

Silicon NPN Transistors

Type	Con- struction	P <sub>c</sub> Max. (mW)	Typical f <sub>T</sub> or *f <sub>1</sub> † fab (MHz)	Absolute Max. Ratings				Typical h <sub>FE</sub> at (mA) (or *h <sub>FE</sub> )	Max I <sub>CBO</sub> at V <sub>CB</sub>		Application	Base Ref.
				V <sub>CB0</sub> (V)	V <sub>CE0</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)		μA	V		
ZT1481 } 2N1481 }	DJ	5W†	1.5††	60	40	12	1.5A	35‡ at 200	10	60	Switching	2
ZT1482 } 2N1482 }	DJ	5W†	1.5††	100	55	12	1.5A	35‡ at 200	10	100		2
2N3439	DJ	5W	20	450	350	10	1A	100 at 0.02	—	—	General purpose	2
2N3440	DJ	5W	20	300	250	10	1A	100 at 0.02	—	—		2
BSV64	PE	5W	60	100	60	—	5A	20 at 5	—	—		2
ZT90	PE	5W†	60‡	60	60	6	1A	100‡ at 200	0.1	60	Power amplifiers	2
ZT91	PE	5W†	60‡	120	100	6	1A	40‡ at 200	1	120		2
ZT92	PE	5W†	60‡	120	100	6	1A	65‡ at 200	1	120	2	
ZT93	PE	5W†	60‡	120	80	6	1A	40‡ at 150	1	120	2	
ZT94	PE	5W†	60‡	60	45	7	1A	30‡ at 200	1	60	2	
ZT95	PE	5W†	60‡	60	60	6	1A	30‡ at 350	0.1	60	2	
ZT2120 } 2N2120 }	PE	5W†	60‡	120	65	6	1A	40‡ at 150	1	120	High performance amplifiers	2
ZT2270 } 2N2270 }	PE	5W†	60‡	60	60	7	1A	50‡ at 150	0.1	60		Low noise amplifiers
BFX34	PE	5W†	80	120	60	—	5A	60 at 500	—	—	General purpose	2
2N3553	PE	7W†	500‡	65	40	4	1A	2.5W out, 0.25W in at 175MHz	—	—		2
ZT2876 } 2N2876 }	P	7.5W†	200	80	60	4	2.5A	10W out, at 50MHz	0.1	80	A.M., F.M., C.W.	16
2N4041	PE	7.5W†	—	60	40	4	500	3.3W out, 1W in at 400MHz	—	—		41
2N4430	PE	10W†	—	55	40	3.5	1A	2.5W out, 75mW in at 1GHz	—	—		41
ZT3375	PE	11.6W†	500‡	65	40	4	1.5A	7.5W out, 1W in at 50MHz	—	—	V.H.F. power amplifiers	41
2N4040	PE	17.5W†	—	60	40	4	1A	8W out, 3W in at 400MHz	—	—		41
2N4431	PE	18W†	—	55	40	3.5	2A	5W out, 1.6W in at 1GHz	—	—	A.M., F.M., C.W.	41
2N4127	PE	20W†	—	60	40	4	1.5A	12W out, 1.9W in at 150MHz	—	—		41
BUY80	PE	20W†	60	150	60	—	5A	60 at 500	—	—	General purpose	2
2N4000	PE	20W†	60	100	80	—	3A	80 at 500	—	—		2
2N4001	PE	20W†	60	120	100	—	3A	80 at 500	—	—	2	
BUX34	PE	20W†	80	120	60	—	5A	60 at 500	—	—		2
2N3632	PE	23W†	—	65	40	4	3A	13.5W out, 3.5W in at 175MHz	—	—	A.M., F.M., C.W.	38
2N3733	PE	23W†	—	65	40	4	3A	14.5W out, 4W in at 260MHz	—	—		38
BUY81	PE	24W†	60	150	60	—	7.5A	60 at 1A	—	—		2
2N3441	DJ	25W†	0.65	160	140	4	3A	50 at 500	—	—	General purpose	1
ZT1701 } 2N1701 }	DJ	25W†	1††	60	40	6	2.5A	20‡ at 300	100	60		3
ZT1483 } 2N1483 }	DJ	25W†	1.25††	60	40	12	3A	20‡ at 750	15	60	High power switching	3
ZT1484 } 2N1484 }	DJ	25W†	1.25††	100	55	12	3A	20‡ at 750	15	100		3
ZT1485 } 2N1485 }	DJ	25W†	1.25††	60	40	12	3A	35‡ at 750	15	60	3	
ZT1486 } 2N1486 }	DJ	25W†	1.25††	100	55	12	3A	35‡ at 750	15	100	3	
BUY82	PE	30W†	60	150	60	—	10A	60 at 1.5A	—	—		2
2N3418	PE	30W†	60	85	60	—	5A	40 at 500	—	—	General purpose	2
2N3419	PE	30W†	60	125	80	—	5A	40 at 500	—	—		2
2N3420	PE	30W†	60	85	60	—	5A	80 at 500	—	—	2	
2N3421	PE	30W†	60	125	80	—	5A	80 at 500	—	—		2
2N4128	PE	35W†	—	60	40	4	3A	35‡ at 750	15	—	Switching	41
2N3583	DJ	35W†	10	250	175	10	2A	10‡ at 1A	—	—		1
2N3584	DJ	35W†	10	375	250	10	2A	62 at 1A	—	—	General purpose	1
2N3585	DJ	35W†	10	500	300	10	2A	62 at 1A	—	—		1
BU217	PE	60W†	60	150	60	—	10A	60 at 500	—	—		1
ZT1487 } 2N1487 }	DJ	75W†	1††	60	40	10	6A	15 at 1.5A	25	60	High power switching	1
ZT1488 } 2N1488 }	DJ	75W†	1††	100	55	10	6A	15 at 1.5A	25	100		1

Continued

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				V <sub>CB0</sub> (V)	V <sub>CE0</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)		μA	V		

**JOSEPH LUCAS (ELECTRICAL) Ltd (Continued)**

*Current Types (Continued)*

DT1322	DJ	5W	2.5	100	60	12	1.5A	80 at 200	—	—	} General purpose	2
2N6263	DJ	20W	0.8	140	120	7	3A	60 at 500	—	—		51
DT3312	DJ	25W	0.8	90	55	7	4A	62 at 500	—	—		51
DT3313	DJ	25W	0.8	160	140	7	3A	62 at 500	—	—		51
2N3054	DJ	25W	0.8	90	55	7	4A	63 at 500	—	—		51
2N3441	DJ	25W	0.8	160	140	7	3A	63 at 500	—	—		51
2N6260	DJ	29W	—	50	40	5	3A	60 at 1.5A	—	—		51
DT4305	DJ	30W	3	400	300	5	5A	30 at 3A	—	—		1
DT4306	DJ	30W	3	500	375	5	5A	30 at 3A	—	—		1
DT6105	DJ	50W	5	400	300	5	10A	30 at 3A	—	—		5
DT6106	DJ	50W	5	500	375	5	10A	30 at 3A	—	—		5
DT4613	DJ	100W	—	160	140	7	10A	45 at 3A	—	—		1
DT4643	DJ	100W	—	160	140	7	16A	37 at 8A	—	—		1
DT4652	DJ	100W	—	100	60	7	20A	37 at 10A	—	—		1
DT4660	DJ	100W	—	50	40	5	30A	37 at 15A	—	—		1
2N4347	DJ	100W	—	140	120	7	5A	37 at 2A	—	—		1
2N5157	DJ	100W	—	700	500	6	3.5A	60 at 1A	—	—		1
DT4612	DJ	100W	0.8	100	60	7	15A	45 at 4A	—	—		1
DT4424	DJ	100W	2.5	—	500	6	3.5A	60 at 1A	—	—		1
DT4425	DJ	100W	2.5	—	500	6	3.5A	60 at 1A	—	—		1
DT4423	DJ	100W	4	400	400	5	3.5A	60 at 1A	—	—		1
2N3902	DJ	100W	4	—	400	5	3.5A	60 at 1A	—	—		1
2N6253	DJ	115W	—	55	45	5	15A	45 at 3A	—	—		1
2N3055	DJ	115W	0.8	100	60	7	15A	45 at 4A	—	—		1
2N3442	DJ	117W	—	160	140	7	10A	45 at 3A	—	—		1
2N4348	DJ	120W	—	140	120	7	10A	37 at 5A	—	—		1
2N5241	DJ	125W	—	400	400	5	5A	25 at 2.5A	—	—		1
DT4430	DJ	125W	4	400	400	5	5A	30 at 2.5A	—	—		1
DT4431	DJ	125W	4	400	400	5	5A	25 at 2.5A	—	—		1
2N3771	DJ	150W	—	50	40	5	30A	37 at 15A	—	—		1
2N3772	DJ	150W	—	100	60	7	20A	37 at 10A	—	—		1
2N3773	DJ	150W	—	160	140	7	16A	37 at 8A	—	—		1
2N6257	DJ	150W	—	50	40	5	20A	40 at 8A	—	—		1
2N2580	DJ	150W	—	400	400	5	10A	25 at 5A	—	—		5
2N2581	DJ	150W	—	400	400	5	10A	45 at 10A	—	—		5
2N2582	DJ	150W	—	500	500	5	10A	25 at 5A	—	—	5	
2N2583	DJ	150W	—	500	500	5	10A	45 at 10A	—	—	5	
2N3079	DJ	150W	—	200	200	5	5A	30 at 5A	—	—	5	
2N3080	DJ	150W	—	300	300	5	5A	30 at 5A	—	—	5	

† Minimum value

**MULLARD**

*Replacement Types*

BF167	PE	130	350	40	30	—	25	—	—	—	—	TV video I.F. stages	2
2N918	PE	200	900	30	15	3	50	20 at 3	0.01	15	—	U.H.F. amps/osc.	20
BF173	PE	260	550	40	25	4	—	—	—	—	—	TV video I.F. output	2
2N929	PE	300	50	45	45	5	30	225 at 10	0.01	45	—	Low noise amplifiers	2
2N930	PE	300	80	45	45	5	30	400 at 10	0.01	45	—	Amplifiers	2
BFW57	PE	300	80	80	60	6	500	115 at 100	0.5	80	} General purpose	43	
BFW58	PE	300	80	80	60	6	500	70 at 100	0.5	80		43	
BFW59	PE	300	80	40	35	6	500	115 at 100	0.5	40		43	
BFW60	PE	300	80	40	35	6	500	70 at 100	0.5	40		43	
BLY55	—	4W	250	40	20	4	1A	60 at 200	—	—	—	V.H.F. amplifiers	38
BU105	—	7W	—	1,500	—	6	2A	—	—	—	—	TV line deflection	1
BLY35	—	12W	250	66	33	4	7.5A	—	—	—	—	A.M. Class B	38
BLY36	—	12W	250	40	20	4	7.5A	—	—	—	—	F.M. Class B	38
BDY10	AD	130W	1	50	40	4	2A	30 at 2A	30	50	} A.F. amplifiers	1	
BDY11	AD	130W	1	100	70	4	2A	30 at 2A	30	100		1	

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				$V_{CBO}$ (V)	$V_{CEO}$ (V)	$V_{EBO}$ (V)	$I_C$ (mA)		$\mu A$	V			
40851	—	45W	1	—	350	—	3A	12 $\ddagger$ at 1.2A	—	—	Regulators	1	
2N5490	H	50W	0.8	—	40	—	7A	60 at 2A	—	—	General purpose	52	
2N5491	H	50W	0.8	—	40	—	7A	60 at 2A	—	—		52	
2N5492	H	50W	0.8	—	55	—	7A	60 at 2.5A	—	—		52	
2N5493	H	50W	0.8	—	55	—	7A	60 at 2.5A	—	—		52	
2N5494	H	50W	0.8	—	40	—	7A	60 at 3A	—	—		52	
2N5495	H	50W	0.8	—	40	—	7A	60 at 3A	—	—		52	
2N5496	H	50W	0.8	—	70	—	7A	60 at 3.5A	—	—		52	
2N5497	H	50W	0.8	—	70	—	7A	60 at 3.5A	—	—		52	
2N6261	H	50W	0.8	—	80	—	3A	62 at 1.5A	—	—		1	
40324	H	50W	0.8	—	35	—	3A	70 at 1A	10	15		Driver	1
40325	H	50W	0.8	—	35	—	9A	36 at 8A	—	—	Class B audio output	1	
40624	H	50W	0.8	—	45	—	6.5A	60 at 2.5A	—	—	Audio output	52	
40627	H	50W	0.8	—	55	—	6.5A	60 at 2.5A	—	—		52	
60632	H	50W	0.8	—	60	—	6.5A	60 at 3A	—	—		52	
40816	H	50W	0.8	—	45	—	6.5A	92 at 2A	—	—		52	
40911	H	50W	0.8	—	80	—	3A	62 at 1.5A	0.5	80	General purpose	1	
2N3441	H	50W	1.2	—	140	—	2A	62 at 500	—	—		1	
2N6263	H	50W	1.2	—	120	—	2A	60 at 500	—	—		1	
2N6264	H	50W	1.2	—	150	—	2A	40 at 1A	—	—		1	
40373	H	50W	1.2	—	140	—	2A	62 at 500	—	—		1	
40912	H	50W	1.2	—	120	—	2A	60 at 500	—	—		1	
40913	H	50W	1.2	—	150	—	2A	40 at 1A	—	—		1	
40411	H	70W	0.8	—	90	—	3A	67 at 4A	—	—		Audio output	1
40636	H	70W	0.8	—	95	—	9A	45 at 4A	—	—		Amplifiers	1
BD278	H	75W	0.8	—	45	—	8A	45 at 4A	—	—		General purpose	52
2N1487	H	75W	0.8	—	40	—	4A	30 at 1.5A	25	30	D.C./D.C. converter	1	
2N1488	H	75W	0.8	—	55	—	4A	30 at 1.5A	25	30	Regulators	1	
2N1489	H	75W	0.8	—	40	—	4A	50 at 1.5A	25	30	Amplifiers	1	
2N1490	H	75W	0.8	—	55	—	4A	50 at 1.5A	25	30	Actuators	1	
2N6098	H	75W	0.8	—	60	—	8A	50 at 4A	—	—	General purpose	52	
2N6099	H	75W	0.8	—	60	—	8A	50 at 4A	—	—		52	
2N6100	H	75W	0.8	—	70	—	8A	50 at 5A	—	—		52	
2N6101	H	75W	0.8	—	70	—	8A	50 at 5A	—	—		52	
2N6102	H	75W	0.8	—	40	—	8A	37 at 8A	—	—		52	
2N6103	H	75W	0.8	—	40	—	8A	37 at 8A	—	—		52	
40369	H	75W	0.8	—	55	—	4A	50 at 1.5A	10	30		Actuator	1
40884	H	75W	0.8	—	65	—	8A	70 at 4A	—	—		Audio output	52
BU106	—	75W	3	—	140	—	10A	8 $\ddagger$ at 4A	—	—		TV frame output	1
2N3263	—	84W	20	—	90	—	25A	50 at 15A	—	—		High current	—
2N3264	—	84W	20	—	60	—	25A	50 at 15A	—	—	—		
BUX16	PE	100W	5	—	200	—	4A	50 at 400	—	—	General purpose	1	
BUX16A	PE	100W	5	—	250	—	4A	50 at 400	—	—		1	
BUX16B	PE	100W	5	—	300	—	4A	50 at 400	—	—		1	
BUX16C	PE	100W	5	—	350	—	4A	50 at 400	—	—		1	
2N5239	PE	100W	5	—	225	—	4A	50 at 2A	—	—		1	
2N5240	PE	100W	5	—	300	—	4A	50 at 2A	—	—		1	
2N5838	—	100W	5	—	250	—	4A	24 at 3A	—	—		Fast switching	1
2N5839	—	100W	5	—	275	—	4A	30 at 2A	—	—			1
2N5840	—	100W	5	—	350	—	4A	30 at 2A	—	—			1
410	—	100W	5	—	200	—	4A	60 at 1A	—	—			1
411	—	100W	5	—	300	—	4A	60 at 1A	—	—	Inverter	1	
413	—	100W	5	—	325	—	4A	50 at 500	—	—		1	
423	—	100W	5	—	325	—	4A	60 at 1A	—	—		1	
431	—	100W	5	—	325	—	4A	25 at 2.5A	—	—		1	
40852	—	100W	5	—	350	—	4A	12 $\ddagger$ at 1.2A	—	—	Regulators	1	
BU120	—	100W	6	—	200	—	10A	65 at 1A	—	—	Fast switching	1	
2N5804	—	110W	15	—	225	—	7A	55 at 5A	—	—		1	
2N5805	—	110W	15	—	300	—	7A	55 at 5A	—	—		1	
40840	—	110W	15	—	300	—	7A	55 at 4A	—	—		1	
40853	—	110W	15	—	300	—	7A	10 $\ddagger$ at 5A	—	—		Regulators	1

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