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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 $h_{FE}$		バイアス		$h_{FE}$	$h_{ie}$ $h_{ie}^*$ ( $\Omega$ )	$h_{re}$ $h_{re}^*$ ( $\times 10^{-4}$ )	$h_{oe}$ $h_{oe}^*$ ( $\mu\text{S}$ )	$f_{\alpha b}$ $f_{\alpha b}^*$ (Mc)		
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  $I_{CBO}$  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 ( $T_a = 25^\circ\text{C}$ )					電 気 的 特 性 ( $T_a = 25^\circ\text{C}$ )											外 形	備 考						
				$V_{CB0}$ (V)	$V_{EBO}$ (V)	$I_C$ (mA)	$P_C$ (mW)	$T_j$ ( $^\circ\text{C}$ )	$I_{CBO}$ 最大値		直流又はパルス $h_{FE}$		バ イ ア ス		$h_{fe}$ $h_{fe}^*$	$h_{ie}$ $h_{ie}^*$ ( $\Omega$ )	$h_{re}$ $h_{re}^*$ ( $\times 10^{-4}$ )	$h_{oc}$ $h_{oc}^*$ ( $\mu\text{U}$ )	$f_{ab}$ $f_T^*$ (Mc)			$C_{ob}$ (pF)	$r_{bb}$ $r_{bb}(\text{real})^*$ ( $\Omega$ )				
									$\mu\text{A}$	$V_{CB}(V)$	$V_{CE}(V)$	$I_C(\text{mA})$	$V_{CB}(V)$	$I_E(\text{mA})$										$h_{fe}$	$h_{ie}$		
2SA953	日電	AF.PA	Si.E	-60	-5	-300	600	150	-0.1	-60	200	-1	-50	-6	10									138	2SC2002 とコンプリ		
" 954	"	"	"	-80	-5	-300	600	150	-0.1	-80	200	-1	-50	-6	10									138	2SC2003 とコンプリ		
" 955																											
" 956	日電	RF.AF.SW	Si.E	-60	-8	-100	150	125	-0.1	-40	160	-1	-10	-10	10	$t_{on}=100\text{nS}$ , $t_{off}=270\text{nS}$									176		
" 957	サンケン	PA	Si.EMe	-150	-6	-2A	$\frac{30\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-150	100	-10	-0.7A	-12	200										298		
" 958	"	"	"	-200	-6	-2A	$\frac{30\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-200	100	-10	-0.7A	-12	200										298		
" 959	日電	SW	Si.E	-100	-7	-10A	$\frac{100\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-100	30~200	-5	-5A			$t_{on}<1\mu\text{S}$ , $t_{off}<1.5\mu\text{S}$									102		
" 960																											
" 961																											
" 962	東芝	PA	Si.E	-60	-5	-1.5A	1 W	150	-1	-50	70~240	-2	-150	-10	100										249	2SC2194 とコンプリ	
" 963	松下	"	Si.EP	-50	-5	-1.5A	$\frac{10\text{W}}{(T_c=25^\circ\text{C})}$	150	-1	-20	120	-5	-1A	-5	500										236		
★ " 964	日電	"	Si.E	-200	-5	-200	$\frac{10\text{W}}{(T_c=25^\circ\text{C})}$	150	-1	-180	180	-10	-10	-10	10										167C		
" 965	東芝	AF	"	-120	-5	-800	900	150	-0.1	-120	80~240	-5	-100	-5	100										241	2SC2235 とコンプリ	
" 966	"	PA	"	-30	-5	-1.5A	900	150	-0.1	-30	100~320	-2	-500	-2	500										241	2SC2236 とコンプリ	
" 967																											
" 968	東芝	PA	Si.E	-160	-5	-1.5A	$\frac{25\text{W}}{(T_c=25^\circ\text{C})}$	150	-1	-160	70~240	-5	-100	-10	100											268	2SC2238 とコンプリ
" 969	"	"	"	-160	-5	-1.5A	$\frac{25\text{W}}{(T_c=25^\circ\text{C})}$	150	-1	-160	70~240	-5	-100	-10	100											99	2SC2239 とコンプリ
" 970	"	AF.LN	"	-120	-5	-100	300	125	-0.1	-120	200~700	-6	-1	-6	1	$NF < 6\text{ dB}$ ( $f=10\text{Hz}$ , $6\text{V}$ , $100\mu\text{A}$ )	$NF < 2\text{ dB}$ ( $f=1\text{kHz}$ )								138		
" 971	サンケン	PA	Si.EMe	-150	-6	-15A	$\frac{150\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-150	60	-4	-5A	-12	500											102	
" 972	松下	AF	Si.EP	-30	-7	-100	250	135	-1	-10	250	-10	-2	-10	2											138	
" 973	"	RF	"	-60	-5	-50	250	125	-0.1	-30	500	-5	-2	-10	1											138	
" 974																											
" 975																											
" 976																											
" 977	松下	PA	Si.EP	-180	-5	-50	1 W	150	-1	-100	180	-5	-10	-10	10											222	
" 978	三菱	AF.LN.RF	"	-40	-5	-100	200	125	-0.1	-35	150~1200	-6	-1	-6	10	$V_{BO} < 300\text{mV}$ ( $10\text{V}$ , $1\text{mA}$ , $R_G=100\text{k}\Omega$ , $A_o=80\text{dB}$ )										138B	
" 979	"	LN.Diff	"	-100	-5	-50	200/unit	125	-0.1	-70	250~1200	-6	-1	-6	1	$\Delta V_{BE} < 10\text{mV}$ $h_{FE1}/h_{FE2} = 0.8 \sim 1.0$										274A	2素子複合
" 980	サンケン	PA	Si.TMe	-100	-6	-8A	$\frac{80\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-100	>30	-4	-3A	-12	500											102	2SC2260 とコンプリ
" 981	"	"	"	-120	-6	-8A	$\frac{80\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-120	>30	-4	-3A	-12	500											102	2SC2261 とコンプリ
" 982	"	"	"	-140	-6	-8A	$\frac{80\text{W}}{(T_c=25^\circ\text{C})}$	150	-100	-140	>30	-4	-3A	-12	500											102	2SC2262 とコンプリ