

# 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.

型 名	社 名	用 途	構 造	最大 定 格 ( $T_a=25^{\circ}\text{C}$ )					電 気 的 特 性 ( $T_a=25^{\circ}\text{C}$ )										外 形	備 考	
				$V_{CBO}$ (V)	$V_{CES}$ (V)	$I_C$ (mA)	$P_C$ (mW)	$T_j$ ( $^{\circ}\text{C}$ )	$I_{CBO}$ 最大値 ( $\mu\text{A}$ )	$V_{CE}$ (V)	直流又はパルス $h_{FE}$ $I_C$ (mA)	バイアス $V_{CE}$ (V)	$h_{FE}$ $h_{FE}^*$	$h_{ie}$ $h_{ie}^*$ ( $\Omega$ )	$h_{re}$ $h_{re}^*$ ( $\times 10^{-4}$ )	$h_{oe}$ $h_{oe}^*$ ( $\mu\text{S}$ )	$f_{\alpha b}$ $f_{\alpha b}^*$ (Mc)	$C_{ob}$ (pF)			$r_{bb'}$ $r_{bb'}(\text{real})^*$ ( $\Omega$ )
1	2	3	4	5					6	7		8				9			10	11	12

- 1 TYPE NUMBER
- 2 ORIGINAL MANUFACTURER
- 3 USES
- 4 MATERIAL AND STRUCTURE
- 5 MAXIMUM RATINGS
- 6  $I_{cso}$  MAXIMUM VALUE AND  $V_{ce}$  VALUE (CRITERIA FOR MEASURING  $I_{cso}$ )
- 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  $V_{ce}$ ,  $I_E$  (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 <sub>a</sub> = 25℃)					電 気 的 特 性 (T <sub>a</sub> = 25℃)														外 形	備 考
					V <sub>CB0</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)	P <sub>C</sub> (mW)	T <sub>J</sub> (℃)	I <sub>CB0</sub> 最大値		直 流 又 は パ ル ス h <sub>FE</sub>		バ イ ア ス		h <sub>fe</sub>	h <sub>ie</sub> * (Ω)	h <sub>re</sub> * (×10 <sup>-4</sup> )	h <sub>ob</sub> * (μU)	f <sub>β</sub> * (Mc)	C <sub>ob</sub> (pF)	τ <sub>ββ</sub> h <sub>ie</sub> (real)* (Ω)			
										(μA)	V <sub>CE</sub> (V)	I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	I <sub>E</sub> (mA)	h <sub>FE</sub> *										
★	2SA106	富士通	Conv. Mix Osc	Ge. D	-6	-0.5	-10	80	85	-10	-6			-3	1	50	PG = 28 dB (f = 1.5Mc)	30	3	50	13A				
★	" 107	"	IF	"	-6	-0.5	-10	80	85	-10	-6			-3	1	40	PG = 40 dB (f = 455kc)	20	3	50	13A				
★	" 108	"	RF	"	-20	-0.5	-10	80	85	-10	-12			-9	1	70	PG = 17 dB (f = 20 Mc)	50	2.3	50	13A	2S108			
★	" 109	"	"	"	-20	-0.5	-10	80	85	-10	-12			-9	1	60	PG = 15 dB (f = 20 Mc)	45	2.3	50	13A	2S109			
★	" 110	"	Conv	"	-20	-0.5	-10	80	85	-10	-12			-9	1	60	PG = 20 dB (f = 12 Mc)	40	2.3	50	13A	2S110			
★	" 111	"	Osc	"	-20	-0.5	-10	80	85	-10	-12			-9	1	40	V <sub>osc</sub> = 0.4 V (f = 12 Mc)	30	2.3	50	13A	2S111			
★	" 112	"	Mix	"	-20	-0.5	-10	80	85	-10	-12			-9	1	45	PG = 15 dB (f = 12 Mc)	20	2.3	50	13A	2S112			
★	" 113	"	Conv. Mix	"	-34	-1	-10	80	85	-7	-12			-12	1	45	CG = 40 dB (f = 1 Mc)	20	2	50	13A				
★	" 114	"	IF	"	-34	-1	-10	80	85	-7	-12			-12	1	40	PG = 39 dB (f = 455kc)	20	2	50	13A				
★	" 115	"	RF	"	-34	-1	-10	80	85	-5	-12			-12	1	60	PG = 28 dB (f = 1.5Mc)	30	2	50	13A				
★	" 116	"	"	"	-30	-0.5	-10	80	85	-10	-12			-12	1.5	60	PG = 15 dB (f = 50 Mc)	120	2	50	13A				
★	" 117	"	Osc	"	-30	-0.5	-10	80	85	-10	-12			-12	1.5	40	V <sub>osc</sub> = 0.25V (f = 60.7Mc)	110	2	50	13A				
★	" 118	"	Mix	"	-30	-0.5	-10	80	85	-10	-12			-12	1.5	60	PG = 15 dB (f = 50 Mc)	100	2	50	13A				
★	" 121	ソニー	RF. Conv Mix. Osc	Ge. GD	-15		-2	15	65	-8	-15			-6	1	-0.96*	50 *	5 *	0.25 *	100	1.3		18	2S173 2T201	
★	" 122	"	"	"	-15		-2	15	65	-8	-15			-6	1	-0.96*	50 *	5 *	0.25 *	100	1.3		18	2T201	
★	" 123	"	"	"	-15		-2	15	65	-8	-15			-6	1	-0.96*	50 *	5 *	0.25 *	100	1.3		18	2T201	
★	" 124	"	"	"	-15		-2	15	65	-8	-15			-6	1	-0.97*	50 *	5 *	0.25 *	120	1.3		18	2S138	
★	" 125	"	"	"	-15		-2	15	65	-2	-15			-6	1	-0.98*	40 *	5 *	0.25 *	120	1.3		18	2S139	
★	" 126	日電	SW	Ge. Me	-12	-1	-50	150	100	-5	-5	40	-0.5	-10	-3	10	t <sub>r</sub> = 22nS, t <sub>f</sub> = 65nS t <sub>r</sub> = 28nS, t <sub>f</sub> = 45nS			300 *		5	49C		
★	" 127	東芝	RF	Ge. D	-70	-0.5	-50	150	75	-50	-12			-6	1	-0.98*				25	15	40	13A		
★	" 128	"	SW	"	-40	-2	-600	170	75	-50	-12	35	-1.5	-600	-6	1	t <sub>r</sub> = 0.35μS, t <sub>f</sub> = 1.1μS t <sub>r</sub> = 0.8μS			>15	<25	<70	13A		
★	" 129	"	"	"	-40	-2	-600	170	75	-50	-12	70	-1.5	-600	-6	1	t <sub>r</sub> = 0.35μS, t <sub>f</sub> = 1.1μS t <sub>r</sub> = 0.8μS			>15	<25	<70	13A		
★	" 130	日立	RF. Conv	Ge. Me	-9	-0.5	-10	80	85	-15	-9			-3	1	80	PG = 19 dB (f = 12 Mc)	65	4	55	13A				
★	" 131	"	Osc	"	-9	-0.5	-10	80	85	-15	-9			-3	1	50				45	4	60	13A		
★	" 132	"	Mix	"	-9	-0.5	-10	80	85	-15	-9			-3	1	80	CG = 25 dB (f = 12 Mc)	50	4	70	13A				
★	" 133	"	IF	"	-9	-0.5	-10	80	85	-15	-9			-3	1	60	PG = 39 dB (f = 455kc)	40	4	110	13A				
★	" 134	"	"	"	-20	-0.5	-10	80	85	-30	-20			-6	1					140	3	100	72A		
★	" 135	"	RF. Conv	"	-20	-0.5	-10	80	85	-30	-20			-6	1					150	3	80	72A		
★	" 136	富士通	Conv	Ge. A	-6	-0.5	-10	80	85	-10	-6			-3	1	75	CG = 25 dB (f = 1.5Mc)	10	13	85	12A				
★	" 137	"	IF	"	-6	-0.5	-10	80	85	-10	-6			-3	1	50	PG = 28 dB (f = 455kc)	5	13	75	12A				