

# 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 <sub>b</sub> =25°C)					電気的特性 (T <sub>b</sub> =25°C)										外形	備考
				V <sub>ceo</sub> (V)	V <sub>ceo</sub> (V)	I <sub>c</sub> (mA)	P <sub>c</sub> (mW)	T <sub>j</sub> (°C)	I <sub>ceo</sub> 最大値 (μA)	直流又はパルスI <sub>BE</sub>		バイアス		h <sub>FE</sub>	h <sub>FE</sub> h <sub>FE</sub> * (Ω)	h <sub>FE</sub> h <sub>FE</sub> * (×10 <sup>-4</sup> )	h <sub>FE</sub> h <sub>FE</sub> * (μS)	f <sub>αB</sub> f <sub>r</sub> * (Mc)		
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<sub>CBO</sub> MAXIMUM VALUE AND V<sub>CB</sub> VALUE (CRITERIA FOR MEASURING I<sub>CBO</sub>)
- 7 STANDARD VALUE OF DC/PULSE h<sub>FE</sub> AND V<sub>CE</sub>, I<sub>C</sub> (CRITERIA FOR MEASURING DC/PULSE h<sub>FE</sub>)
- 8 STANDARD VALUE OF h PARAMETERS AND BIAS V<sub>CB</sub>, I<sub>E</sub> (CRITERIA FOR MEASURING h PARAMETERS)

- \* INDICATES VALUE IN GROUNDED-BASE OPERATION, OTHERWISE VALUE IN EMITTER-GROUNDED OPERATION.
  - 9 f<sub>αB</sub> OF RF CHARACTERISTIC, EXCEPT IN CASE OF \* WHICH INDICATES VALUE OF f<sub>r</sub>.
  - 10 C<sub>ob</sub> AND r<sub>bb'</sub> OF RF CHARACTERISTICS EXCEPT IN CASE OF \* IN r<sub>bb'</sub> COLUMN WHICH INDICATES VALUE OF h<sub>ie</sub> (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>c</sub> = 25°C)					電 気 的 特 性 (T <sub>c</sub> = 25°C)													外 形	備 考				
				V <sub>CB0</sub> (V)	V <sub>EBO</sub> (V)	I <sub>C</sub> (mA)	P <sub>C</sub> (mW)	T <sub>J</sub> (°C)	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>fb</sub> *	h <sub>ie</sub> h <sub>ib</sub> * (Ω)	h <sub>re</sub> h <sub>rb</sub> * (×10 <sup>-4</sup> )	h <sub>oe</sub> h <sub>ob</sub> * (μΩ)	f <sub>β</sub> f <sub>T</sub> * (Mc)	C <sub>ob</sub> (pF)	r <sub>bb</sub> h <sub>ie</sub> (real)* (Ω)						
									(μA)	V <sub>CE</sub> (V)	V <sub>CE</sub> (V)	I <sub>C</sub> (mA)	V <sub>CB</sub> (V)	I <sub>E</sub> (mA)										h <sub>ie</sub>	h <sub>re</sub>	h <sub>oe</sub>	
★ 2SB 68	日立	SW	Ge. A	-105	-50	-100	50	85	-14	-2.5	60	-0.35	-5											84 A	2N398		
" 69	東芝	PA	Ge. D	-60	-1	-6A	25W (T <sub>c</sub> =25°C)	75	-330	-12	70	-1.5	-1A	-1.5	500							1			102		
★ " 70	松下	AF	Ge. A	-30	-10	-10	125	75	-12	-10				-2	0.5	30	2200	9	23		f <sub>β</sub> = 15kc				20	OC 70	
★ " 71	"	"	"	-30	-10	-10	125	75	-12	-10				-2	3	50	800	5.4	80		f <sub>β</sub> = 15kc				20	OC 71	
★ " 73	日立	LN	"	-10	-10	-2	20	85	-7	-10				-4	0.5	65	3900	3.8	11.8			NF < 6dB (f = 1kc)			12A	2N220	
★ " 74	"	AF	"	-16	-0.5	-15	80	85	-6	-12				-6	1	48									12A	2S148 HJ 62	
★ " 75	"	"	"	-25	-12	-100	150	85	-14	-30	65	-1.5	-50	-6	1	55	1750	3	17.5	2					12A	2SD75 とコンパリ	
★ " 75A	"	"	"	-45	-12	-100	150	85	-25	-45	65	-1.5	-50	-6	1	55	1750	3	17.5	2					12A		
★ " 76	"	"	"	-12	-2.5	-100	150	85	-14	-12	65	-1.5	-50	-6	1	55	1750	3	17.5	2					12A	2N406	
★ " 77	"	PA	"	-25	-12	-100	150	85	-14	-25	85	-1	-50	-6	1	70	1900	3.8	26	2					12C	2SD77 とコンパリ	
★ " 77A	"	"	"	-45	-12	-100	150	85	-25	-45	85	-1	-50	-6	1	70	1900	3.8	26	2					12C	2SD77A とコンパリ	
★ " 78	"	"	"	-12	-2.5	-100	150	85	-14	-12	85	-1.5	-50	-6	1	70									12A	2N408 HJ 51	
★ " 79	"	"	"	-25	-12	-150	250	85	-16	-30	70	-1	-150												70	2S 91 HJ34A	
★ " 80	"	"	"	-25	-10	-1A	4 W (T <sub>c</sub> =41°C)	85	-100	-12	70	-1.5	-0.5A													101	2S177 HJ 36
★ " 81	"	"	"	-80	-12	-0.5A	2 W (T <sub>c</sub> =25°C)	85	-50	-50	45	-2	-100	-6	100	40	40	6	1200	0.5	40					101	2S177 HJ 47
★ " 82	"	"	"	-100	-12	-0.5A	2 W (T <sub>c</sub> =25°C)	85	-35	-50	40	-2	-100	-6	100	40	40	6	1200	0.5	40					101	2S177 HJ 47
★ " 83	"	"	"	-40	-10	-3A	11W (T <sub>c</sub> =80°C)	91	-3mA	-40	70	-1.5	-0.7A													103	2N301
★ " 84	"	"	"	-60	-10	-3A	11W (T <sub>c</sub> =80°C)	91	-3mA	-60	70	-1.5	-0.7A													103	2N301A
★ " 85	"	"	"	-40	-20	-10A	50W (T <sub>c</sub> =25°C)	91	-3mA	-40	30	-1.5	-4A													103	HS102
★ " 86	"	"	"	-60	-20	-10A	50W (T <sub>c</sub> =25°C)	91	-3mA	-60	30	-1.5	-4A													103	HS102
★ " 87	"	"	"	-80	-60	-10A	50W (T <sub>c</sub> =25°C)	91	-3mA	-80	30	-1.5	-4A													103	HS102
★ " 88	"	"	"	-100	-60	-10A	50W (T <sub>c</sub> =25°C)	91	-3mA	-100	30	-1.5	-4A													103	HS102
★ " 89	"	"	"	-25	-12	-150	250	85	-16	-25	70	-1	-150	-6	1	55	1800	3.3	20							71A	
★ " 89A	"	"	"	-45	-12	-150	250	85	-50	-45	70	-1	-150	-6	1	55	1800	3.3	20							71A	
★ " 90	東芝	AF	"	-18	-12	-5	40	75	-14	-18				-6	1	70	30*	3.5*	0.4*		> 1	12				5	
★ " 91	"	PA	"	-18	-12	-30	40	75	-14	-18	70	-1	-30	-6	1						> 1					5	
★ " 92	松下	"	"	-32	-10	-125	125	75	-12	-10	50	-1	I <sub>B</sub> = -2mA	-6	10						0.35					16	OC 72
★ " 93	"	AF	"	-30		-10	125	75	-12	-20				-2	3	90										20	MC 75
★ " 94	東芝	PA	"	-25	-12	-50	150	75	-14	-25	80	-1	-50	-6	1						1	35				12A	2S 56
★ " 95	"	"	"	-25	-12	-50	150	75	-14	-30	60	-1	-50													12A	

2SB