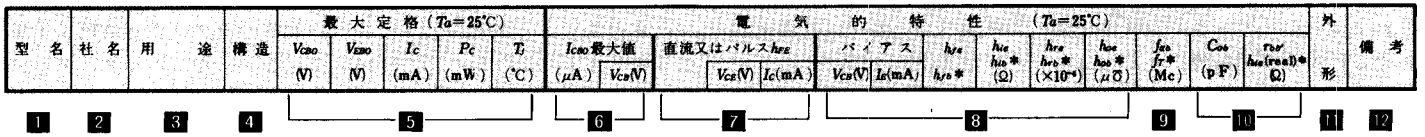
# FOR USE BY ELECTRICIANS OVERSEAS:

**最新トランジスタ規格表** (New Transistor Manual) lists all the transistors registered with the Electronic Industries Association of Japan (EIAJ), arranged in a manner easy to look up. We hope that you will make full use of the data provided in this manual by referring to the Japanese-English translation key given below.




1 TYPE NUMBER

2 ORIGINAL MANUFACTURER

3 USES

4 MATERIAL AND STRUCTURE

5 MAXIMUM RATINGS

6 $I_{CBO}$ MAXIMUM VALUE AND $V_{CB}$ VALUE (CRITERIA FOR MEASURING $I_{CBO}$ )

7 STANDARD VALUE OF DC/PULSE $h_{FE}$ AND $V_{CE}$ , $I_C$ ( CRITERIA FOR MEASURING DC/PULSE $h_{FE}$ )

8 STANDARD VALUE OF $h$ PARAMETERS AND BIAS $V_{CB}$ , $I_E$ (CRITERIA FOR MEASURING $h$ PARAMETERS)

* INDICATES VALUE IN GROUNDED-BASE OPERATION, OTHERWISE VALUE IN EMITTER-GROUNDED OPERATION.

9 $f_{\alpha b}$ OF RF CHARACTERISTIC, EXCEPT IN CASE OF * WHICH INDICATES VALUE OF $f_T$.

10 $C_{ob}$ AND $r_{bb'}$ OF RF CHARACTERISTICS EXCEPT IN CASE OF * IN $r_{bb'}$ COLUMN WHICH INDICATES VALUE OF $h_{ie}$ (real)

11 OUTLINE

12 REMARKS

:とコンプリ: COMPLEMENTARY TO ·····

| | 型名 | 社名 | 用途 | 構造 | 最大定格 ($T_a$ = 25°C) | | | | | 電気的特性 ($T_a$ = 25°C) | | | | | | | | | | | | | 外形 | 備考 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | $V_{CBO}$ (V) | $V_{EBO}$ (V) | $I_C$ (mA) | $P_C$ (mW) | $T_j$ (°C) | $I_{CBO}$ 最大値 ($\mu$A) | $V_{CB}$(V) | 直流又はパルス $h_{FE}$ $V_{CE}$(V) | $I_C$(mA) | パイアス $V_{CB}$(V) | $I_E$(mA) | $h_{fe}$ $h_{fb}$* | $h_{ie}$ $h_{ik}$* (Ω) | $h_{re}$ $h_{rb}$* (×10⁻⁴) | $h_{oe}$ $h_{ob}$* ($\mu$℧) | $f_{ab}$ $f_T$* (Mc) | $C_{ob}$ (pF) | $r_{bb'}$* $h_{ie(real)}$ (Ω) | | |
| ★ | 2SA331 | 三洋 | Conv | Ge. D | −40 | −1.5 | −50 | 120 | 75 | −15 | −15 | | | −6 | 1 | 30~300 | | | | >40 | 2~5 | 50 | 12B | |
| | 〃 332 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 50 | 75 | −20 | −9 | | | −6 | 1 | 110 | | | | 60 | 3 | 150 | 13B | |
| | 〃 333 | 〃 | Osc | 〃 | −20 | −0.5 | −10 | 50 | 75 | −20 | −9 | | | −6 | 1 | 30 | | | | 55 | 3 | 150 | 13B | |
| | 〃 334 | 〃 | Mix | 〃 | −20 | −0.5 | −10 | 50 | 75 | −20 | −9 | | | −6 | 1 | 30 | | | | 65 | 3 | 150 | 13B | |
| ★ | 〃 336 | 日立 | IF | 〃 | −9 | −0.5 | −10 | 80 | 85 | −15 | −9 | | | −3 | 1 | 70 | PG = 38 dB ($f$ = 455 kc) | | | 30 | 2.6 | 40 | 13A | |
| ★ | 〃 337 | 〃 | Conv | 〃 | −9 | −0.5 | −10 | 80 | 85 | −15 | −9 | | | −3 | 1 | 70 | CG = 36 dB ($f$ = 1.5Mc) | | | 35 | 2.6 | 40 | 13A | |
| ★ | 〃 338 | 松下 | RF. IF. Conv Mix. Osc | 〃 | −20 | −0.5 | −5 | 50 | 75 | −16 | −10 | | | −6 | 1 | 30 | | | | 15 | 2.5 | 15 | 4 | |
| ★ | 〃 339 | 〃 | 〃 | 〃 | −20 | −0.5 | −5 | 50 | 75 | −16 | −10 | | | −6 | 1 | 50 | | | | 30 | 2.5 | 20 | 4 | |
| ★ | 〃 340 | 〃 | RF. Conv Mix. Osc | Ge. AD | −20 | −0.5 | −10 | 63 | 75 | −13 | −6 | | | −6 | 1 | 100 | | | | 70 | 2 | 50 | 50C | |
| ★ | 〃 341 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 63 | 75 | −13 | −6 | | | −6 | 1 | 100 | | | | 70 | 2 | 50 | 50C | |
| ★ | 〃 342 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 63 | 75 | −13 | −6 | | | −6 | 1 | 100 | | | | 100 | 2 | 40 | 50C | |
| ★ | 〃 343 | 〃 | RF. Conv. Mix Osc. PA | 〃 | −20 | −0.4 | −5 | 86 | 75 | −12 | −10 | | | −6 | 1 | 100 | PG = 18 dB ($f$ = 100Mc) | | | 100* | 1.5 | 50 | 72B | |
| ★ | 〃 344 | 〃 | 〃 | 〃 | −30 | −0.5 | −30 | 120 | 75 | −6 | −6 | | | −2 | 10 | 200 | | | | 100 | 4 | 35 | 13B | |
| ★ | 〃 345 | 三菱 | RF | Ge. Me | −20 | −0.5 | −10 | 60 | 85 | −30 | | | | −6 | 1 | 30 | PG = 18dB ($f$ = 200Mc) | | | >250* | 1.2 | <100 | 48C | |
| ★ | 〃 346 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 60 | 85 | −30 | | | | −6 | 1 | 30 | PG = 20dB ($f$ = 200Mc) | | | >250* | 1.2 | <100 | 48C | |
| ★ | 〃 347 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 60 | 85 | −30 | | | | −6 | 1 | 30 | PG = 21dB ($f$ = 200Mc) | | | >250* | 1.2 | <100 | 48C | |
| ★ | 〃 348 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 60 | 85 | −30 | | | | −6 | 1 | 10 | PG = 15dB ($f$ = 100Mc) | | | >200* | 1.5 | <120 | 48C | |
| ★ | 〃 349 | 〃 | 〃 | 〃 | −20 | −0.5 | −10 | 60 | 85 | −30 | | | | −6 | 1 | 10 | PG = 15dB ($f$ = 50Mc) | | | >100* | 1.5 | <120 | 48C | |
| ★ | 〃 350 | 日立 | RF. Conv Mix. Osc | Ge. D | −20 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 90 | PG = 14 dB ($f$ = 20 Mc) | | | 40 | 2.5 | 30* | 12A | |
| ★ | 〃 351 | 〃 | RF. Osc | 〃 | −20 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 70 | PG = 11dB ($f$ = 12Mc) | | | 40 | 2.5 | 30* | 12A | |
| ★ | 〃 352 | 〃 | RF. Conv Mix | 〃 | −20 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 75 | CG = 22.5dB ($f$ = 12MC) | | | 40 | 2.5 | 30* | 12A | |
| ★ | 〃 353 | 〃 | RF | 〃 | −25 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 70 | PG = 39 dB ($f$ = 455 kc) | | | 30 | 2.5 | 30* | 12A | |
| ★ | 〃 354 | 〃 | Conv. Mix | 〃 | −25 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 70 | CG = 40 dB ($f$ = 1 Mc) | | | 30 | 2.5 | 30* | 12A | |
| ★ | 〃 355 | 〃 | RF | 〃 | −25 | −0.5 | −10 | 80 | 85 | −10 | −12 | | | −9 | 1 | 70 | PG = 33 dB ($f$ = 1.5Mc) | | | 30 | 2.5 | 30* | 12A | |
| ★ | 〃 356 | 〃 | 〃 | 〃 | −9 | −0.5 | −10 | 80 | 85 | −15 | −9 | | | −3 | 1 | 80 | PG = 40 dB ($f$ = 455 kc) | | | 25 | 2.8 | 30 | 12A | |
| ★ | 〃 357 | 〃 | Conv. Mix | 〃 | −9 | −0.5 | −10 | 80 | 85 | −15 | −9 | | | −3 | 1 | 70 | CG = 40 dB ($f$ = 1.5Mc) | | | 30 | 1.8 | 30 | 12A | |
| ★ | 〃 358 | 〃 | RF | 〃 | −75 | −1 | −50 | 225 (放熱板付) | 85 | −12 | −12 | | | −9 | 1 | 90 | | | | 40 | 2.5 | 35* | 64 | |
| | 〃 359 | 三洋 | 〃 | Ge. Me | −20 | −0.4 | −20 | 270 | 85 | −15 | −20 | | | −6 | 5 | 30 | | | | 300* | 3.5 | 75 | 84B | |
| ★ | 〃 360 | 三菱 | 〃 | Ge. DB | −20 | −0.5 | −10 | 80 | 85 | −30 | −20 | | | −6 | 1 | 70 | | | | 110 | 2.3 | 85 | 13A | |
| ★ | 〃 361 | 〃 | RF. Conv Mix. Osc | 〃 | −20 | −0.5 | −10 | 80 | 85 | −30 | −20 | | | −6 | 1 | 70 | | | | 125 | 2.3 | 80 | 13A | |