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# 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 ( $T_c=25^\circ\text{C}$ )					電気的特性 ( $T_c=25^\circ\text{C}$ )										外形	備考	
				$V_{ce0}$ (V)	$V_{be0}$ (V)	$I_c$ (mA)	$P_c$ (mW)	$T_c$ ( $^\circ\text{C}$ )	$I_{c0}$ 最大値 ( $\mu\text{A}$ )	直流又はパルス $I_{cE}$		バイアス		$h_{FE}$	$h_{ie}$	$h_{re}$	$h_{oe}$	$f_{\alpha}$			$C_{ob}$
				$V_{ce}$ (V)	$I_c$ (mA)	$V_{ce}$ (V) $I_c$ (mA)		$V_{ce}$ (V) $I_c$ (mA)	$h_{FE}$ *	$h_{ie}$ ( $\Omega$ )	$h_{re}$ ( $\times 10^{-4}$ )	$h_{oe}$ ( $\mu\text{S}$ )	$f_{\alpha}$ (Mc)	$C_{ob}$ (pF)	$r_{bb'}$ ( $\Omega$ )						
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  $I_{cB0}$  MAXIMUM VALUE AND  $V_{cB}$  VALUE (CRITERIA FOR MEASURING  $I_{cB0}$ )
- 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 <sub>a</sub> = 25°C)					電 気 的 特 性 (T <sub>a</sub> = 25°C)											外 形	備 考		
				V <sub>CE0</sub> (V)	V <sub>BE0</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)	V <sub>CEB</sub> (V)	直流又はバリス hFE		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>αB</sub> f <sub>T</sub> * (Mc)			C <sub>ob</sub> (pF)	r <sub>bb</sub> ' h <sub>ie</sub> (real)* (Ω)
											V <sub>CE</sub> (V)	I <sub>C</sub> (mA)	V <sub>CEB</sub> (V)	I <sub>E</sub> (mA)									
★ 2SC1931	富士通	Diff	Si.EP	16	3	30	150/unit	175	0.1	10	80	3	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (3V, 10mA)	8000*	0.45	50*	263		
★ "	1932	"	"	16	3	30	200/unit	175	0.1	10	80	3	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (3V, 10mA)	8000*	0.45	50*	264A		
"	1933	"	"	15	3	40	200/unit	175	0.1	10	80	3	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (3V, 20mA)	6000*	0.65	50*	263		
"	1934	"	"	20	3	80	200/unit	175	0.1	10	80	1	5	30	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-30	ΔV <sub>BE</sub> < 30mV, γΔV <sub>BE</sub> < 60μV/°C (5V, 30mA)	6000*	0.9	50*	285	
★ "	1935	"	RF	15	3	30	250	175	0.1	10	80	6	10		6	-20		6000*	0.4	25*	284		
★ "	1936	"	Diff	15	3	30	200/unit	175	0.1	10	80	6	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (6V, 10mA)	6000*	0.6	50*	263		
★ "	1937	"	RF	15	3	70	300	175	0.1	10	80	6	40		6	-40		6000*	0.7	20*	284		
★ "	1938	"	Diff	15	3	30	200/unit	175	0.1	10	80	6	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (6V, 10mA)	6000*	0.6	50*	264B		
★ "	1939	"	"	15	3	30	200/unit	175	0.1	10	80	6	10	h <sub>FE1</sub> /h <sub>FE2</sub> = 0.6 ~ 1.0	6	-20	ΔV <sub>BE</sub> < 20mV, γΔV <sub>BE</sub> < 60μV/°C (6V, 20mA)	6000*	0.6	50*	264A		
"	1940	日電	PA	120	5	50	1W	150	0.1	120	200	10	10		10	-10		120*	2.3		278	2SA915 とコンプリ	
"	1941	"	"	160	5	50	1W	150	0.1	160	200	10	10		10	-10		120*	2.3		278	2SA916 とコンプリ	
"	1942	日立	SW	1500	6	3A	50W (T <sub>c</sub> = 25°C)	150	10	600						5	-200	t <sub>j</sub> < 1μs	5*	90	15	102	水平偏向用
"	1943	三菱	PA	35	4	400	3W (T <sub>c</sub> = 25°C)	175	100	15	50	10	100					P <sub>o</sub> = 0.4W (f = 470MHz, V <sub>CE</sub> = 13.5V, P <sub>i</sub> = 30mW)				255	
"	1944																						
"	1945	三菱	PA	80	5	6A	20W (T <sub>c</sub> = 25°C)	150	100	30	50	10	100					P <sub>o</sub> = 16W, η = 70% (f = 27MHz, V <sub>CE</sub> = 12V, P <sub>i</sub> = 0.5W)				301A	
"	1946	"	"	35	4	7A	50W (T <sub>c</sub> = 25°C)	175	2mA	25	50	10	200					P <sub>o</sub> = 32W, η = 70% (f = 175MHz, V <sub>CE</sub> = 13.5V, P <sub>i</sub> = 6W)				272	
"	1947	"	"	35	4	1A	10W (T <sub>c</sub> = 25°C)	175	500	25	50	10	100					P <sub>o</sub> = 4W, η = 60% (f = 175MHz, V <sub>CE</sub> = 13.5V, P <sub>i</sub> = 0.3W)				84B	
"	1948	日電	RF.LN	Si.E	15	3	20	150	200	1	8	8	10	8	10	-10		G <sub>re</sub> = 8.5dB (8V, 10mA, 4GHz)	8000*	C <sub>re</sub> 0.3		339	
"	1949	"	"	"	30	3	130	580	200	0.1	20	100	5	50	5	-50		S <sub>21c</sub>   <sup>2</sup> = 9.2dB (5V, 50mA, 1GHz)	2700*	C <sub>re</sub> 1		306	
"	1950	"	RF.PA	"	28	3	200	5W (T <sub>c</sub> = 25°C)	200	0.5	10	40	6	100	6	-100		S <sub>21c</sub>   <sup>2</sup> = 4dB (f = 1GHz, V <sub>CE</sub> = 6V, I <sub>C</sub> = 100mA)	4000*	C <sub>re</sub> 1.5	25*	311	
"	1951	ソニー	RF	"	120	5	100	750	120	0.2	100	150	5	3	10	-20		A <sub>re</sub> = 8dB (f = 100MHz)			C <sub>e</sub> = 45pS	259	2SA917 とコンプリ
"	1952	日電	RF.LN	"	45	3	300	800	200	0.1	20	80	10	50	15	-50		G <sub>re</sub> = 18dB (15V, 50mA, 200MHz)	2000*	2		84B	
"	1953	松下	AF.PA	"	150	5	100	1W	150	1	100	65-450	5	10	10	-10			200*			222	2SA914 とコンプリ
"	1954	富士通	RF	Si.EP	25	3	150	450	150	1	20	100	10	25	10	-25			1500*	2	35*	138	
"	1955	東芝	PA	"	35	3.5	800	7.5W (T <sub>c</sub> = 25°C)	175	1mA	15	>10	5	500				P <sub>o</sub> = 3.2W (f = 175MHz, V <sub>CE</sub> = 13.5V, P <sub>i</sub> = 0.15W)				<15	84B
★ "	1956	"	"	"	35	3.5	3.5A	35W (T <sub>c</sub> = 25°C)	175	1mA	15	50	5	1A				P <sub>o</sub> = 17W (f = 175MHz, V <sub>CE</sub> = 12.5V, P <sub>i</sub> = 1.3W)					135
"	1957	日電	"	Si.E	75	4	1A	750	150	1	40	90	10	500	10	-150		P <sub>o</sub> = 1.8W, η > 60% (V <sub>CE</sub> = 12V, f = 27MHz, P <sub>i</sub> = 35mW)	250*	14	14	225	
"	1958																						
"	1959	東芝	AF.SW	Si.E	35	5	500	500	150	0.1	35	70-240	1	100	6	-20			300*	7		138	2SA562 とコンプリ
"	1960	富士通	SW	Si.EP	20	4	200	300	150	0.4	15	60	1	10				f <sub>c</sub> = 4nS, t <sub>f</sub> = 9nS t <sub>sig</sub> = 6nS				275	