

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(sat)</sub>		f <sub>T</sub>	C <sub>ob</sub>	N.F.
			P <sub>d</sub> (mW)	I <sub>C</sub> (mA)	V <sub>CEO</sub> (V)	min	max	I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	max	I <sub>C</sub>			
										(V)	(mA)	(MHz)	(MHz)	(dB)
BC107	N	TO-18	300	100	45	110	450 #	2	5	0.6	100	150	6	10
BC108	N	TO-18	300	100	20	110	800 #	2	5	0.6	100	150	6	10
BC109	N	TO-18	300	100	20	110	800 #	2	5	0.6	100	150	6	4
BC147	N	TO-92F	350	100	45	110	450 #	2	5	0.6	100	200+	4.5	10
BC148	N	TO-92F	350	100	20	110	800 #	2	5	0.6	100	200+	4.5	10
BC149	N	TO-92F	350	100	20	200	800 #	2	5	0.6	100	200+	4.5	10
BC157	P	TO-92F	350	100	45	110	450 #	2	5	0.3	10	150+	3.5+	10
BC158	P	TO-92F	350	100	25	110	800 #	2	5	0.3	10	150+	3.5+	10
BC159	P	TO-92F	350	100	20	200	800 #	2	5	0.3	10	150+	3.5+	4
BC167	N	TO-92B	300	100	45	110	450 #	2	5	0.6	100	150	4.5	10
BC168	N	TO-92B	300	100	20	110	800 #	2	5	0.6	100	150	4.5	10
BC169	N	TO-92B	300	100	20	200	800 #	2	5	0.6	100	150+	4.5	4
BC171	N	TO-92F	300	100	45	125	500 # *	2	5	0.6	100	150	6	10
BC172	N	TO-92F	300	100	25	125	900 # *	2	5	0.6	100	150	6	10
BC173	N	TO-92F	300	100	25	125	900 # *	2	5	0.6	100	150	6	10
BC174	N	TO-92F	300	100	64	110	800 #	2	5	0.6	100	150	10	10
BC177	P	TO-18	300	100	45	70	450 #	2	5	0.3	10	150	7	10
BC178	P	TO-18	300	100	25	70	800 #	2	5	0.3	10	100	7	10
BC179	P	TO-18	300	100	25	200	800 #	2	5	0.3	10	100	7	4
BC181	P	TO-92F	300	200	25	60	-	2.5	5	0.25	50	150+	4.7+	-
BC182	N	TO-92F	300	200	50	110	450 #	2	5	0.6	100	150	5	10
BC182L	N	TO-92B	300	200	50	110	450 #	2	5	0.6	100	150	5	10
BC183	N	TO-92F	300	200	50	110	800 #	2	5	0.6	100	150	5	10
BC183L	N	TO-92B	300	200	30	110	800 #	2	5	0.6	100	150	5	10
BC184	N	TO-92F	300	200	30	200	800 #	2	5	0.6	100	150	5	4
BC184L	N	TO-92B	300	200	30	200	800 #	2	5	0.6	100	150	5	4
BC212	P	TO-92F	300	200	50	100	400 # *	2	5	0.6	100	100	10	10
BC212L	P	TO-92B	300	200	50	100	400 # *	2	5	0.6	100	100	10	10
BC213	P	TO-92F	300	200	30	100	600 # *	2	5	0.6	100	100	10	10
BC213L	P	TO-92B	300	200	30	100	600 # *	2	5	0.6	100	100	10	10
BC214	P	TO-92F	300	200	30	200	600 # *	2	5	0.6	150	150	10	2
BC214L	P	TO-92B	300	200	30	200	600 # *	2	5	0.6	100	150	10	2
BC224	P	TO-92B	250	30	30	150	450	1	5	0.7	10	150+	3.5+	-
BC237	N	TO-92F	300	100	45	110	450 #	2	5	0.6	100	150	4.5	10
BC238	N	TO-92F	300	100	20	110	800 #	2	5	0.6	100	150	4.5	10
BC239	N	TO-92F	300	100	20	200	800 #	2	5	0.6	100	150	4.5	4
BC250	P	TO-92F	300	100	20	35	800 #	1	1	0.4+	30	100	6	-
BC251	P	TO-92F	300	100	45	125	900 # *	2	5	0.3	10	80	6	10
BC252	P	TO-92F	300	100	25	125	900 # *	2	5	0.3	10	80	6	10
BC253	P	TO-92F	300	100	25	125	900 # *	2	5	0.3	10	80	6	4
BC256	P	TO-92F	300	100	64	125	500 #	2	5	0.5	100	130+	6	10
BC257	P	TO-92B	300	100	45	70	450 #	2	5	0.3	10	130	6	10
BC258	P	TO-92B	300	100	25	70	800 #	2	5	0.3	10	130	6	10
BC259	P	TO-92B	300	100	20	200	800 #	2	5	0.3	10	130	6	4
BC260	P	TO-18	300	100	20	35	600 #	1	1	0.4+	30	100	6	-
BC261	P	TO-18	300	100	45	125	900 # *	2	5	0.3	10	100	6	10
BC262	P	TO-18	300	100	25	125	900 # *	2	5	0.3	10	100	6	10
BC263	P	TO-18	300	100	25	125	900 # *	2	5	0.3	10	100	6	4

# HFE grouping available \* hfe @ 1KHz. + typical value

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(sat)</sub>		f <sub>T</sub>	C <sub>oh</sub>	N.F.
			P <sub>d</sub>	I <sub>C</sub>	V <sub>CEO</sub>			I <sub>C</sub>	V <sub>CE</sub>	max	I <sub>C</sub>			
						(mW)	(mA)					(V)	min	max
BC266	P	TO-18	300	100	64	110	450 #	2	5	0.3	10	150+	6	10
BC267	N	TO-18	400	1000	45	110	450 #	2	5	0.3	100	150	8.6+	3+
BC268	N	TO-18	400	1000	20	110	800 #	2	5	0.3	100	150	8.6+	3+
BC269	N	TO-18	400	1000	30	220	800 #	2	5	0.3	100	150	8.6+	4
BC280	N	TO-18	360	100	40	180	600	1	5	0.7	10	-	2.8+	3
BC282	N	TO-18	400	600	30	50	300	50	5	1	300	100	10	-
BC283	P	TO-18	400	600	30	40	270	50	5	1	300	80+	7	-
BC307	P	TO-92F	300	100	45	70	450 #	2	5	0.3	10	100	6	10
BC308	P	TO-92F	300	100	25	70	800 #	2	5	0.3	10	100	6	10
BC309	P	TO-92F	300	100	20	200	800 #	2	5	0.3	10	100	6	4
BC315	P	TO-92F	300	100	35	100	350 #	2	5	0.6	100	200	5+	2
BC315L	P	TO-92B	300	100	35	100	350 #	2	5	0.6	100	200	5+	2
BC317	N	TO-92A	310	150	45	110	450 #	2	5	0.5	100	100	4	6
BC318	N	TO-92A	310	150	30	110	800 #	2	5	0.5	100	100	7	6
BC319	N	TO-92A	310	150	20	200	800 #	2	5	0.5	100	100	4	6
BC320	P	TO-92A	310	150	45	70	450 #	2	5	0.3	10	100	4	6
BC321	P	TO-92A	310	150	30	70	800 #	2	5	0.3	10	100	4	6
BC322	P	TO-92A	310	150	20	200	800 #	2	5	0.3	10	100	4	4
BC330	N	TO-92F	250	30	45	220	- #	2	5	1	10	100	3	2
BC332	N	TO-92F	250	30	45	100	- #	2	5	1	10	100	3	6
BC333	N	TO-92F	310	50	25	100	1000 #	0.1	5	0.6	10	50	4	-
BC334	P	TO-92F	310	50	25	100	1000 #	0.1	5	0.6	10	50	4	-
BC335	N	TO-92F	310	50	25	100	1000 #	0.1	5	0.6	10	50	4	-
BC336	P	TO-92F	310	50	25	100	1000 #	0.1	5	0.6	10	50	4	-
BC347	N	TO-92A	300	100	45	40	450 #	2	5	0.25	10	125	4	10
BC348	N	TO-92A	300	100	30	40	450 #	2	5	0.25	10	125	4	10
BC349	N	TO-92A	300	100	20	40	450 #	2	5	0.25	10	125	4	10
BC350	P	TO-92A	300	100	45	40	450 #	2	5	0.25	10	125	4	10
BC351	P	TO-92A	300	100	30	40	450 #	2	5	0.25	10	125	4	10
BC352	P	TO-92A	300	100	20	40	450 #	2	5	0.25	10	125	4	10
BC357	P	TO-92F	310	100	25	100	500	10	10	0.25	10	200	10	-
BC358	N	TO-92F	310	100	25	100	500	10	10	0.25	10	125	10	-
BC382	N	TO-92F	300	100	45	100	900 #	2	5	0.6	100	150	5	6
BC382L	N	TO-92B	300	100	45	100	900 #	2	5	0.6	100	150	5	6
BC383	N	TO-92F	300	100	30	100	900 #	2	5	0.6	100	150	5	6
BC383L	N	TO-92B	300	100	30	100	900 #	2	5	0.6	100	150	5	6
BC384	N	TO-92F	300	100	30	250	900 #	2	5	0.6	100	150	5	4
BC384L	N	TO-92B	300	100	30	250	900 #	2	5	0.6	100	150	5	4
BC385	N	TO-92F	300	100	45	100	480	2	5	0.6	100	150	5	-
BC386	N	TO-92F	300	100	20	100	850	2	5	0.6	100	150	5	-
BC413	N	TO-92F	300	100	30	180	800 #	2	5	0.6	100	200+	2.7+	2.5
BC414	N	TO-92F	300	100	45	180	800 #	2	5	0.6	100	200+	2.7+	2.5
BC415	P	TO-92F	300	100	35	120	800 #	2	5	0.6	100	200+	2.7+	2
BC416	P	TO-92F	300	100	45	120	800 #	2	5	0.6	100	200+	2.7+	2
BC447	N	TO-92F	625	300	80	50	460 #	2	5	0.25	100	100	-	-
BC448	P	TO-92F	625	300	80	50	460 #	2	5	0.25	100	100	-	-
BC449	N	TO-92F	625	300	100	50	460 #	2	5	0.25	100	100	-	-

# HFE grouping available \* hfe @ 1KHz + typical value

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(max)</sub>		f <sub>T</sub> min	C <sub>ob</sub> max	N.F. max
			P <sub>d</sub> (mW)	I <sub>C</sub> (mA)	V <sub>CEO</sub> (V)	min	max	I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	max (V)	I <sub>C</sub> (mA)			
												(MHz)	(MHz)	(dB)
BC451	N	TO-92F	300	100	45	110	800 #	2	6	-	-	150	4.5	10
BC452	N	TO-92F	300	100	30	110	800 #	2	6	-	-	150	4.5	10
BC453	N	TO-92F	300	100	30	110	800 #	2	6	-	-	150	4.5	4
BC454	P	TO-92F	300	100	45	125	800 #	2	6	-	-	150	6	10
BC455	P	TO-92F	300	100	30	125	800 #	2	6	-	-	150	6	10
BC456	P	TO-92F	300	100	30	125	800 #	2	6	-	-	150	6	4
BC478	P	TO-18	360	150	50	110	450 #	2	5	0.25	10	-	6	6
BC479	P	TO-18	360	150	40	220	450 #	2	5	0.25	10	-	6	4
BC546	N	TO-92F	500	100	65	110	450 #	2	5	0.6	100	300+	4.5	10
BC547	N	TO-92F	500	100	45	110	450 #	2	5	0.6	100	250+	4.5	10
BC548	N	TO-92F	500	100	30	110	800 #	2	5	0.6	100	250+	4.5	10
BC549	N	TO-92F	500	100	30	200	800 #	2	5	0.6	100	250+	4.5	4
BC550	N	TO-92F	500	100	45	200	800 #	2	5	0.6	100	250+	4.5	4
BC556	P	TO-92F	500	100	65	110	450 #	2	5	0.6	100	300+	4.5	10
BC557	P	TO-92F	500	100	45	70	450 #	2	5	0.65	100	180+	3.2+	10
BC558	P	TO-92F	500	100	30	70	800 #	2	5	0.65	100	180+	3.2+	4
BC559	P	TO-92F	500	100	30	110	800 #	2	5	0.65	100	180+	3.2+	4
BC560	P	TO-92F	500	100	45	110	800 #	2	5	0.65	100	180+	3.2+	10
BCX58	N	TO-92F	450	100	32	120	630 #	2	5	0.5	100	125	4.5	6
BCX59	N	TO-92F	450	100	45	120	630 #	2	5	0.5	100	125	4.5	6
BCX78	P	TO-92F	450	100	32	120	630 #	2	5	0.6	100	100	4.5	6
BCX79	P	TO-92F	450	100	45	120	630 #	2	5	0.6	100	100	4.5	6
BCY58	N	TO-18	360	200	32	120	630 #	2	5	0.35	10	125	6	6
BCY59	N	TO-18	360	200	45	120	630 #	2	5	0.35	10	125	6	6
BCY70	P	TO-18	300	200	40	50	-	10	1	0.25	10	250	6	6
BCY71	P	TO-18	350	200	45	100	600	10	1	0.25	10	200	6	2
BCY72	P	TO-18	350	200	25	50	-	10	1	0.25	10	200	6	6
BCY78	P	TO-18	350	200	32	120	630 #	2	5	0.25	10	100	7	6
BCY79	P	TO-18	350	200	45	120	460 #	2	5	0.25	10	100	7	6
KM9011	N	TO-92A	300	100	20	28	198	1	5	0.5	10	150	2.5	-
KM9014	N	TO-92A	300	100	20	72	1000 #	1	5	0.5	10	50	6	2+
KM9015	P	TO-92A	300	100	20	72	1000 #	1	5	0.5	10	50	6	2+
MPS2714	N	TO-92A	350	100	18	75	225	2	4.5	0.3	50	250+	2.5+	-
MPS2716	N	TO-92A	360	100	18	75	225	2	4.5	-	-	-	5	-
MPS2923	N	TO-92A	360	100	25	90	180 *	2	10	-	-	-	12	-
MPS2924	N	TO-92A	360	100	25	150	300 *	2	10	-	-	-	12	-
MPS2925	N	TO-92A	360	200	25	235	470 *	2	10	-	-	-	12	-
MPS2926	N	TO-92A	360	200	18	35	470 # *	2	10	-	-	-	3.5	-
MPS3390	N	TO-92A	360	100	25	400	800	2	4.5	-	-	-	10	-
MPS3391	N	TO-92A	360	100	25	250	500	2	4.5	-	-	-	10	-
MPS3392	N	TO-92A	360	100	25	150	300	2	4.5	-	-	-	10	-
MPS3393	N	TO-92A	360	100	25	90	180	2	4.5	-	-	-	10	-
MPS3395	N	TO-92A	360	100	25	150	500	2	4.5	-	-	-	10	-
MPS3396	N	TO-92A	360	100	25	90	500	2	4.5	-	-	-	10	-
MPS3397	N	TO-92A	360	100	25	55	500	2	4.5	-	-	-	10	-
MPS3398	N	TO-92A	360	100	25	55	800	2	4.5	-	-	-	10	-

# HFE grouping available \* hfe @ 1KHz + typical value

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>		I <sub>C</sub> V <sub>CE</sub>		V <sub>CE(DSAT)</sub>		f <sub>T</sub>	C <sub>ob</sub>	N.F.
			P <sub>d</sub>	I <sub>C</sub>	V <sub>CEO</sub>					max	I <sub>C</sub>			
			(mW)	(mA)	(V)	min	max	(mA)	(V)	(V)	(mA)	(MHz)	(MHz)	(dB)
MPS3608	P	TO-92A	350	500	25	30	-	50	1	1	100	100	20	-
MPS3707	N	TO-92A	360	30	30	100	400	0.1	5	1	10	-	-	-
MPS3708	N	TO-92A	360	30	30	45	660	1	5	1	10	-	-	-
MPS3709	N	TO-92A	360	30	30	45	165	1	5	1	10	-	-	-
MPS3710	N	TO-92A	360	30	30	90	330	1	5	1	10	-	-	-
MPS3711	N	TO-92A	360	30	30	180	660	1	5	1	10	-	12	-
MPS3721	N	TO-92A	360	100	18	60	660	2	10	-	-	-	3.5	-
MPS5172	N	TO-92A	360	100	25	100	500	10	10	0.25	10	-	10	-
MPS6513	N	TO-92A	350	100	30	90	180	2	10	0.5	50	100	3.5	2+
MPS6514	N	TO-92A	350	100	25	150	300	2	10	0.5	50	100	3.5	2+
MPS6515	N	TO-92A	350	100	25	250	500	2	10	0.5	50	100	3.5	2+
MPS6517	P	TO-92A	350	100	40	90	180	2	10	0.5	50	100	4	2+
MPS6518	P	TO-92A	350	100	40	150	300	2	10	0.5	50	100	4	2+
MPS6519	P	TO-92A	350	100	25	250	500	2	10	0.5	50	100	4	2+
MPS6520	N	TO-92A	360	100	25	200	400	2	10	0.5	50	-	3.5	3
MPS6521	N	TO-92A	360	100	25	300	600	2	10	0.5	50	-	3.5	3
MPS6522	P	TO-92A	360	100	25	200	400	2	10	0.5	50	-	3.5	3
MPS6523	P	TO-92A	360	100	25	300	600	2	10	0.5	50	-	3.5	3
MPS6565	N	TO-92A	360	200	45	40	160	10	10	0.4	10	200	3.5	-
MPS6566	N	TO-92A	360	200	45	100	400	10	10	0.4	10	200	3.5	-
MPS6571	N	TO-92A	360	50	20	250	1000	0.1	5	0.5	10	50	4.5	-
MPS6573	N	TO-92A	360	100	35	200	500	10	5	0.5	10	100	12	-
MPS6574	N	TO-92A	360	100	35	100	300 #	1	5	0.5	10	100	12	-
MPS6575	N	TO-92A	360	100	45	200	500	10	5	0.5	10	100	12	-
MPS6576	N	TO-92A	360	100	45	100	300 #	1	5	0.5	10	100	12	-
MPS8097	N	TO-92A	350	200	40	250	700	0.1	5	-	-	250	4	2
MPS8098	N	TO-92A	350	200	60	100	300	1	5	0.3	100	100	6	-
MPS8598	P	TO-92A	350	200	60	100	300	1	5	0.3	100	100	8	-
MPS8599	P	TO-92A	350	200	80	100	300	1	5	0.3	100	150	8	-
MPS9410	N	TO-92A	350	500	12	60	400 #	50	1	0.5	250	200+	4+	-
MPS9411	N	TO-92A	350	500	18	60	400 #	50	1	0.5	250	200+	4+	-
MPS9412	N	TO-92A	350	500	25	60	400 #	50	1	0.5	250	200+	4+	-
MPS9460	P	TO-92A	350	500	12	60	400 #	50	1	0.5	250	150+	4.7+	-
MPS9461	P	TO-92A	350	500	18	60	400 #	50	1	0.5	250	150+	4.7+	-
MPS9462	P	TO-92A	350	500	25	60	400 #	50	1	0.5	250	150+	4.7+	-
MPS9600	N	TO-92A	300	100	12	25	300 #	1	5	0.5	10	50	4	-
MPS9601	N	TO-92A	300	100	18	25	300 #	1	5	0.5	10	50	4	-
MPS9602	N	TO-92A	300	100	30	25	300 #	1	5	0.5	10	50	4	-
MPS9630	N	TO-92A	350	100	12	45	600 #	1	5	0.5	30	-	-	-
MPS9631	N	TO-92A	350	100	18	45	600 #	1	5	0.5	30	-	-	-
MPS9632	N	TO-92A	350	100	30	45	600 #	1	5	0.5	30	-	-	-
MPS9633	N	TO-92A	310	50	30	250	1800 #	2	5	0.5	10	150	3.5	2.5
MPS9634	N	TO-92A	310	50	30	250	1800 #	2	5	0.5	10	150	3.5	2+
MPSA09	N	TO-92A	350	50	50	100	600 #	0.1	5	0.9	10	30	5	-
MPSA10	N	TO-92A	210	100	40	40	400	5	10	-	-	20	4	-
MPSA18	N	TO-92A	350	200	45	500	1500	10	5	0.3	50	100	3	1.5
MPSA20	N	TO-92A	350	100	40	40	400 #	5	10	0.25	10	125	4	-
MPSA70	P	TO-92A	350	100	40	40	400 #	5	10	0.25	10	125	4	-

# HFE grouping available \* hfe @ 1KHz + typical value

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(sat)</sub>		f <sub>T</sub>	C <sub>ob</sub>	N.F.
			P <sub>d</sub>	I <sub>C</sub>	V <sub>CEO</sub>			I <sub>C</sub>	V <sub>CE</sub>	max	I <sub>C</sub>			
						(mW)	(mA)					(V)	min	max
MPSD06	N	TO-92A	350	50	25	50	-	50	5	0.3	50	100	-	-
MPSD56	P	TO-92A	350	50	25	50	-	50	5	0.3	50	100	-	-
PN930	P	TO-92A	300	100	45	100	300	0.01	5	1	10	30	8	3
PN1711	N	TO-92A	300	100	32	100	300	150	10	1.5	150	70	25	-
PN3548	P	TO-92A	300	100	45	100	300	0.01	5	1	10	60	8	4
PN3565	N	TO-92A	300	50	25	150	600	1	10	0.35	1	40	4	-
PN3566	N	TO-92A	600	200	30	150	600	10	10	1	100	40	25	-
PN3694	N	TO-92A	600	30	45	100	450	10	1	0.2+	100	200	6	-
PN4249	P	TO-92A	200	100	60	100	300	0.1	5	0.25	10	50	6	3
PN4250	P	TO-92A	200	100	40	250	700	0.1	5	0.25	10	50	6	2
PN5138	P	TO-92A	300	50	30	50	800	0.1	10	0.3	10	30	7	-
TIS92	N	TO-92F	625	400	40	100	300	50	2	0.25	50	200+	4.2+	-
TIS93	P	TO-92F	625	400	40	100	300	50	2	0.25	50	150+	5+	-
TIS97	N	TO-92F	360	200	40	250	700	0.1	5	0.5	100	200	4	3
TIS98	N	TO-92F	360	200	60	100	300	1	5	0.5	100	200	4	-
2N841	N	TO-18	500	100	45	76	333	5	1	10	50	8	-	-
2N929	N	TO-18	300	1000	45	60	400	10	5	2	10	40	15	-
2N930	N	TO-18	500	30	45	100	300	0.01	5	1	10	30	8	3
2N930A	N	TO-18	500	30	45	100	300	0.01	5	0.5	10	45	6	3
2N2511	N	TO-18	360	200	50	240	750	10	5	1	5	45	6	4
2N2586	N	TO-18	300	100	45	120	360	0.01	5	0.5	10	45	7	3
2N2605	P	TO-18	400	30	45	100	300	0.01	5	0.5	10	30	6	3
2N2714	N	TO-92B	200	100	18	75	225	2	4.5	0.3	50	-	-	-
2N2716	N	TO-92B	200	100	18	75	225	2	4.5	-	-	-	5	-
2N2923	N	TO-92B	200	100	25	90	180	2	10	-	-	-	12	-
2N2924	N	TO-92B	200	100	25	150	300	2	10	-	-	-	12	-
2N2925	N	TO-92B	200	100	25	235	470	2	10	-	-	-	12	-
2N2926	N	TO-92B	200	100	18	35	470	2	10	-	-	-	12	-
2N3390	N	TO-92B	200	100	25	400	800	2	4.5	-	-	-	10	-
2N3391	N	TO-92B	200	100	25	250	500	2	4.5	-	-	120+	10	-
2N3391A	N	TO-92B	200	100	25	250	500	2	4.5	-	-	120+	10	5
2N3392	N	TO-92B	200	100	25	150	300	2	4.5	-	-	120+	10	-
2N3393	N	TO-92B	200	100	25	90	180	2	4.5	-	-	120+	10	-
2N3395	N	TO-92B	200	100	25	150	500	2	4.5	-	-	-	10	-
2N3396	N	TO-92B	200	100	25	90	500	2	4.5	-	-	-	10	-
2N3397	N	TO-92B	200	100	25	55	500	2	4.5	-	-	-	10	-
2N3398	N	TO-92B	200	100	25	55	800	2	4.5	-	-	-	10	-
2N3547	P	TO-18	400	100	60	100	500	1	5	1	10	45	8	5
2N3548	P	TO-18	400	100	45	100	300	0.01	5	1	10	60	8	4
2N3549	P	TO-18	400	100	60	100	500	0.01	5	1	10	60	8	4
2N3550	P	TO-18	400	100	45	200	600	0.01	5	0.5	5	60	8	4
2N3707	N	TO-92B	360	200	30	100	400	0.1	5	1	10	-	-	5
2N3708	N	TO-92B	360	200	30	45	660	1	5	1	10	-	-	-
2N3709	N	TO-92B	360	200	30	45	160	1	5	1	10	-	-	-
2N3710	N	TO-92B	360	200	30	90	330	1	5	1	10	-	-	-
2N3711	N	TO-92B	360	200	30	180	660	1	5	1	10	-	-	-
2N3721	N	TO-92B	200	100	18	60	660	2	10	1	100	100	12	-
2N3798	P	TO-18	360	50	60	150	450	1	5	0.25	1	100	4	3
2N3799	P	TO-18	360	50	60	300	900	1	5	0.25	1	100	4	1.5

# HFE grouping available. \* hfe @ 1KHz + typical value

# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(sat)</sub>		f <sub>T</sub>	C <sub>ob</sub>	N.F.
			P <sub>d</sub>	I <sub>C</sub>	V <sub>CEO</sub>	h <sub>FE</sub>		I <sub>C</sub>	V <sub>CE</sub>	max	I <sub>C</sub>			
						(mW)	(mA)					(V)	min	max
2N3859	N	TO-92B	200	100	30	100	200	2	4.5	0.125	10	90	4	-
2N3860	N	TO-92B	200	100	30	150	300	2	4.5	0.125	10	90	4	-
2N3900	N	TO-92B	360	100	18	250	500	2	4.5	-	-	160+	12	-
2N3901	N	TO-92B	360	100	18	350	700	2	4.5	-	-	200+	10	-
2N3903	N	TO-92A	350	200	40	50	150	10	1	0.3	50	250	4	6
2N3904	N	TO-92A	350	200	40	100	300	10	1	0.3	50	250	4	5
2N3905	P	TO-92A	350	200	40	50	150	10	1	0.4	50	250	4.5	5
2N3906	P	TO-92A	350	200	40	100	300	10	1	0.4	50	250	4.5	4
2N3946	N	TO-18	360	200	40	50	150	10	1	0.3	50	250	4	5
2N3947	N	TO-18	360	200	40	100	300	10	1	0.3	50	300	4	5
2N3962	P	TO-18	360	200	60	100	300	0.01	5	0.25	10	40	6	3
2N3964	P	TO-18	360	200	45	250	500	0.01	5	0.25	10	50	6	2
2N4058	P	TO-92B	360	100	30	100	400	0.1	5	0.7	10	-	-	5
2N4059	P	TO-92B	360	100	30	45	660	1	5	0.7	10	-	-	-
2N4060	P	TO-92B	360	100	30	45	165	1	5	0.7	10	-	-	-
2N4061	P	TO-92B	360	100	30	90	330	1	5	0.7	10	-	-	-
2N4062	P	TO-92B	360	100	30	180	660	1	5	0.7	10	-	-	-
2N4286	N	TO-92B	250	100	25	150	600	1	5	0.35	1	40	6	-
2N4287	N	TO-92B	250	100	45	150	600	1	5	0.35	1	40	6	8
2N4288	P	TO-92B	250	100	25	150	600	1	5	0.35	1	40	8	-
2N4289	P	TO-92B	250	100	45	150	600	1	5	0.35	1	40	8	4
2N4290	P	TO-92B	250	600	20	50	300	100	10	0.4	100	100	10	-
2N4291	P	TO-92B	250	600	30	100	300	100	10	0.4	100	100	10	-
2N4359	P	TO-18	360	50	45	50	600	1	5	-	-	20	6	4
2N4384	N	TO-18	300	50	30	100	500	0.01	5	0.2	10	30	8	2
2N4386	N	TO-18	300	50	30	40	500	0.01	5	0.2	10	30	8	3
2N4410	N	TO-92A	625	250	80	60	400	10	1	0.2	1	60	12	-
2N5086	P	TO-92A	350	50	50	150	500	0.1	5	0.3	10	40	4	3
2N5087	P	TO-92A	350	50	50	250	800	0.1	5	0.3	10	40	4	2
2N5088	N	TO-92A	350	50	30	300	900	0.1	5	0.5	10	50	4	3
2N5089	N	TO-92A	350	50	25	400	1200	0.1	5	0.5	10	50	4	2
2N5172	N	TO-92B	200	100	25	100	500	10	10	0.25	10	-	-	-
2N5209	N	TO-92A	350	50	50	100	300	0.1	5	0.7	10	30	4	4
2N5210	N	TO-92A	350	50	50	200	600	0.1	5	0.7	10	30	4	3
2N5219	N	TO-92A	350	100	15	35	500	2	10	0.4	10	150	4	-
2N5223	N	TO-92A	350	100	20	50	800	2	10	0.7	10	150	4	-
2N5227	P	TO-92A	350	50	30	50	700	2	10	0.4	10	100	5	-
2N5249	N	TO-92B	330	100	50	400	800	2	5	0.125	10	200+	4	3
2N5310	N	TO-92B	360	100	50	100	300	0.01	5	0.125	10	-	4	-
2N5825	N	TO-92F	360	100	40	100	200	2	5	0.125	10	90	4	-
2N5826	N	TO-92F	360	100	40	150	300	2	5	0.125	10	90	4	-
2N5827	N	TO-92F	360	100	40	250	500	2	5	0.125	10	90	4	-
2N5828	N	TO-92F	360	100	40	400	800	2	5	0.125	10	90	4	-
2SA495	P	TO-92B	200	100	30	70	240 #	10	1	1	10	100	7	-
2SA545	P	TO-92B	400	200	60	50	232 #	50	1	0.9	10	150+	-	-



# Low Level and General Purpose Amplifiers

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(sat)</sub>		f <sub>r</sub> min	C <sub>ob</sub> max	N.F. max
			P <sub>d</sub> (mW)	I <sub>C</sub> (mA)	V <sub>CEO</sub> (V)	min		I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	max	I <sub>C</sub> (mA)			
												(MHz)	(MHz)	(dB)
2SA561	P	TO-92B	300	150	50	70	400 #	20	1	0.3	10	70+	13+	-
2SA564	P	TO-92B	250	50	25	65	700 #	2	5	0.4	50	150+	3.2+	2+
2SA564A	P	TO-92B	250	50	45	65	700 #	2	5	0.4	50	150+	3.2+	2+
2SA640	P	TO-92B	250	50	45	100	700 #	0.5	3	0.3	20	60	10	3
2SA641	P	TO-92B	250	50	45	100	700 #	0.5	3	0.3	20	60	10	-
2SA666	P	TO-92B	250	50	25	130	700 #	2	5	0.4	50	80+	-	16
2SA666A	P	TO-92B	250	50	45	130	700 #	2	5	0.4	50	80+	-	16
2SA673A	P	TO-92B	400	500	50	60	320 #	10	3	0.4	100	-	-	-
2SA721	P	TO-92B	150	50	35	180	1040 #	2	5	0.6	100	250+	-	-
2SA722	P	TO-92B	150	50	55	180	1040 #	2	5	0.6	100	250+	-	-
2SA888	P	TO-92A	350	50	25	65	700 #	2	5	0.5	50	100+	2.7+	-
2SA889	P	TO-92A	350	50	45	65	700 #	2	5	0.5	50	100+	2.7+	-
2SA1015	P	TO-92B	400	150	50	70	400	2	6	0.3	100	80	7	10
2SA1715	P	TO-92B	300	200	50	90	800	1	6	0.3	100	200+	6.5+	20
2SB637K	P	TO-92B	300	100	50	160	800	2	12	0.5	100	200+	1.8	-
2SC372	N	TO-92B	200	100	30	70	240 #	2	12	0.4	10	80	3.5	-
2SC373	N	TO-92B	200	100	30	200	400 #	2	12	0.4	10	80	3.5	-
2SC380	N	TO-92B	200	30	30	40	240 #	2	12	1.3	10	100	3.2	-
2SC454	N	TO-92B	200	100	30	60	320	2	12	1.1	10	230+	3.5	-
2SC536	N	TO-92B	200	100	20	40	850 #	1	6	-	-	-	6	-
2SC537	N	TO-92B	200	100	-	40	850 #	1	6	-	-	-	6	-
2SC644	N	TO-92B	150	50	25	130	700 #	2	5	0.4	50	75	10	3
2SC693	N	TO-92B	100	50	-	100	850 #	1	6	-	-	90	6	-
2SC734	N	TO-92B	300	150	50	70	400 #	20	1	0.25	100	80	10	-
2SC735	N	TO-92B	300	400	30	70	240 #	100	1	0.25	100	100	10	-
2SC828	N	TO-92B	250	50	25	65	700 #	2	5	0.4	50	150+	2.5+	2+
2SC828A	N	TO-92B	250	50	45	65	700 #	2	5	0.4	50	150+	2.5+	2+
2SC858	N	TO-92B	100	50	12	100	850 #	1	6	-	-	90	6	-
2SC900	N	TO-92B	250	100	35	225	1000 #	0.5	3	0.3	100	50	5	4
2SC923	N	TO-92B	250	100	35	225	1000 #	0.5	3	0.3	100	50	5	20
2SC945	N	TO-92B	250	100	50	90	600 #	1	6	0.3	100	150	5	15
2SC1000	N	TO-92B	200	100	50	200	700 #	2	6	0.3	10	80+	2.5	10
2SC1213A	N	TO-92B	400	500	50	60	320 #	10	3	0.4	100	-	-	-
2SC1222	N	TO-92B	250	100	45	150	1000 #	0.5	3	0.3	10	60	3.2+	3
2SC1327	N	TO-92B	150	50	35	180	1040 #	2	5	0.6	100	250+	-	-
2SC1328	N	TO-92B	150	100	35	180	1040 #	2	5	0.6	100	150+	3.2+	4
2SC1330	N	TO-92B	400	100	40	60	400 #	1	6	0.5	30	50	6	-
2SC1675	N	TO-92B	250	30	30	40	180 #	1	6	0.3	10	150	2.2	-
2SC1684	N	TO-92B	250	100	25	90	650 #	2	10	0.5	100	150+	3.5+	-
2SC1685	N	TO-92B	250	100	50	90	650 #	2	10	0.5	100	150+	3.5+	-
2SC1815	N	TO-92B	400	150	50	70	700 #	6	2	0.25	100	80	3.5	-
2SC1849	N	TO-92A	350	100	25	90	650 #	2	10	0.5	100	-	-	-
2SC1850	N	TO-92A	350	100	50	90	650 #	2	10	0.5	100	-	-	-
2SC2458	N	TO-92B	200	150	50	70	700 #	6	2	0.25	100	80	3.5	-
2SC2603	N	TO-92B	300	200	50	90	800	1	6	0.3	100	200+	2.5+	15

# HFE grouping available \* hfe @ 1KHz + typical value