

Type	Construction	P _C Max. (mW)	Typical f _T or *f _i † fab (MHz)	Absolute Max. Ratings				Typical h _{FE} at (mA) (or *h _{fe})	Max I _{CBO} at V _{CB}		Application	Base Ref.
				V _{CB0} (V)	V _{CE0} (V)	V _{EB0} (V)	I _C (mA)		μA	V		
BCY78A	PE	300	200	-32	-32	-5	200	180 at 2	0.02	25	Amplifiers	2
BCY78B	PE	300	200	-32	-32	-5	200	260 at 2	0.02	25		2
BCY78C	PE	300	200	-32	-32	-5	200	360 at 2	0.02	25		2
BCY78D	PE	300	200	-32	-32	-5	200	500 at 2	0.02	25		2
BCY79A	PE	300	200	-45	-45	-5	200	180 at 2	0.02	35		2
BCY79B	PE	300	200	-45	-45	-5	200	260 at 2	0.02	35		2
BCY79C	PE	300	200	-45	-45	-5	200	360 at 2	0.02	35	2	
2N3963	PE	300	220	-80	-80	-5	200	275 at 2	0.01	70	2	
BCY71	PE	300	250	-45	-45	-5	200	50 at 2	0.01	50	2	
BCY72	PE	300	250	-25	-25	-5	200	50 at 2	0.01	25	2	
2N3965	PE	300	250	-60	-60	-5	200	425 at 2	0.01	50	2	
2N2894	PE	360	400	-12	-12	-4	200	25 at 100	0.08	6	2	
2N3209	PE	360	400	-20	-20	-4	200	15 at 100	0.08	6	2	
BC192	PE	400	100	-25	-25	-5	500	90 at 50	0.1	20	2	
BSV46	PE	400	200	-70	-70	-5	500	35 at 10	0.02	50	2	
BSV47A	PE	400	200	-60	-60	-5	500	40 at 10	0.02	50	2	
BSV47B	PE	400	200	-60	-60	-5	500	100 at 10	0.02	50	2	
BSV48A	PE	400	200	-60	-40	-5	500	35 at 10	0.02	50	2	
BSV48B	PE	400	200	-60	-40	-5	500	75 at 10	0.02	50	2	
BSV49A	PE	400	200	-30	-30	-5	500	35 at 10	0.025	20	2	
BSV49B	PE	400	200	-30	-30	-5	500	75 at 10	0.025	20	2	
BSW72	PE	400	200	-40	-25	-5	500	30 at 10	0.1	30	2	
BSW73	PE	400	200	-40	-25	-5	500	70 at 10	0.1	30	2	
BSW74	PE	400	200	-75	-40	-5	500	35 at 10	0.01	50	2	
BSW75	PE	400	200	-75	-40	-5	500	75 at 10	0.01	50	2	
2N2906	PE	400	200	-60	-40	-5	500	35 at 10	0.02	50	2	
2N2906A	PE	400	200	-60	-60	-5	500	40 at 10	0.01	50	2	
2N2907	PE	400	200	-60	-40	-5	500	75 at 10	0.02	50	2	
2N2907A	PE	400	200	-60	-60	-5	500	100 at 10	0.01	50	2	
BSV42	PE	600	200	-70	-70	-5	500	35 at 10	0.02	50	64	
BSV43A	PE	600	200	-60	-60	-5	500	40 at 10	0.02	50	64	
BSV43B	PE	600	200	-60	-60	-5	500	100 at 10	0.02	50	64	
BSV44A	PE	600	200	-60	-40	-5	500	35 at 10	0.02	50	64	
BSV44B	PE	600	200	-60	-40	-5	500	75 at 10	0.02	50	64	
BSV45A	PE	600	200	-30	-30	-5	500	35 at 10	0.025	20	64	
BSV45B	PE	600	200	-30	-30	-5	500	75 at 10	0.025	20	64	
BC327	PE	625	—	—	-45	-5	800	350 at 1	—	—	64	
BC328	PE	625	—	—	-25	-5	800	350 at 1	—	—	64	
BC160-6	PE	750	—	—	-40	-5	1A	70 at 1	—	—	2	
BC160-10	PE	750	—	—	-40	-5	1A	110 at 1	—	—	2	
BC160-16	PE	750	—	—	-40	-5	1A	175 at 1	—	—	2	
BC161-6	PE	750	—	—	-60	-5	1A	70 at 1	—	—	2	
BC161-10	PE	750	—	—	-60	-5	1A	110 at 1	—	—	2	
BC161-16	PE	750	—	—	-60	-5	1A	175 at 1	—	—	2	
BC360-6	PE	800	—	—	-40	-5	500	70 at 5	—	—	2	
BC360-10	PE	800	—	—	-40	-5	500	110 at 5	—	—	2	
BC360-16	PE	800	—	—	-40	-5	500	175 at 5	—	—	2	
BC361-6	PE	800	—	—	-60	-5	500	70 at 5	—	—	2	
BC361-10	PE	800	—	—	-60	-5	500	110 at 5	—	—	2	
BSX40	PE	800	100	-30	-30	-5	500	35 at 10	0.025	25	2	
2N4030	PE	800	100	-60	-60	-5	1A	30 at 5	0.05	50	2	
2N4031	PE	800	100	-80	-80	-5	1A	30 at 5	0.05	60	2	
BSX41	PE	800	150	-30	-30	-5	500	75 at 10	0.025	25	2	
2N4032	PE	800	150	-60	-60	-5	1A	75 at 5	0.05	50	2	
2N4033	PE	800	150	-80	-80	-5	1A	75 at 5	0.05	60	2	
2N2904	PE	800	150	-60	-40	-5	600	75 at 10	0.025	25	2	
2N2904A	PE	800	200	-60	-60	-5	600	40 at 10	0.01	50	2	
2N2905	PE	800	200	-60	-40	-5	600	75 at 10	0.02	50	2	
2N2905A	PE	800	200	-60	-60	-5	600	100 at 10	0.01	50	2	

Silicon PNP Transistors

Type	Construction	P _C Max. (mW)	Typical f _T or *f _T † fab (MHz)	Absolute Max. Ratings				Typical h _{FE} at (mA) (or *h _{FE})	Max I _{CB0} at V _{CB}		Application	Base Ref.
				V _{CB0} (V)	V _{CE0} (V)	V _{EBO} (V)	I _C (mA)		μA	V		

MULLARD

Replacement Types

BCY49	AJ	250	—	-15	-15	-15	20	—	—	—	Low-level chopper	2
BFW87	PE	300	100	-60	-60	-5	500	110 at 10	0.1	50	General purpose	43
BFW88	PE	300	100	-60	-60	-5	500	55 at 10	0.1	50		43
BFW89	PE	300	100	-40	-40	-5	500	110 at 10	0.1	30		43
BFW90	PE	300	100	-40	-40	-5	500	55 at 10	0.1	30		43
BFW91	PE	300	100	-20	-20	-5	500	55 at 50	0.1	15		43
2N1131	PE	600	60	-50	-35	-5	600	45 at 10	1	30	Switching	2
2N1132	PE	600	60	-50	-35	-5	600	90 at 10	1	30		2
2N3133	PE	600	200	-50	-35	-4	600	120 at 150	0.05	30		2
2N3134	PE	600	200	-50	-35	-4	600	300 at 150	0.05	30		2

Current Types

BCW29R	PE	200	150	-30	-20	—	100	120‡ at 2	—	—	Micro-miniature	53
BCW30R	PE	200	150	-30	-20	—	100	215‡ at 2	—	—		53
BCW69R	PE	200	150	-50	-45	—	100	120‡ at 2	—	—		53
BCW70R	PE	200	150	-50	-45	—	100	215‡ at 2	—	—		53
BC157	PE	220	130	-50	-45	-5	100	140 at 2	0.1	20	A. F. driver	43
BC158	PE	220	130	-30	-25	-5	100	140 at 2	0.1	20	General purpose	43
BC159	PE	220	130	-25	-20	-5	100	230 at 2	0.1	20	A. F. input	43
BCY30	AJ	250	1.2	-64	-64	-45	50	25* at 1	0.05	6	General purpose	2
BCY33	AJ	250	1.5	-32	-32	-16	50	25* at 1	0.05	6		2
BCY31	AJ	250	1.7	-64	-64	-45	50	35* at 1	0.05	6		2
BCY34	AJ	250	2.4	-32	-32	-16	50	35* at 1	0.05	6		2
BCY32	AJ	250	2.5	-64	-64	-32	50	35* at 1	0.05	6		2
BSV68	PE	250	50‡	-110	-100	—	100	30‡ at 25	—	—	Switching	2
BF450	PE	250	325	-40	-40	—	25	60‡ at 1	—	—	R. F. amplifiers	49
BF451	PE	250	325	-40	-40	—	25	30‡ at 1	—	—		49
BF324	PE	250	550	-30	-30	—	25	25‡ at 4	—	—		50
BSS68	PE	300	50	-110	-100	—	100	30‡ at 25	—	—	Switching	50
BC557	PE	300	150	-50	-45	—	200	75* at 2	—	—	General purpose	50
BC558	PE	300	150	-30	-25	—	200	75‡ at 2	—	—		50
BC559	PE	300	150	-25	-20	—	200	125* at 2	—	—		50
BCX17	PE	310	100	-50	-30	—	500	100‡ at 100	—	—	Micro-miniature	54
BCX18	PE	310	100	-45	-25	—	500	100‡ at 100	—	—		54
BCY71	PE	350	200	-45	-45	—	200	100‡ at 10	—	—	General purpose	2
BCY72	PE	350	200	-25	-25	—	200	50‡ at 10	—	—		2
BCY70	PE	350	250	-50	-40	—	200	50‡ at 10	—	—		2
BFX37	PE	360	0.01	-60	-60	-6	50	200 at 1	—	—	Amplifiers	2
2N2906	PE	400	200	-60	-40	-5	600	80 at 150	0.02	50	High speed switching	2
2N2906A	PE	400	200	-60	-60	-5	600	80 at 150	0.01	50		2
2N2907	PE	400	200	-60	-40	-5	600	200 at 150	0.02	50		2
2N2907A	PE	400	200	-60	-60	-5	600	200 at 150	0.01	50		2
BCY38	AJ	410	1.5*	-32	-32	-12	250	20 at 150	0.1	6	General purpose	2
BCY39	AJ	410	1.5*	-64	-64	-12	250	30 at 150	0.1	6		2
BCY54	AJ	410	2*	-50	-50	-12	250	40 at 150	0.1	6		2
BCY40	AJ	410	2.5*	-32	-32	-12	250	67 at 150	0.1	6		2
BFX30	PE	600	—	-65	-65	-5	600	90 at 10	0.05	50		2
BFX29	PE	600	100	-60	-60	—	600	50‡ at 10	—	—	2	
BFX87	PE	600	100	-50	-50	-4	600	90 at 150	0.5	1	2	
BFX88	PE	600	100	-40	-40	-4	600	90 at 150	0.5	1	2	
2N2904	PE	600	200	-60	-40	-5	600	120 at 150	0.02	50	High speed switching	2
2N2904A	PE	600	200	-60	-60	-5	600	120 at 150	0.01	50		2
2N2905	PE	600	200	-60	-40	-5	600	300 at 150	0.02	50		2
2N2905A	PE	600	200	-60	-60	-5	600	300 at 150	0.01	50		2
BC327	PE	625	100	-50	-45	—	1A	100‡ at 100	—	—		50
BC328	PE	625	100	-30	-25	—	1A	100‡ at 100	—	—	General purpose	50
BCX35	PE	880	100	-80	-80	—	600	90 at 150	—	—		43
BCX36	PE	880	100	-60	-60	—	600	90 at 150	—	—		43
BCX37	PE	880	100	-40	-40	—	600	90 at 150	—	—		43

Continued