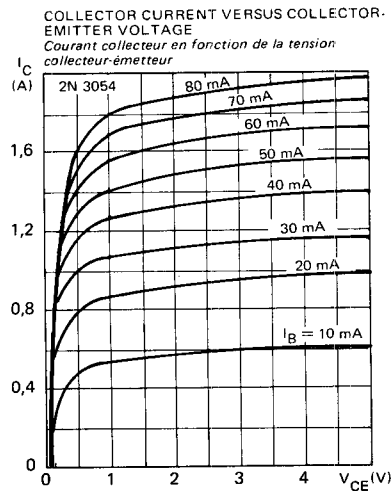
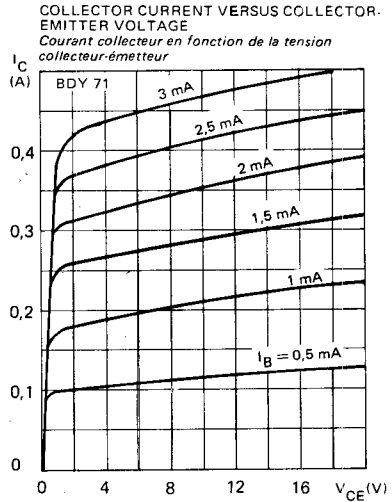
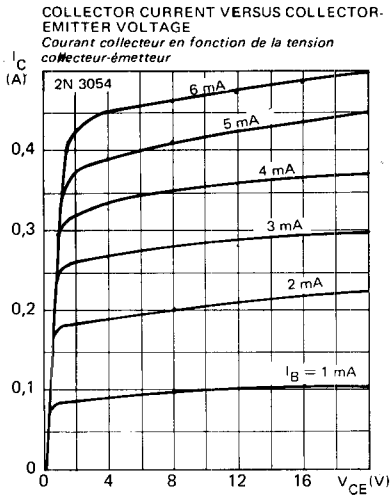
SAFE OPERATING AREA
Aire de fonctionnement de sécurité



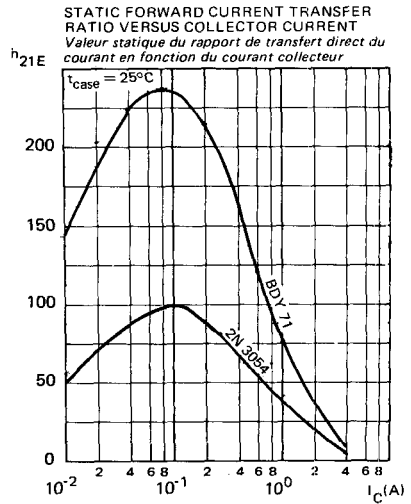
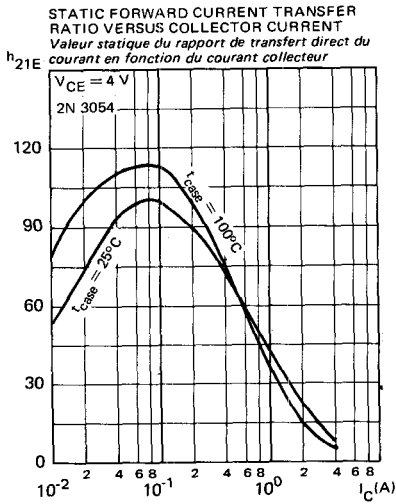
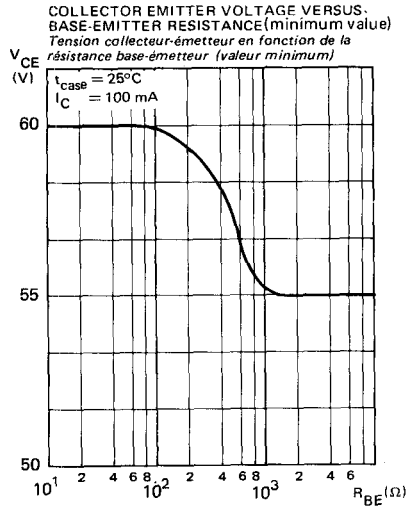
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Aire de fonctionnement de sécurité



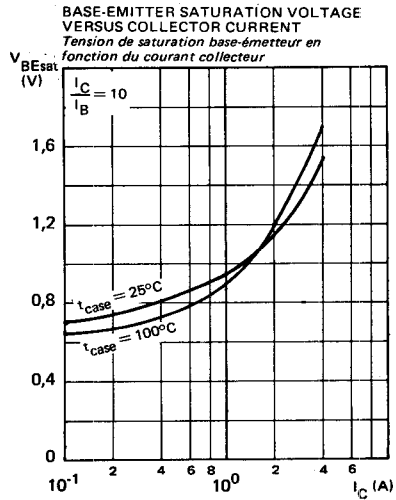
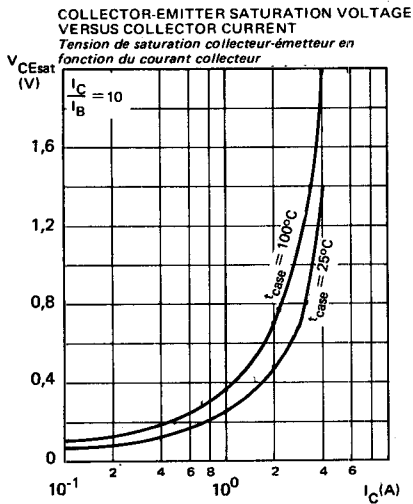
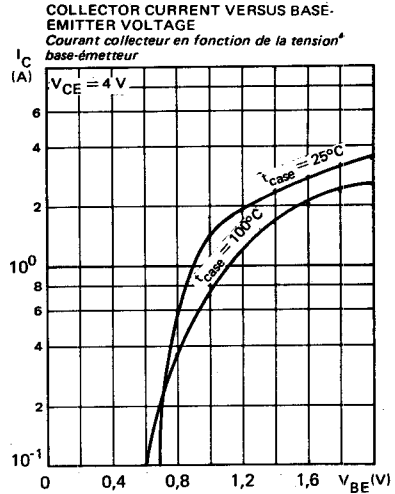
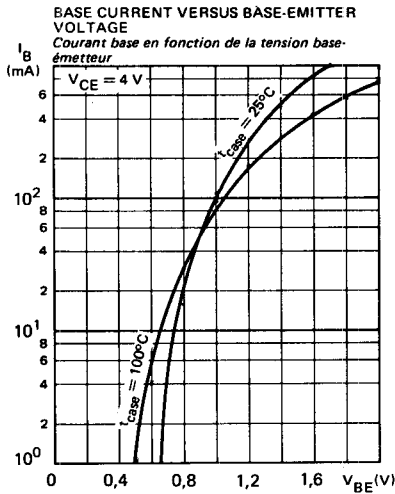
TYPICAL CHARACTERISTICS
CARACTERISTIQUES TYPIQUES



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 CARACTERISTIQUES TYPIQUES



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