DAFTAR PUSTAKA

1. ..... ***"Bahan Ajar Teknik Digital"*** Direktorat Perguruan Tinggi Swasta; Direktorat Jendral Pendidikan Tinggi; Departemen Pendidikan Dan Kebudayaan; Yogyakarta 1999
2. Ian Robertson Sinclair; ***"Elektronika Digital"*** Elek Media Komputindo; Kelompok Gramedia; Jakarta.
3. ..... ***"TTL Data Book National 1976"***
4. ..... ***"Data Sheet Book I"*** Data IC, Linear, TTL dan CMOS; Alih Bahasa Wasito S; Elek Media Komputindo; Kelompok Gramedia; Jakarta.
5. ..... ***"Data Sheet Book I"*** Data IC, Linear, TTL dan CMOS; Alih Bahasa Wasito S; Elek Media Komputindo; Kelompok Gramedia; Jakarta.
6. Wasito S, B Hernawan BSc; ***"Teknik Digit"*** Cetakan Kelima Pebruari 1981; Karya Utama.
7. ..... ***"301 Rangkaian Elektronika"*** Elek Media Komputindo; Kelompok Gramedia; Jakarta.
8. ..... ***"303 Rangkaian Elektronika"*** Elek Media Komputindo; Kelompok Gramedia; Jakarta.

LAMPIRAN

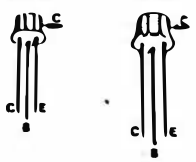
TRANSISTOR AF DAN KEGUNAAN UMUM

Tipe	PNP NPN	max U_{CEO} (V)	max I_C (mA)	P_{max} (mW)	h_{FE}/I_C	(mA)	Komp.	Gb.
BC 107	N	45	100	300	>110	2	BC 177	1
BC 108	N	20					BC 178	1
BC 109	N						BC 179	1
BC 140	N	40	1000	3700	>40	100	BC 160	1
BC 141	N	60					BC 161	1
BC 160	P	40					BC 140	1
BC 161	P	60					BC 141	1
BC 177	P	45	100	300	>70	2	BC 107	1
BC 178	P	25			>110		BC 108	1
BC 179	P	20					BC 109	1
BC 182	N	50	200		>100		BC 212	2
BC 183	N	30					BC 213	2
BC 184	N						BC 214	2
BC 212	P	50			>60		BC 182	2
BC 213	P	30			>80		BC 183	2
BC 214	P				>140		BC 184	2
BC 237	N	45	100		>110		BC 307	2
BC 238	N	20					BC 308	2
BC 239	N		60				BC 309	2
BC 307	P	45	100		>70		BC 237	2
BC 308	P	25					BC 238	2
BC 309	P	20	50				BC 239	2
BC 327	P	45	500	800	>100	100	BC 337	2
BC 328	P	25					BC 338	2
BC 337	N	45					BC 327	2
BC 338	N	25					BC 328	2
BC 414	N	50	100	300	>100	2	–	2
BC 416	P				>120		–	2
BC 516	P	30	400	625	>30.000	20	BC 517	2 1)
BC 517	N						BC 516	2 1)
BC 546	N	65	100	500	>110	2	BC 556	2
BC 547	N	45					BC 557	2
BC 548	N	30					BC 558	2
BC 549	N				>200		–	2
BC 550	N	45					–	2
BC 556	P	65			>75		BC 546	2
BC 557	P	45					BC 547	2
BC 558	P	30					BC 548	2
BC 559	P				>125		–	2
BC 560	P	45					–	2
BC 639	N	80	1000	1000	>40	150	BC 640	3
BC 640	P						BC 639	3

Catatan:
1) darlington
2) max. U_{CEO}:
... A = 60 V
... B = 80 V
... C = 100 V

Tipe	PNP NPN	max U_{CEO} (V)	max I_C (A)	P_{max} (W)	h_{FE}/I_C		Komp.	Gb.
BD 131	N	45	3	15	>40	0,5A	BD 132	4
BD 132	P						BD 131	4
BD 135	N		1	8		0,15A	BD 136	4
BD 136	P						BD 135	4
BD 137	N	60					BD 138	4
BD 138	P						BD 137	4
BD 139	N	80					BD 140	4
BD 140	P						BD 139	4
BD 169	N		1,5	20			BD 170	4
BD 170	P						BD 169	4
BD 183	N		15	117	>20	3 A	–	5
BD 233	N	45	2	25	40	0,15A	BD 234	4
BD 234	P						BD 233	4
BD 235	N	60					BD 236	4
BD 236	P						BD 235	4
BD 237	N	80					BD 238	4
BD 238	P						BD 237	4
BD 239	N	45	2	30		0,2 A	BD 240	6 2)
BD 240	P						BD 239	6 2)
BD 241	N		3	40	>25	1 A	BD 242	6 2)
BD 242	P						BD 241	6 2)
BD 243	N		6	65	>30	0,3 A	BD 244	6 2)
BD 244	P						BD 243	6 2)
BD 245	N		10	80	>40	1 A	BD 246	7 2)
BD 246	P						BD 245	7 2)
BD 249	N		25	125	>25	1,5 A	BD 250	7 2)
BD 250	P						BD 249	7 2)
BD 435	N	32	4	36	>85	0,5 A	BD 436	4
BD 436	P						BD 435	4
BD 437	N	45					BD 438	4
BD 438	P						BD 437	4
BD 439	N	60			>40		BD 440	4
BD 440	P						BD 439	4
BD 441	N	80					BD 442	4
BD 442	P						BD 441	4
BD 643	N	45	8	62,5	>750	3 A	BD 644	7 1)
BD 644	P						BD 643	7 1)
BD 645	N	60					BD 646	7 1)
BD 646	P						BD 645	7 1)
BD 675	N	45	4	40		1,5 A	BD 676	4 1)
BD 676	P						BD 675	4 1)
BD 677	N	60					BD 678	4 1)
BD 678	P						BD 677	4 1)
BD 679	N	80					BD 680	4 1)
BD 680	P						BD 679	4 1)
TIP 31	N	40	3	40	>20	0,5 A	TIP 32	6 2)
TIP 32	P						TIP 31	6 2)
TIP 33	N		10	80			TIP 34	7 2)
TIP 34	P						TIP 33	7 2)
TIP 35	N		25	125	>25	1 A	TIP 36	7 2)
TIP 36	P						TIP 35	7 2)
TIP 41	N		6	65	>20	0,5 A	TIP 42	6 2)
TIP 42	P						TIP 41	6 2)
TIP 122	N	100	8		>1000		TIP 127	6 1)
TIP 127	P						TIP 122	6 1)
TIP 142	N		15	125		5 A	TIP 147	7 1)
TIP 147	P						TIP 142	7 1)
TIP 2955	P	70	15	100	>20	4 A	TIP 3055	7
TIP 3055	N						TIP 2955	7
2N3055	N			115			MJ 2955	5
MJ 2955	P						2N3055	5
2N 2955	*P*	*25*	*100 m*	*0,3*	*>20*	*10 mA*	–	*1*

1 TO-18 TO-39



2 TO-92

3 TO-92Z

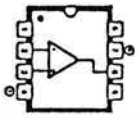
4 TO-126 (SOT-32)

5 TO-3

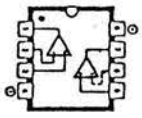
6 TO-220AB

7

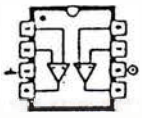
IC LINEAR

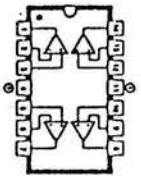
301
318
709
741
CA3130
CA3140
LF355/356/357
TL071/081



1458
4558

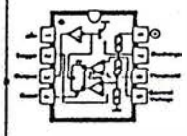


LM387
NE542

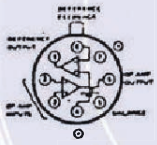


LM324
TL074
TL084

RC4136

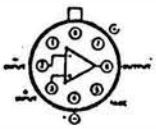
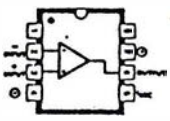


555

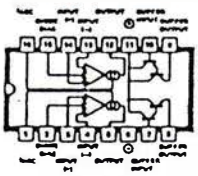


LM10C

CA3080

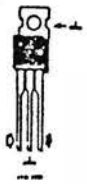
LM13600



Masukan
Keluaran

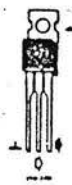
. Seluruh IC tampak atas

REGULATOR TEGANGAN



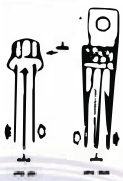
7805
7806
7808
7812
7815
7818
7824

I_{out} = 1 A



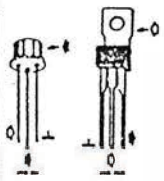
7905
7906
7908
7912
7915
7918
7924

I_{out} = −1 A



78M05
78M06
78M08
78M12
78M15
78M18
78M24

I_{out} = 500 mA



79M05
79M06
79M08
79M12
79M15
79M18
79M24

I_{out} = −500 mA

78L05
78L06
78L08
78L12
78L15
78L18
78L24

I_{out} = 100 mA

79L05
79L06
79L08
79L12
79L15
79L18
79L24

I_{out} = −100 mA

U_{out} = 5 V

LM309K
I_{out} = 1 A

LM323K
I_{out} = 3 A

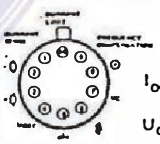
U_{out} = −5 V

I_{out} = −3 A

U_{out} = 1,2 V ... 37 V

LM317K
I_{out} = 1,5 A

LM723



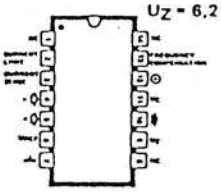
(pes de U_Z)

I_{out} = 200 mA

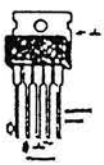
U_{out} = ... 37 $V_{max.}$

U_{ref} = 7,15 V

U_Z = 6,2 V



U_{out} = 2,85 V ... 40 V



L 200
I_{out} = 2 A

Jangkah tegangan kerja

7805 = 8 V ... 35 V	7905 = −8 V ... −35 V
7806 = 9 V ... 35 V	7906 = −9 V ... −35 V
7808 = 11 V ... 35 V	7908 = −11 V ... −35 V
7812 = 15 V ... 35 V	7912 = −15 V ... −35 V
7815 = 18 V ... 35 V	7915 = −18 V ... −35 V
7818 = 21 V ... 35 V	7918 = −21 V ... −35 V
7824 = 27 V ... 40 V	7924 = −27 V ... −40 V

TUP TUN DUG DUS

Umumnya pada rangkaian-rangkaian Elektor, transistor-transistor dan dioda-dioda ditandai dengan 'TUP' (Transistor, Universal PNP), 'TUN' (Transistor, Universal NPN), 'DUG' (Dioda, Universal Germanium) atau 'DUS' (Dioda, Universal Silikon). Ini menunjukkan bahwa sekelompok besar komponen dapat dipakai untuk maksud yang sama, asalkan memenuhi spesifikasi minimum yang didaftarkan dalam tabel 1a dan 1b.

Tabel 1a. Spesifikasi minimum untuk TUP dan TUN.

	type	U_{ceo} max	I_c max	hfe min.	Ptot max	f_T min.
TUN	NPN	20 V	100 mA	100	100 mW	100 MHz
TUP	PNP	20 V	100 mA	100	100 mW	100 MHz

Tabel 1b. Spesifikasi minimum untuk DUG dan DUS.

	type	UR max	I_F max	I_R max	P_{tot} max	C_D max
DUS	Si	25 V	100 mA	1 μA	250 mW	5 pF
DUG	Ge	20 V	35 mA	100 μA	250 mW	10 pF

Tabel 2. Berbagai tipe transistor yang memenuhi spesifikasi TUN.

TUN		
BC 107	BC 208	BC 384
BC 108	BC 209	BC 407
BC 109	BC 237	BC 408
BC 147	BC 238	BC 409
BC 148	BC 239	BC 413
BC 149	BC 317	BC 414
BC 171	BC 318	BC 547
BC 172	BC 319	BC 548
BC 173	BC 347	BC 549
BC 182	BC 348	BC 582
BC 183	BC 349	BC 583
BC 184	BC 382	BC 584
BC 207	BC 383	

Tabel 3. Berbagai tipe transistor yang memenuhi spesifikasi TUP.

TUP		
BC 157	BC 253	BC 352
BC 158	BC 261	BC 415
BC 177	BC 262	BC 416
BC 178	BC 263	BC 417
BC 204	BC 307	BC 418
BC 205	BC 308	BC 419
BC 206	BC 309	BC 512
BC 212	BC 320	BC 513
BC 213	BC 321	BC 514
BC 214	BC 322	BC 557
BC 251	BC 350	BC 558
BC 252	BC 351	BC 559

Huruf setelah nomor tipe menyatakan penguatan arus:

A: α'	(β.hfe)	= 125–260
B: α'		= 240–500
C: α'		= 450–900

Tabel 4. Berbagai tipe dioda yang memenuhi spesifikasi DUS atau DUG.

DUS		DUG
BA 127	BA 318	OA 85
BA 217	BAX 13	OA 91
BA 218	BAY 61	OA 95
BA 221	1N914	AA 116
BA 222	1N4148	
BA 317		

Tabel 5. Spesifikasi minimum untuk keluarga BC 107—108—109 dan BC 177—178—179 (menurut Standar Pro-Electron). Catatan bahwa BC 179 tidak selalu memenuhi spesifikasi TUP (Ic maks = 50 mA).

	NPN	PNP
	BC 107 BC 108 BC 109	BC 177 BC 178 BC 179
U_{ce_0} max	45 V 20 V 20 V	45 V 25 V 20 V
U_{eb_0} max	6 V 5 V 5 V	5 V 5 V 5 V
I_c max	100 mA 100 mA 100 mA	100 mA 100 mA 50 mA
$P_{tot.}$ max	300 mW 300 mW 300 mW	300 mW 300 mW 300 mW
f_T min.	150 MHz 150 MHz 150 MHz	130 MHz 130 MHz 130 MHz
F max	10 dB 10 dB 4 dB	10 dB 10 dB 4 dB

Tabel 6. Berbagai macam persamaan untuk keluarga BC 107—108. Data diberikan oleh Standar Pro-Electron; pabrik-pabrik sering memberi spesifikasi yang lebih baik untuk produk mereka masing-masing.

NPN	PNP	Case	Remarks
BC 107 BC 108 BC 109	BC 177 BC 178 BC 179		
BC 147 BC 148 BC 149	BC 157 BC 158 BC 159		P_{max} = 250 mW
BC 207 BC 208 BC 209	BC 204 BC 205 BC 206		
BC 237 BC 238 BC 239	BC 307 BC 308 BC 309		
BC 317 BC 318 BC 319	BC 320 BC 321 BC 322		I_{cmax} = 150 mA
BC 347 BC 348 BC 349	BC 350 BC 351 BC 352		
BC 407 BC 408 BC 409	BC 417 BC 418 BC 419		P_{max} = 250 mW
BC 547 BC 548 BC 549	BC 557 BC 558 BC 559		P_{max} = 500 mW
BC 167 BC 168 BC 169	BC 257 BC 258 BC 259		169/259 I_{cmax} = 50 mA
BC 171 BC 172 BC 173	BC 251 BC 252 BC 253		251 . . . 253 desah rendah
BC 182 BC 183 BC 184	BC 212 BC 213 BC 214		I_{cmax} = 200 mA
BC 582 BC 583 BC 584	BC 512 BC 513 BC 514		I_{cmax} = 200 mA
BC 414 BC 414 BC 414	BC 416 BC 416 BC 416		desah rendah
BC 413 BC 413	BC 415 BC 415		desah rendah
BC 382 BC 383 BC 384			
BC 437 BC 438 BC 439			P_{max} = 220 mW
BC 467 BC 468 BC 469			P_{max} = 220 mW
	BC 261 BC 262 BC 263		desah rendah