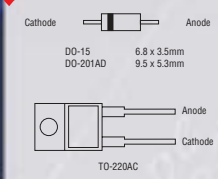
SEMICONDUCTORS DISCRETE DEVICES

New New



Fast recovery diodes
page 427

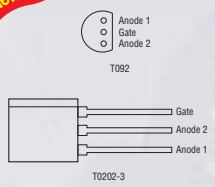
New New

Schottky power diodes
page 428

Extended range

Isolated tab triacs
page 430

New New



General purpose triacs
page 430

Extended range

Diacs
page 403

Extended range

Thyristors
page 430

Base Number	Device	Order Code	Page Number
1	CRD-E1.5mA	47-2600	427
1	CRD-F1.5mA	47-2630	427
1	1B02	47-3182	428
1	1B04	47-3184	428
1	1B06	47-3186	428
1	1B08	47-3188	428
1	1N914	47-3116	427
1	1N4001	47-3130	427
1	1N4002	47-3132	427
1	1N4003	47-3134	427
1	1N4004	47-3136	427
1	1N4005	47-3138	427
1	1N4006	47-3140	427
1	1N4007	47-3142	427
1	1N4148	47-3308	427
1	1N5338B	47-2288	426
1	1N5339B	47-2290	426
1	1N5341B	47-2292	426
1	1N5342B	47-2294	426
1	1N5344B	47-2298	426
1	1N5346B	47-2300	426
1	1N5347B	47-2302	426
1	1N5348B	47-2304	426
1	1N5349B	47-2306	426
1	1N5352B	47-2310	426
1	1N5353B	47-2312	426
1	1N5401	47-3144	427
1	1N5402	47-3146	427
1	1N5404	47-3148	427
1	1N5406	47-3150	427
1	1N5408	47-3152	427
1	1N5820	47-2546	428
2	CRD-E2.0mA	47-2602	427
2	W02	47-3192	428
2	2KBP02	47-3200	428
2	BZYC2V7	47-3000	426
2	2KBP04	47-3202	428
2	2SK1119	47-0304	437
2	2SB817	81-0342	435
2	2SB1037	81-0298	435
2	2SD1047	81-0340	435
2	2SD1047	81-0340	435
2	2SK1058/2SJ162	47-0386	437
2	2SA1085E	81-0294	432
2	2SA1208	81-0344	437
2	2SA1208	81-0344	437
2	2SA1209	81-0352	437
2	2SA1209	81-0352	437
2	2SA1216	81-0322	435
2	2SA1294	81-0330	435
2	2SA1295	81-0288	435
2	2SA1386	81-0338	435
2	2SD1459	81-0296	435
2	2SB1560	81-0334	435
2	2SA1606	81-0356	435
2	2SA1606	81-0356	435
2	2SB1650	81-0334	435
2	2SA1668	81-0302	434
2	2SA1673	81-0350	435
2	2SA1943	81-0292	435
2	2SD2390	81-0332	435
2	2SD2390	81-0332	435
2	2SC2547E	81-0304	431
2	2N2905	81-0258	432
2	2N2905A	81-0260	432
2	2N2907A	81-0262	432
2	2SC2910	81-0346	437
2	2SC2910	81-0346	437
2	2SC2922	81-0320	435
2	2N3053	81-0264	431
2	2N3055	81-0266	433
2	2N3055H	81-0268	433
2	2SC3263	81-0328	435
2	2SC3264	81-0286	435
2	2SC3519	81-0336	435
2	2N3704	81-0272	431
2	2N3705	81-0274	431
2	2N3819	47-3344	436
2	2N3904	81-0278	431
2	2N3906	81-0280	432
2	2SC4159	81-0358	435
2	2SC4159	81-0358	435
2	2SC4382	81-0300	433
2	2SC4388	81-0348	435
2	2N4401	81-0282	431
2	2N4403	81-0284	432
2	2N5060	47-3266	430
2	2N5061	47-3268	430
2	2SC5200	81-0290	435
2	2N6027	47-3348	436
2	2N7000	47-0180	436
3	DB3	47-3412	430
3	BZYC3V0	47-3002	426
3	BZYC3V3	47-3004	426
3	CRD-E3.5mA	47-2606	427
3	CRD-F3.5mA	47-2636	427
3	BZYC3V6	47-3006	426
3	BZYC3V9	47-3008	426
3	BZT03C7V5	47-2200	426
3	BZT03C8V2	47-2202	426
3	BZT03C9V1	47-2204	426
3	BZT03C10	47-2206	426
3	BZT03C12	47-2208	426
3	BZT03C15	47-2210	426
3	BZT03C18	47-2214	426
3	BZT03C20	47-2216	426
3	BZT03C22	47-2218	426
3	BZT03C27	47-2222	426
3	BZT03C30	47-2224	426
3	BZT03C36	47-2228	426
3	BZT03C39	47-2230	426
3	BZT03C43	47-2232	426
3	STGP3NB60HD	47-0454	437
4	KBU4D	47-3210	429
4	KBU4J	47-3212	429
4	W04	47-3194	428
4	BZYC4V3	47-3010	426
4	CRD-E4.5mA	47-2608	427
4	CRD-F4.5mA	47-2638	427
4	BZX4V7	47-3054	426
4	BZYC4V7	47-3012	426
5	W005	47-3190	428
5	BZX5V1	47-3056	426
5	BZYC5V1	47-3014	426
5	BZX5V6	47-3058	426
5	BZYC5V6	47-3016	426
5	CRD-E5.6mA	47-2610	427
5	CRD-F5.6mA	47-2640	427
5	VNP5N07	47-0402	437
6	GBU6D	47-2800	429
6	GBU6J	47-2802	429
6	W06	47-3196	428
6	BZYC6V2	47-3018	426
6	BZX6V2	47-3060	426
6	BZX6V8	47-3062	426
6	BZYC6V8	47-3020	426
6	BTA06-600BW	47-3396	430
6	BTA06-600T	47-3390	430
7	VNP7N04	47-0404	437
7	BZX7V5	47-3064	426
7	BZYC7V5	47-3022	426
7	STGP7NB60HD	47-0456	437
8	KBU8D	47-3214	429
8	KBU8K	47-3216	429
8	W08	47-3198	428
8	BZX8V2	47-3066	426
8	BZYC8V2	47-3024	426
8	BTA08-600B	47-3254	430
9	BZX9V1	47-3068	426
9	BZYC9V1	47-3026	426
10	BZX10	47-3070	426
10	BZYC10	47-3028	426
10	VNP10N06	47-0388	437
10	BYV10-40	47-2542	428
10	BYV10-60	47-2544	428
11	BUZ11A	47-0206	436
11	BZX11	47-3072	426
11	BZYC11	47-3030	426
12	BZX12	47-3074	426
12	BZYC12	47-3032	426
12	BTA12-600B	47-3392	430
12	BTA12-600BW	47-3260	430
13	BZX13	47-3076	426
13	BZYC13	47-3034	426
13	MPSA13	81-0142	434
15	BZX15	47-3078	426
15	BZYC15	47-3036	426
15	SAP15N	81-0324	435
15	SAP15N	81-0324	435
15	SAP15P	81-0326	435
15	SAP15P	81-0326	435
16	BZX16	47-3080	426
16	BZYC16	47-3038	426
16	BTA16-600B	47-3256	430
16	BTA16-600CW	47-3262	430
18	BZX18	47-3082	426
18	BZYC18	47-3040	426
20	BZX20	47-3084	426
20	BZYC20	47-3042	426
20	VNP20N07	47-0394	437
21	BAV21	47-3110	427
22	BZX22	47-3086	426
22	BZYC22	47-3044	426
24	BZX24	47-3088	426
24	BZYC24	47-3046	426
24	BTA24-600BW	47-3398	430
26	BTA26-600B	47-3258	430
26	BTA26-600BW	47-3400	430
27	BZX27	47-3090	426
27	BZYC27	47-3048	426
27	BYV27-200	47-2502	428
29	TIP29A	81-0148	433
29	TIP29C	81-0150	433
29	BYW29-200	47-3830	427
30	BZX30	47-3092	426
30	BZYC30	47-3050	426
31	TIP31A	81-0154	433
31	TIP31C	81-0156	433
32	TIP32A	81-0158	434
32	TIP32C	81-0160	434
33	BDX33C	81-0428	434
33	BZX33	47-3094	426
33	BZYC33	47-3052	426
34	BDX34C	81-0430	434
35	VNP35N07	47-0398	437
36	BZX36	47-3096	426
38	BCX38B	81-0084	434
39	BZX39	47-3098	426
41	BAT41	47-3100	427
41	TIP41A	81-0162	433
41	BTA41-600B	47-3394	430
42	BAT42	47-3102	427
42	MPSA42	81-0144	431
42	TIP42A	81-0164	434
45	PHP45N03T	47-0220	436
46	BAT46	47-3104	427
47	TIP47	81-0166	433
49	BAT49	47-3106	427
49	VNP49N04	47-0400	437
50	BFY50	81-0120	432
51	BFY51	81-0122	432
52	BFY52	81-0124	432
53	BDX53C	81-0424	434
54	BDX54C	81-0426	434
62	BAW62	47-3112	427
70	BCY70	81-0086	432
71	BCY71	81-0088	432
71	BUZ71A	47-0210	436
71	BUZ71A	47-0212	436
72	BUZ72A	47-0272	437
74	BUZ74	47-0274	437
80	BYW80-200	47-3832	427
85	BAT85	47-3108	427
85	BFX85	81-0116	432
88	BFX88	81-0118	432
90	ZTX790A	81-0242	433
92	MPSA92	81-0146	432
93	BDW93C	81-0110	433
94	BDW94C	81-0112	434
97	TIS97	81-0008	431
98	BYW98-200	47-3834	427
100	BR100	47-3264	430
100	BYW100-200	47-3836	427
102	KBPC102	47-3206	429
103	Z0103MA	47-3406	430
104	KBPC104	47-3208	429
106	TIC106D	47-3270	430
107	BC107	81-0010	431
107	BC107B	81-0012	431
107	BS107	47-0140	436
107	Z0107MA	47-3410	430
108	BC108	81-0014	431
108	BC108B	81-0016	431
108	BC108C	81-0018	431
108	J108	47-3510	436
109	BC109	81-0020	431
109	BC109C	81-0022	431
110	J110	47-3508	436
112	TIP112	81-0432	434
116	TIC116D	47-3272	430
117	TIP117	81-0434	434
120	TIP120	81-0168	433
121	TIP121	81-0170	433
122	TIP122	81-0172	433
125	TIP125	81-0174	434
126	TIC126D	47-3274	430
126	TIP126	81-0176	434
127	TIP127	81-0178	434
130	SB130	47-2534	428
131	BD131	81-0090	433
132	BD132	81-0092	434
135	BD135	81-0094	433
136	BD136	81-0096	434
136	BT136-600	47-3236	429
137	BT137-600	47-3238	429
139	BD139	81-0098	433
139	BT139-500	47-3234	429
139	BT139-600	47-3240	429
140	BD140	81-0100	434
140	SB140	47-2536	428
141	TIP141	81-0180	433
142	BC142	81-0024	432
142	TIP142	81-0190	433
147	TIP147	81-0192	434
152	TB152	47-2804	429
156	TB156	47-2806	429
170	BS170	47-0142	436
177	BC177	81-0026	432
178	BC178	81-0028	432
179	BC179	81-0030	432
182	BC182	81-0032	431
182	BC182L	81-0034	431
183	BC183L	81-0036	431
184	BC184	81-0038	431
184	BC184L	81-0040	431
206	TIC206D	47-3242	430
206	TIC206M	47-3248	430
208	BU208A	81-0126	433
212	BC212L	81-0044	432
225	TYN225	47-3446	430
226	TIC226D	47-3244	430
237	BC237B	81-0046	431
238	BC238B	81-0048	431
238	BD238	81-0402	434
244	BF244B	47-3342	436
246	TIC246D	47-3246	430
246	TIC246M	47-3252	430
259	BF259	81-0114	432
321	ZTX321	81-0360	431
325	ZTX325	81-0362	431
327	BC327	81-0050	432
330	SB330	47-2538	428
337	BC337	81-0052	431
340	MJE340	81-0138	433
350	MJE350	81-0140	434
405	Z0405MF	47-3402	430
408	TYN408	47-3444	430
435	BD435	81-0404	433

Base Number	Device	Order Code	Page Number
435	BD435	81-0400	433
436	BD436	81-0406	434
437	BD437	81-0102	433
438	BD438	81-0104	434
441	BC441	81-0054	432
450	ZTX450	81-0202	432
451	ZTX451	81-0204	432
453	ZTX453	81-0206	432
455	ZTX455	81-0364	431
457	ZTX457	81-0368	431
461	BC461	81-0056	433
477	BC477	81-0058	432
508	BU508AFI	81-0130	433
517	BC517	81-0062	431
520	IRF520	47-0312	437
530	IRF530	47-0314	437
540	IRF540	47-0316	437
545	ZVP0545A	47-4156	436
547	BC547B	81-0064	431
548	BC548B	81-0066	431
549	BC549B	81-0068	431
549	ZTX549	81-0374	433
550	ZTX550	81-0212	433
551	ZTX551	81-0214	433
557	BC557B	81-0070	432
558	BC558B	81-0072	432
558	ZTX558	81-0366	432
600	ZTX600	81-0216	434
600	ZTX600B	81-0218	432
602	KBPC602	47-3218	429
603	ZTX603	81-0372	431
605	ZTX605	81-0220	432
608	KBPC608	47-3220	429
612	TYN612	47-3448	430
625	TYN625	47-3450	430
630	IRF630	47-0290	437
635	BC635	81-0074	432
636	BC636	81-0076	432
637	BC637	81-0078	432
639	BC639	81-0080	432
640	BC640	81-0082	432
640	IRF640	47-0318	437
651	ZTX651	81-0224	432
653	ZTX653	81-0226	432
677	BD677	81-0420	434
678	BD678	81-0422	434
679	BD679	81-0106	433
680	BD680	81-0108	434
689	ZTX689B	81-0228	432
690	ZTX690B	81-0230	432
705	ZTX705	81-0232	433
712	ZTX712	81-0378	432
730	IRF730	47-0320	437
730	IRF730A	47-0294	437
740	IRF740	47-0322	437
751	ZTX751	81-0236	433
753	ZTX753	81-0238	433
776	ZTX776	81-0380	433
806	STTH806TTI	47-0478	428
830	IRF830	47-0324	437
840	IRF840	47-0326	437
851	ZTX851	81-0244	432
853	ZTX853	81-0246	432
900	BUZ900	47-0370	437
900	BUZ900D	47-0372	437
900	BUZ900DP	47-0374	437
900	BUZ900P	47-0376	437
905	BUZ905	47-0378	437
905	BUZ905D	47-0380	437
905	BUZ905DP	47-0382	437
905	BUZ905P	47-0384	437
1048	ZTX1048A	81-0250	432
1051	ZTX1051A	81-0252	432
1053	ZTX1053A	81-0254	432
1147	ZTX1147A	82-2134	433
1149	ZTX1149A	82-2136	433
1151	ZTX1151A	82-2138	433
2106	ZVN2106A	47-0156	436
2106	ZVP2106A	47-0174	436
2110	ZVP2110A	47-0176	436
2120	ZVP2120A	47-4154	436
2222	2N2222A	81-0256	431
2502	KBPC2502	47-3222	429
2506	KBPC2506	47-3224	429
2955	MJ2955	81-0136	434
2955	TIP2955	81-0194	434
3003	STTH3003CW	47-0470	428
3055	TIP3055	81-0196	433
3306	ZVN3306A	47-0160	436
3306	ZVP3306A	47-0178	436
3310	ZVN3310A	47-4158	436
3502	KBPC3502	47-3226	429
3506	KBPC3506	47-3228	429
3702	2N3702	81-0270	432
4001	UF4001	47-3154	428
4002	UF4002	47-3156	428
4004	UF4004	47-3158	428
4006	UF4006	47-3160	428
4007	UF4007	47-3162	428
4206	ZVN4206A	47-0162	436
4210	ZVN4210A	47-0164	436
4306	ZVN4306A	47-0166	436
4310	ZVN4310A	47-0168	436
4424	ZVN4424A	47-0170	436
4424	ZVP4424A	47-4150	436
5355	1N5355B	47-2314	426
5357	1N5357B	47-2316	426
5359	1N5359B	47-2318	426
5401	UF5401	47-3164	428
5402	UF5402	47-3166	428
5404	UF5404	47-3168	428
5406	UF5406	47-3170	428
5408	UF5408	47-3172	428
5457	2N5457	47-3506	436
6003	STTH6003CW	47-0472	428
9630	IRF9630	47-0308	437
9640	IRF9640	47-0310	437

400mW Zener Diodes BZX55 series

BZX55 Series. Subminiature 400mW DO-35 glass encapsulated zener diodes.

Manfr's Type	Voltage	Order code	1+	100+	1000+	5000+
BZYC2V7	2V7	**47-3000**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC3V0	3V0	**47-3002**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC3V3	3V3	**47-3004**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC3V6	3V6	**47-3006**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC3V9	3V9	**47-3008**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC4V3	4V3	**47-3010**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC4V7	4V7	**47-3012**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC5V1	5V1	**47-3014**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC5V6	5V6	**47-3016**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC6V2	6V2	**47-3018**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC6V8	6V8	**47-3020**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC7V5	7V5	**47-3022**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC8V2	8V2	**47-3024**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC9V1	9V1	**47-3026**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC10	10V	**47-3028**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC11	11V	**47-3030**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC12	12V	**47-3032**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC13	13V	**47-3034**	**0.07**	**0.04**	**0.027**	**0.024**
BZYC15	15V	**47-3036**	**0.07**	**0.04**	**0.027**	**0.024**
BZYC16	16V	**47-3038**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC18	18V	**47-3040**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC20	20V	**47-3042**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC22	22V	**47-3044**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC24	24V	**47-3046**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC27	27V	**47-3048**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC30	30V	**47-3050**	**0.06**	**0.02**	**0.012**	**0.011**
BZYC33	33V	**47-3052**	**0.06**	**0.02**	**0.012**	**0.011**

1.3W zener diodes BZX85 series

BZX85 series. 1.3W zener diodes housed in a DO-41 package.

Manufr's code	Order code	1+	100+	1000+	5000+
BZX85C4V7	**47-3054**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C5V1	**47-3056**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C5V6	**47-3058**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C6V2	**47-3060**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C6V8	**47-3062**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C7V5	**47-3064**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C8V2	**47-3066**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C9V1	**47-3068**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C10V	**47-3070**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C11V	**47-3072**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C12V	**47-3074**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C13V	**47-3076**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C15V	**47-3078**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C16V	**47-3080**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C18V	**47-3082**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C20V	**47-3084**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C22V	**47-3086**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C24V	**47-3088**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C27V	**47-3090**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C30V	**47-3092**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C33V	**47-3094**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C36V	**47-3096**	**0.07**	**0.04**	**0.027**	**0.024**
BZX85C39V	**47-3098**	**0.07**	**0.04**	**0.027**	**0.024**

3.25W zener diodes BZT03C series

Vishay

Hermetically sealed glass passivated zener diodes housed in SOD-64 package (4.3dia. x 4.2mm).

Zener voltage V	Device	Order code	Zener voltage V	Device	Order code
7.5	BZT03C7V5	**47-2200**	43	BZT03C43	**47-2232**
8.2	BZT03C8V2	**47-2202**	47	BZT03C47	**47-2234**
10	BZT03C10	**47-2206**	51	BZT03C51	**47-2236**
12	BZT03C12	**47-2208**	56	BZT03C56	**47-2238**
15	BZT03C15	**47-2210**	62	BZT03C62	**47-2240**
16	BZT03C16	**47-2212**	91	BZT03C91	**47-2248**
18	BZT03C18	**47-2214**	120	BZT03C120	**47-2252**
20	BZT03C20	**47-2216**	160	BZT03C160	**47-2258**
22	BZT03C22	**47-2218**	180	BZT03C180	**47-2260**
27	BZT03C27	**47-2222**	200	BZT03C200	**47-2262**
30	BZT03C30	**47-2224**	220	BZT03C220	**47-2264**
36	BZT03C36	**47-2228**	270	BZT03C270	**47-2266**
39	BZT03C39	**47-2230**			

Order code	1+	25+	100+	500+
All codes	**0.17**	**0.13**	**0.105**	**0.095**

5W zener diodes, 1N5300B series

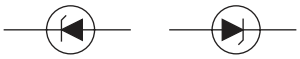
High power zener diodes housed in a CB-417 plastic encapsulation. Rated at 5W. Tolerance 5%.

Zener voltage V	Device	Order code	Zener voltage V	Device	Order code
5.1	1N5338B	**47-2288**	18	1N5355B	**47-2314**
5.6	1N5339B	**47-2290**	20	1N5357B	**47-2316**
6.2	1N5341B	**47-2292**	24	1N5359B	**47-2318**
6.8	1N5342B	**47-2294**	28	1N5362B	**47-2322**
8.2	1N5344B	**47-2298**	36	1N5365B	**47-2326**
9.1	1N5346B	**47-2300**	47	1N5368B	**47-2330**
10	1N5347B	**47-2302**	56	1N5370B	**47-2334**
12	1N5349B	**47-2306**	62	1N5372B	**47-2336**
15	1N5352B	**47-2310**	150	1N5383B	**47-2350**
16	1N5353B	**47-2312**	154	1N5386B	**47-2354**

Order code	1+	25+	100+	500+
All codes	**0.35**	**0.27**	**0.19**	**0.13**

20W zener diodes BZY93 series

High power 20W (1500W peak pulse power) glass passivated junction zener diodes, housed in a hermetically sealed stud mounted DO4 case. Available in stud cathode and stud anode configuration.



Stud cathode normal Stud anode

Technical specification

Zener voltage V	Device Cathode stud	Order code	Device Anode stud	Order code
7.5	BZY93C7V5	**47-5000**	BZY93C7V5R	**47-5002**
8.2	BZY93C8V2	**47-5004**		
9.1	BZY93C9V1	**47-5006**		
10	BZY93C10	**47-5008**		
11	BZY93C11	**47-5010**		
12	BZY93C12	**47-5012**	BZY93C12R	**47-5014**
13	BZY93C13	**47-5016**	BZY93C13R	**47-5018**
15	BZY93C15	**47-5020**	BZY93C15R	**47-5022**
16	BZY93C16	**47-5024**	BZY93C16R	**47-5026**
18	BZY93C18	**47-5028**	BZY93C18R	**47-5030**
20	BZY93C20	**47-5032**	BZY93C20R	**47-5034**
22	BZY93C22	**47-5036**		
24	BZY93C24	**47-5038**	BZY93C24R	**47-5040**
27	BZY93C27	**47-5042**	BZY93C27R	**47-5044**
30	BZY93C30	**47-5046**		
33	BZY93C33	**47-5048**		
36	BZY93C36	**47-5050**	BZY93C36R	**47-5052**
39	BZY93C39	**47-5054**	BZY93C39R	**47-5056**
43	BZY93C43	**47-5058**		
47	BZY93C47	**47-5060**		
51	BZY93C51	**47-5062**		
56	BZY93C56	**47-5064**		
62	BZY93C62	**47-5066**		
68	BZY93C68	**47-5068**	BZY93C68R	**47-5070**
75	BZY93C75	**47-5072**	BZY93C75R	**47-5074**

Order code	1+	10+	25+	100+
All codes	**5.98**	**5.32**	**4.78**	**4.24**

Current regulating diodes

Semitec

A range of current regulating diodes (CRDs) which regulate current in the same way as a zener diode regulates voltage. Typical applications include: current regulation, limiting, biasing, stabilising LED brightness, and as a power supply voltage reference. Available in a range of current ratings in axial or surface-mount (MELF) styles. ATC Semitec types CRD-E series (axial) and CRD-F series (MELF).

Technical specification

Pinch-off current (mA)	Current tolerance	Voltage range for constant current	Dynamic impedance	Order code Axial	Order code MELF
1.5	15%	2.0-100V	0.40MΩ	**47-2600**	**47-2630**
2.0	16%	2.3-100V	0.25MΩ	**47-2602**	
3.5	16%	3.2-100V	0.10MΩ	**47-2606**	**47-2636**
4.5	15%	3.7-100V	0.07MΩ	**47-2608**	**47-2638**
5.6	15%	4.5-100V	0.04MΩ	**47-2610**	**47-2640**

Axial	Order code	1+	25+	100+	250+
1.5mA	**47-2600**	**0.55**	**0.48**	**0.425**	**0.37**
2.0mA	**47-2602**	**0.55**	**0.48**	**0.425**	**0.37**
3.5mA	**47-2606**	**0.55**	**0.48**	**0.425**	**0.37**
4.5mA	**47-2608**	**0.55**	**0.48**	**0.425**	**0.37**
5.6mA	**47-2610**	**0.55**	**0.48**	**0.425**	**0.37**
MELF package					
1.5mA	**47-2630**	**0.55**	**0.48**	**0.425**	**0.37**
3.5mA	**47-2636**	**0.55**	**0.48**	**0.425**	**0.37**
4.5mA	**47-2638**	**0.55**	**0.48**	**0.425**	**0.37**
5.6mA	**47-2640**	**0.55**	**0.48**	**0.425**	**0.37**
Application notes	**99-0550**		**No charge**		

Signal diodes

A range of general purpose low signal diodes including silicon Schottky barrier types. Supplied either taped or bulk, please refer to specification table.

Technical Specification

V_{RRM} max V	I_F AV max mA	V_F @ I_F Max V	mA	Type	Application	Manfr Code
30	200	0.4	10	Silicon schottky	General purpose	**BAT42**
30	200	0.4	10	Silicon schottky	High speed	**BAT85**
75	150	1.0	100	Silicon epitaxial	High speed	**BAW62**
80	500	0.42	100	Silicon schottky	General purpose	**BAT49**
100	75	1.0	10	Silicon diffused	High speed	**1N914**
100	150	0.45	1	Silicon schottky	General purpose	**BAT41**
100	150	0.45	10	Silicon schottky	General purpose	**BAT46**
200	250	1.0	100	Silicon epitaxial	Switching	**BAV21**

Manfr's code	Order code	1+	100+	1000+	10000+
BAT41	**47-3100**	**0.09**	**0.07**	**0.065**	**0.062**
BAT42	**47-3102**	**0.08**	**0.065**	**0.062**	**0.059**
BAT46	**47-3104**	**0.13**	**0.095**	**0.085**	**0.079**
BAT49	**47-3106**	**0.30**	**0.20**	**0.16**	**0.13**
BAT85	**47-3108**	**0.12**	**0.07**	**0.055**	**0.048**
BAV21	**47-3110**	**0.03**	**0.018**	**0.015**	**0.012**
BAW62	**47-3112**	**0.03**	**0.018**	**0.015**	**0.012**
1N914	**47-3116**	**0.04**	**0.018**	**0.0095**	**0.0085**

1N4148 signal diode

Rohm

Standard high speed switching diode housed in a DO-35 package. Available in small volumes or in boxes of 5,000.

Technical specification

V_{RRM} max V	I_F AV max mA	V_F @ I_F max V	mA
75	150	1.0	10

	Small volumes (price each)				
	Order code	1+	100+	1000+	10000+
1N4148	**47-3308**	**0.04**	**0.011**	**0.007**	**0.006**
	Box of 5,000				
	Order code	1+	2+	5+	
1N4148	**47-3310**	**26.50**	**26.00**	**24.50**	

Silicon rectifier diodes

DC

1N4000 Series

Miniature 1A plastic diodes in industry standard DO41 package with 0.8mm diameter leads. Available **taped in small quantities** or in **ammo boxes of 2500 pieces**.

			Price each			
Manufr's code	VRRM	Order code	1+	100+	1000+	5000+
1N4001	50V	**47-3130**	**0.04**	**0.012**	**0.008**	**0.006**
1N4002	100V	**47-3132**	**0.05**	**0.017**	**0.008**	**0.007**
1N4003	200V	**47-3134**	**0.05**	**0.02**	**0.008**	**0.007**
1N4004	400V	**47-3136**	**0.04**	**0.018**	**0.008**	**0.007**
1N4005	600V	**47-3138**	**0.04**	**0.02**	**0.008**	**0.007**
1N4006	800V	**47-3140**	**0.04**	**0.02**	**0.008**	**0.007**
1N4007	1000V	**47-3142**	**0.04**	**0.018**	**0.008**	**0.007**
			Price per box of 2500			
Manufr's code	VRRM	Order code	1+	5+	10+	
1N4001	50V	**47-3800**	**16.10**	**15.50**	**14.95**	
1N4002	100V	**47-3802**	**16.40**	**15.70**	**15.10**	
1N4003	200V	**47-3804**	**16.90**	**16.10**	**15.50**	
1N4004	400V	**47-3806**	**17.50**	**16.80**	**16.20**	
1N4005	600V	**47-3808**	**17.50**	**16.80**	**16.20**	
1N4006	800V	**47-3810**	**17.50**	**16.80**	**16.20**	
1N4007	1000V	**47-3812**	**17.50**	**16.80**	**16.20**	

1N5400 Series

DC

Miniature 3A plastic diodes in industry standard DO27 package. Available **taped in small quantities** or in **ammo boxes of 500 pieces.**

			Price each			
Manufr's code	VRRM	Order code	1+	100+	1000+	5000+
1N5401	100V	**47-3144**	**0.08**	**0.04**	**0.028**	**0.024**
1N5402	200V	**47-3146**	**0.08**	**0.042**	**0.029**	**0.025**
1N5404	400V	**47-3148**	**0.09**	**0.045**	**0.036**	**0.029**
1N5406	600V	**47-3150**	**0.09**	**0.048**	**0.038**	**0.031**
1N5408	1000V	**47-3152**	**0.10**	**0.05**	**0.04**	**0.033**
			Price per box of 500			
Manufr's code	VRRM	Order code	1+	5+	10+	
1N5401	100V	**47-3820**	**10.90**	**10.40**	**9.80**	
1N5402	200V	**47-3822**	**11.20**	**10.60**	**10.10**	
1N5404	400V	**47-3824**	**12.50**	**11.80**	**11.20**	
1N5406	600V	**47-3826**	**12.80**	**11.95**	**11.40**	
1N5408	1000V	**47-3828**	**13.30**	**12.70**	**12.10**	

Fast recovery diodes

New New **ST**

A range of high efficiency fast recovery rectifier diodes suitable for switch mode power supplies, high frequency DC-DC converters and transistor circuits. These devices feature very low conduction losses and a maximum reverse recovery time of 35nS. Housed in DO-15, DO-201AD or TO-220 packages.

Technical specification

Device	V_{RRM}	$I_{F(AV)}$	I_{FSM}	T_{rr} max	V_F max	Package
BYW29-200	200V	8A	80A	35nS	1.15V	TO-220AC
BYW80-200	200V	10A	100A	35nS	1.15V	TO-220AC
BYW98-200	200V	3A	70A	35nS	0.85V	DO-201AD
BYW100-200	200V	1.5A	50A	35nS	0.85V	DO-15

Type	Order code	1+	25+	100+	500+
BYW29-200	**47-3830**	**0.62**	**0.43**	**0.28**	**0.27**
BYW80-200	**47-3832**	**0.54**	**0.44**	**0.36**	**0.30**
BYW98-200	**47-3834**	**0.29**	**0.22**	**0.18**	**0.15**
BYW100-200	**47-3836**	**0.30**	**0.22**	**0.15**	**0.11**

Ultrafast recovery diode

Philips/Temic

An axial ultrafast recovery diode.

SOD-57: 4.2 x 4.3mm

V_{RRM} V	I_F (av) A	I_{FSM} A	t_{rr} ns	V_F max V	Package	Device
200	2.0	50	25	1.07	SOD-57	BYV27-200

	Order code	1+	100+	500+	1000+
BYV27-200	**47-2502**	**0.30**	**0.10**	**0.088**	**0.084**

1A Ultrafast rectifier diodes

UF4000 series. A range of miniature ultrafast recovery diodes rated at 1A suitable for use in switched mode power supplies and similar applications. Maximum reverse recovery time is just 75ns.

Manufr's code	V_{RRM}	Order code	1+	100+	1000+
UF4001	50V	**47-3154**	**0.08**	**0.055**	**0.045**
UF4002	100V	**47-3156**	**0.09**	**0.06**	**0.049**
UF4004	400V	**47-3158**	**0.11**	**0.075**	**0.058**
UF4006	800V	**47-3160**	**0.14**	**0.095**	**0.07**
UF4007	1000V	**47-3162**	**0.17**	**0.11**	**0.085**

3A Ultrafast rectifier diodes

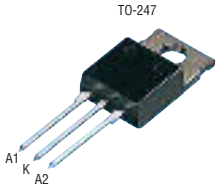
UF5400 series. A range of miniature ultrafast recovery diodes rated at 3A suitable for use in switched mode power supplies and similar applications. Maximum reverse recovery time is just 75ns.

Manufr's code	V_{RRM}	Order code	1+	100+	1000+
UF5401	100V	**47-3164**	**0.20**	**0.135**	**0.105**
UF5402	200V	**47-3166**	**0.22**	**0.145**	**0.11**
UF5404	400V	**47-3168**	**0.24**	**0.17**	**0.125**
UF5406	600V	**47-3170**	**0.25**	**0.18**	**0.13**
UF5408	1000V	**47-3172**	**0.26**	**0.19**	**0.135**

High frequency secondary rectifiers

ST

A range of high frequency, high current rating, dual epitaxial diodes primarily intended for switch mode power supplies and DC/DC converters. They combine ultrafast, soft and noise-free recovery, for low-side effects, with excellent reverse voltage performance.



Technical specification

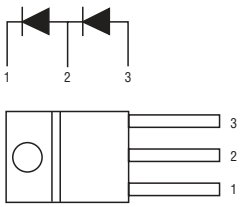
Device	V_{RRM}	$I_{F(AV)}$	V_F	trr (max)	Package
STTH3003CW	300V	2x15A	1V	40ns	T0-247
STTH6003CW	300V	2x30A	1V	55ns	T0-247

	Order code	1+	25+	100+	250+
STTH3003CW	**47-0470**	**2.88**	**2.40**	**2.10**	**1.88**
STTH6003CW	**47-0472**	**3.82**	**3.128**	**2.54**	**2.30**

STTH806TTI 600V ultrafast boost diode

ST

The STTH806TTI is an ultra high performance 600V diode comprising of two 300V diodes connected in series, and designed for high DI/DT operation as boost diodes in continuous mode power factor correctors and 'hard' switching conditions.



Technical specification

Repetitive peak reverse voltage	600V
RMS forward current	14A
Surge non-repetitive forward current	80A
Forward voltage drop	2.6V

	Order code	1+	25+	100+	250+
STTH806TTI	**47-0478**	**2.40**	**1.78**	**1.36**	**1.18**

Schottky power diodes

Extended range

ST/GS

DO-41: 5.2 x 2.7mm DO-201AD: 9.5 x 5.6mm

Schottky barrier power diodes designed for high efficiency rectification in switch mode power supplies, regulators, etc.

I_F (av) max A	V_{RRM} max V	V_F @ I_F V	A	I_{FSM} A	Package	Manfr.	Device
1.0	40	0.50	1	50	DO-41	ST	**BYV10-40**
1.0	60	0.70	1	40	DO-041	ST	**BYV10-60**
1.0	30	0.50	1	40	DO-41	GS	**SB130**
1.0	40	0.50	1	40	DO-41	GS	**SB140**
3.0	30	0.50	3	80	DO-201AD	GS	**SB330**
3.0	40	0.475	3	80	DO-201AD	ST	**1N5820**

	Order code	1+	25+	100+	500+
BYV10-40 *NEW*	**47-2542**	**0.27**	**0.20**	**0.12**	**0.115**
BYV10-60 *NEW*	**47-2544**	**0.29**	**0.205**	**0.13**	**0.14**
SB130	**47-2534**	**0.32**	**0.29**	**0.21**	**0.16**
SB140	**47-2536**	**0.36**	**0.31**	**0.24**	**0.21**
SB330	**47-2538**	**0.62**	**0.52**	**0.40**	**0.38**
1N5820 *NEW*	**47-2546**	**0.44**	**0.25**	**0.19**	**0.09**

1A DIL bridge rectifiers

DC

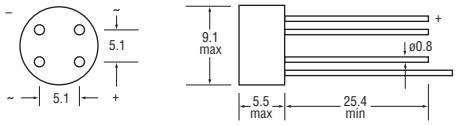
A range of miniature 1A bridge rectifiers housed in a DIL package.

Manufr's code	V_{RRM}	Order code	1+	50+	100+	500+
1B02	200V	**47-3182**	**0.33**	**0.22**	**0.185**	**0.165**
1B04	400V	**47-3184**	**0.36**	**0.26**	**0.21**	**0.19**
1B06	600V	**47-3186**	**0.39**	**0.28**	**0.23**	**0.20**
1B08	800V	**47-3188**	**0.42**	**0.33**	**0.26**	**0.22**

1.5A bridge rectifiers

DC

Miniature 1.5A plastic encapsulated W0 Series rectifiers for direct mounting to printed circuit boards. Dimensions 5mm high, diameter 8mm.

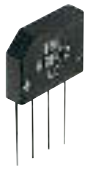


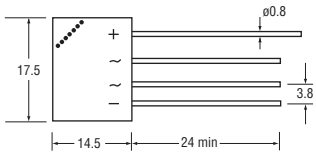
Manufr's code	V_{RRM}	Order code	1+	100+	500+	1000+
W005	50V	**47-3190**	**0.15**	**0.095**	**0.082**	**0.079**
W02	200V	**47-3192**	**0.16**	**0.10**	**0.089**	**0.084**
W04	400V	**47-3194**	**0.16**	**0.105**	**0.093**	**0.087**
W06	600V	**47-3196**	**0.17**	**0.115**	**0.105**	**0.096**
W08	800V	**47-3198**	**0.18**	**0.125**	**0.11**	**0.103**

2A in-line bridge rectifiers

DC

Miniature 2A in-line configuration compact bridge rectifiers.



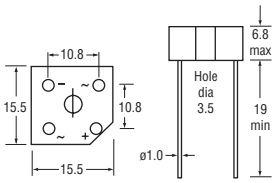


Manufr's code	V_{RRM}	Order code	1+	100+	500+	1000+
2KBP02	200V	**47-3200**	**0.40**	**0.33**	**0.27**	**0.24**
2KBP04	400V	**47-3202**	**0.44**	**0.36**	**0.30**	**0.26**

3A bridge rectifiers

DC

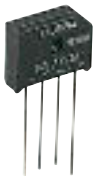
Miniature 3A plastic encapsulated bridge rectifiers for direct mounting to printed circuit boards.
Dimensions: 15mm square, 6.5mm high.

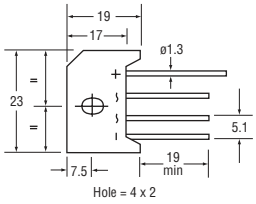


Manufr's code	VRRM	Order code	1+	100+	500+	1000+
KBPC102	200V	**47-3206**	**0.30**	**0.24**	**0.205**	**0.185**
KBPC104	400V	**47-3208**	**0.34**	**0.26**	**0.22**	**0.195**

4A/8A in-line bridge rectifiers

A range of miniature 4A and 8A in-line configuration bridge rectifiers.

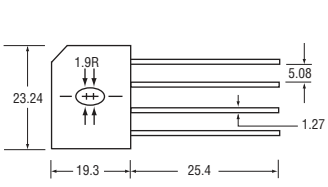




Manufr's code	VRRM	Order code	1+	100+	500+	1000+
4A Series						
KBU4D	200V	**47-3210**	**0.80**	**0.55**	**0.49**	**0.46**
KBU4J	600V	**47-3212**	**0.90**	**0.74**	**0.68**	**0.65**
8A Series						
KBU8D	200V	**47-3214**	**1.20**	**0.90**	**0.78**	**0.72**
KBU8K	800V	**47-3216**	**1.35**	**0.98**	**0.85**	**0.77**

6A in-line glass passivated bridge rectifiers

A range of miniature 6A in-line configuration bridge rectifiers.



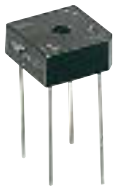
	PIV(V)	IFSM(A)	VFM(V)	IR(µA)@PIV
TU602G	200	250	1.1@3A	10
TU606G	600	250	1.1@3A	10

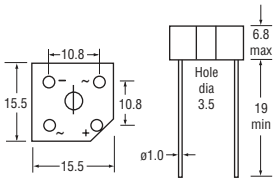
Manufr's code	VRRM	Order code	1+	100+	500+	1000+
TU602G	200V	**47-2800**	**0.88**	**0.60**	**0.52**	**0.48**
TU606G	600V	**47-2802**	**0.98**	**0.82**	**0.76**	**0.68**

6A bridge rectifiers

DC

Miniature 6A plastic encapsulated bridge rectifiers for direct mounting to printed circuit boards.
Dimensions 15mm square, 6.5mm high.

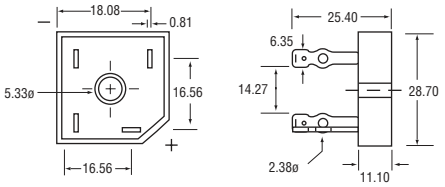




Manufr's type	VRRM	Order code	1+	100+	500+	1000+
KBPC602	200V	**47-3218**	**0.55**	**0.42**	**0.36**	**0.32**
KBPC608	800V	**47-3220**	**0.65**	**0.47**	**0.40**	**0.35**

15A bridge rectifiers

Plastic case with metal base bridge rectifiers, single hole fixing, solder terminals.

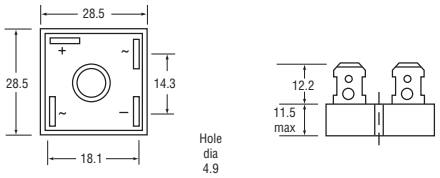


Manufr's type	VRRM	Order code	1+	100+	500+	1000+
KBPC1502	200V	**47-2804**	**1.36**	**0.98**	**0.88**	**0.79**
KBPC1506	600V	**47-2806**	**1.46**	**1.06**	**0.95**	**0.86**

25A bridge rectifiers

DC

Metal clad bridge rectifiers. Single hole fixing.
28mm square, 11mm high.

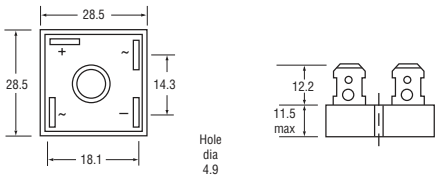


Manufr's code	VRRM	Order code	1+	100+	500+	1000+
KBPC2502	200V	**47-3222**	**1.55**	**1.05**	**0.92**	**0.84**
KBPC2506	600V	**47-3224**	**1.65**	**1.15**	**0.99**	**0.91**

35A bridge rectifiers

DC

Metal clad 35A bridge rectifiers. Single hole fixing.
6.3 x 0.8mm fast-on termination.

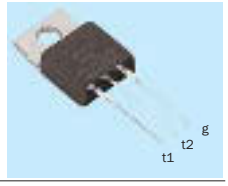


Manufr's code	VRRM	Order code	1+	25+	100+	500+
KBPC3502	200V	**47-3226**	**1.70**	**1.40**	**1.10**	**0.98**
KBPC3506	600V	**47-3228**	**1.90**	**1.55**	**1.20**	**1.05**

Triacs

Philips

A range of non-isolated TO220 packaged triacs from Philips featuring low voltage gate requirements.



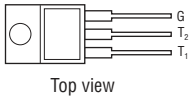
Technical specification								
Device	I_{T} rms	V_{DRM}	V_{GT}	I_{GT} mA t_2+ G+	t_2+G-	t_2- G-	t_2- G+	I_{TSM}A
BT139-500	16A	500V	1.5V	35	35	35	70	140
BT136-600	4A	600V	1.5V	35	35	35	70	25
BT137-600	8A	600V	1.5V	35	35	35	70	55
BT139-600	16A	600V	1.5V	35	35	35	70	140

Device	Rating	Order code	1+	25+	100+	500+
BT139-500	16A 500V	**47-3234**	**0.80**	**0.65**	**0.49**	**0.42**
BT136-600	4A 600V	**47-3236**	**0.55**	**0.42**	**0.25**	**0.19**
BT137-600	8A 600V	**47-3238**	**0.62**	**0.49**	**0.35**	**0.26**
BT139-600	16A 600V	**47-3240**	**0.90**	**0.78**	**0.55**	**0.41**

Triacs

Power Innovations

Triacs in plastic cases. Ideal for use in lamp, motor and heater control, etc.



Top view

Technical specification

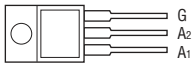
Device	IT rms	VDRM	VGT	IGTmA t2+ G+	t2+ G-	t2- G-	t2- G+	ITSMA
TIC206D	4A	400V	2.0V	5	5	5	10	30
TIC226D	8A	400V	2.0V	50	50	50	-	80
TIC246D	16A	400V	2.0V	50	50	50	-	125
TIC206M	4A	600V	2.0V	5	5	5	10	30
TIC246M	16A	600V	2.0V	50	50	50	-	125

Device	Rating	Order code	1+	25+	100+	500+
TIC206D	4A 400V	**47-3242**	**0.60**	**0.44**	**0.35**	**0.33**
TIC226D	8A 400V	**47-3244**	**0.70**	**0.52**	**0.44**	**0.41**
TIC246D	16A 400V	**47-3246**	**0.95**	**0.78**	**0.69**	**0.64**
TIC206M	4A 600V	**47-3248**	**0.62**	**0.47**	**0.37**	**0.34**
TIC246M	16A 600V	**47-3252**	**0.85**	**0.72**	**0.59**	**0.52**

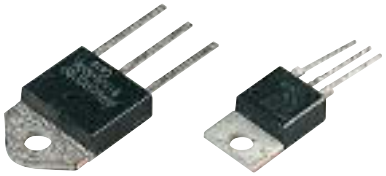
Isolated tab triacs

Extended range

ST



Top view



A range of power triacs in which the mounting tab is electrically isolated to 2500V rms. Insulating hardware is therefore not required when mounting these triacs onto heatsinks. Supplied in TO-220AB, TO-18 or TOP3 plastic packages. Snubberless and sensitive gate types are now also available.

Technical specification

Type	case	IT rms	VDRM	VGT	IGTmA t2+ G+	t2+ G-	t2- G-	t2- G+	ITSM A
BTA06-600T	TO220	6A	600V	1.5V	5	5	5	5	60
BTA08-600B	TO220	8A	600V	1.5V	50	50	50	100	80
BTA12-600B	TO220	12A	600V	1.5V	50	50	50	100	120
BTA16-600B	TO220	16A	600V	1.5V	50	50	50	100	160
BTA26-600B	TO218	25A	600V	1.5V	50	50	50	100	250
BTA41-600B	TO218	40A	600V	1.5V	50	50	50	100	300
BTA06-600BW	TO220	6A	600V	1.5V	50	50	50	–	63
BTA12-600BW	TO220	12A	600V	1.5V	50	50	50	–	126
BTA24-600BW	TO220	24A	600V	1.5V	50	50	50	–	240
BTA26-600BW	TOP3	25A	600V	1.5V	50	50	50	–	262
BTA16-600CW	TO220	16A	600V	1.5V	35	35	35	–	160

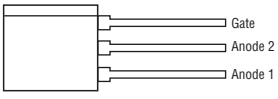
Manufr's type	Order code	1+	25+	100+	500+
Sensitive gate					
BTA06-600T *NEW*	**47-3390**	**1.30**	**0.78**	**0.62**	**0.38**
Standard					
BTA08-600B	**47-3254**	**0.70**	**0.57**	**0.43**	**0.39**
BTA12-600B *NEW*	**47-3392**	**1.27**	**0.77**	**0.60**	**0.49**
BTA16-600B	**47-3256**	**1.24**	**0.87**	**0.69**	**0.59**
BTA26-600B	**47-3258**	**2.36**	**1.79**	**1.38**	**1.28**
BTA41-600Bv	**47-3394**	**4.52**	**2.60**	**1.97**	**1.77**
Snubberless					
BTA06-600BW *NEW*	**47-3396**	**1.09**	**0.65**	**0.51**	**0.40**
BTA12-600BW	**47-3260**	**1.27**	**0.74**	**0.57**	**0.50**
BTA24-600BW *NEW*	**47-3398**	**2.74**	**1.39**	**0.97**	**0.83**
BTA26-600BW *NEW*	**47-3400**	**3.21**	**1.84**	**1.39**	**1.26**
BTA16-600CW	**47-3262**	**1.55**	**0.90**	**0.71**	**0.62**

General purpose triacs

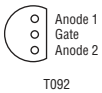
New New

ST

A range of triacs suitable for general purpose AC switching applications. Available with different gate sensitivities. Typical applications include light control and fan speed controllers. Supplied in TO-92 or TO-202-3 packages.



T0202-3



T092

Technical specification

Device	IT(RMS) A	ITSM A	VDRM V	VGT V	IGT mA t2 + g+	t2 + g-	t2 - g-	t2 - g+	Package
Z0103MA	0.8	8	600	1.5	3	3	3	5	TO-92
Z0107MA	0.8	8	600	1.5	5	5	5	7	TO-92
Z0405MF	4	20	600	1.5	5	5	5	5	TO-202-3

	Order code	1+	25+	100+	500+
Z0103MA	**47-3406**	**0.32**	**0.23**	**0.15**	**0.13**
Z0107MA	**47-3410**	**0.29**	**0.20**	**0.14**	**0.12**
Z0405MF	**47-3402**	**0.61**	**0.28**	**0.20**	**0.17**

Diacs

Extended range

Silicon bi-directional trigger diodes for use in triac firing circuits. SOD57 (DO-35) glass case.

Technical specification

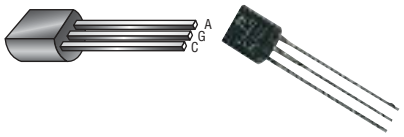
Type	VBO	IBO MAX.	VO MIN.	Ptot
DB3	32V	50µA	5V	150mW
BR100	36V	50µA	7V	150mW

Manufr's type	Order code	1+	25+	100+	500+
DB3 *NEW*	**47-3412**	**0.16**	**0.09**	**0.085**	**0.055**
BR100	**47-3264**	**0.16**	**0.115**	**0.105**	**0.105**

T092 thyristors

ONS

A range of miniature T092 package thyristors for low current/voltage applications.



Technical specification

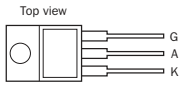
VRRM	IT (RMS)	IGT	Manufr's type	Order code
30V	0.8A	200µA	**2N5060**	**47-3266**
60V	0.8A	200µA	**2N5061**	**47-3268**

Manufr's code	Order code	1+	25+	100+	500+
2N5060	**47-3266**	**0.20**	**0.17**	**0.14**	**0.125**
2N5061	**47-3268**	**0.22**	**0.18**	**0.15**	**0.13**

Thyristors

Extended range

Thyristors in plastic case. Ideal for use in light and heater control, power supplies, etc.



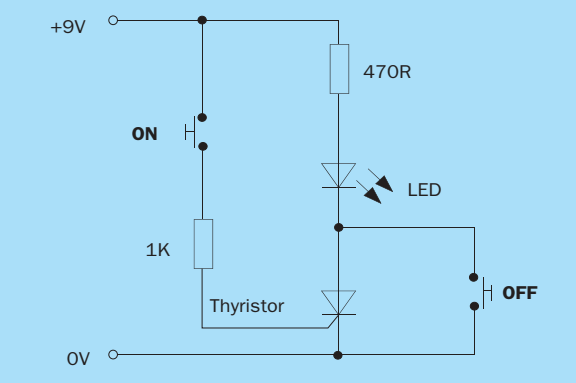
Manfr code	VRRM	IT (RMS)	VGT	IGT	Package	Manuf.
TIC106D	400V	4A	0.8V	0.2mA	TO-220	ONS
TIC116D	400V	8A	1.5V	20mA	TO-220	PI
TIC126D	400V	12A	1.5V	20mA	TO-220	PI
TYN225	200V	25A	1.3V	40mA	TO-220AB	ST
TYN408	400V	8A	1.5V	15mA	TO-220AB	ST
TYN612	600V	12A	0.8V	200µA	TO-220AB	ST
TYN625	600V	25A	1.5V	40mA	TO-220AB	ST

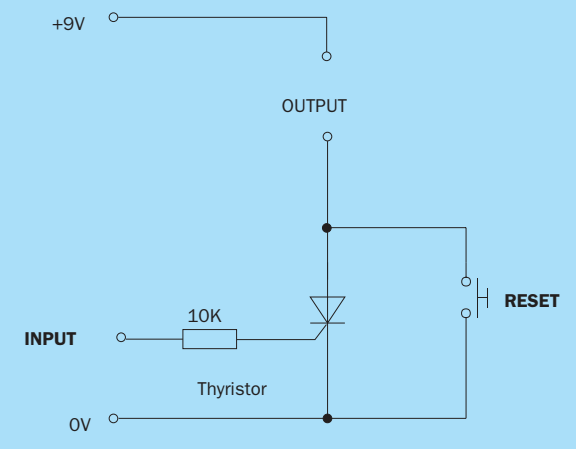
Manufr's code	Order code	1+	25+	100+	500+
TIC106D	**47-3270**	**0.38**	**0.32**	**0.23**	**0.215**
TIC116D	**47-3272**	**0.70**	**0.55**	**0.44**	**0.39**
TIC126D	**47-3274**	**0.78**	**0.62**	**0.49**	**0.43**
TYN225 *NEW*	**47-3446**	**2.04**	**1.25**	**1.00**	**0.68**
TYN408 *NEW*	**47-3444**	**1.27**	**0.91**	**0.72**	**0.37**
TYN612 *NEW*	**47-3448**	**1.32**	**0.63**	**0.50**	**0.29**
TYN625 *NEW*	**47-3450**	**2.28**	**1.38**	**1.14**	**0.78**

30

Thyristor (SCR)

When a voltage is applied to the gate of the thyristor(SCR) it turns on. When the voltage to the gate is removed the thyristor will conduct until the power is removed by shorting between the anode and cathode.





Low power silicon NPN transistors

A range of low power, small signal, general purpose, and RF, NPN silicon transistors.

Technical specification

Device	Man	Case Style	Vcb	V (max) Vce	Ic (max) Veb	mA	Ptot mW	hFE (min) @ Ic (mA)	fT MHz
MPSA13	Fair	TO-92 (B)	30	30	10	500	625	5@10	125
MPSA14	Fair	TO-92 (B)	30	30	-	1.2A	600	20000	100
MPSA27	Fair	TO-92 (B)	60	60	-	800	600	10000	100
MPSA42	Fair	TO-92 (B)	300	300	6	500	625	40@30	50
TIS97	CDIL	TO-92 (C)	-	40	-	200	625	250@0.1	200
BC107	CDIL	TO-18	50	45	6	200	600	100@2	150
BC107B	CDIL	TO-18	50	45	6	200	600	200@2	150
BC108	CDIL	TO-18	30	25	5	200	600	100@2	150
BC108B	CDIL	TO-18	30	25	5	200	600	200@2	150
BC108C	CDIL	TO-18	30	25	5	200	600	420@2	150
BC109	CDIL	TO-18	30	25	5	200	600	200@2	150
BC109C	CDIL	TO-18	30	25	5	200	600	420@2	150
BC182	Fair	TO-92 (C)	60	50	6	100	350	120@2	150
BC182L	CDIL	TO-92 (A)	60	50	6	100	350	120@2	150
BC183L	CDIL	TO-92 (A)	45	30	6	100	350	120@2	150
BC184	CDIL	TO-92 (C)	45	30	6	100	350	250@2	150
BC184L	CDIL	TO-92 (A)	45	30	6	100	350	250@2	150
BC237B	CDIL	TO-92 (C)	50	45	6	100	350	200@2	150
BC238B	CDIL	TO-92 (C)	30	25	5	100	350	200@2	150
BC337	CDIL	TO-92 (C)	50	45	5	500	625	100@100	200
ZTX321	Zetex	E LINE	15	15	-	500	500	20@3	600
ZTX325	Zetex	E LINE	15	15	-	25	500	25@25	600
BC517	Fair	TO-92 (C)	40	30	10	1A	600	30000@20	200
ZTX455	Zetex	E LINE	140	140	-	1A	1W	100@0.15	100
ZTX457	Zetex	E LINE	300	300	-	500	1W	50@0.05	75
BC547B	CDIL	TO-92 (C)	50	45	6	100	500	200@2	150
BC548B	Fair	TO-92 (C)	30	30	6	100	500	220@2	150
BC549B	Fair	TO-92 (C)	30	30	5	100	625	240@2	150
ZTX603	Zetex	E LINE	80	80	-	1A	1W	5000@0.5	150
ZTX614	Zetex	E LINE	100	100	-	800	1W	10K@0.5	100
2N2222A	CDIL	TO-18	60	30	5	800	500	100@150	250
2SC2547E	Hit	TO-92 (A)	120	120	5	1A	400	800@2	90
2N3053	CDIL	TO-39	60	40	5	700	500	50@150	100
2N3704	CDIL	TO-92 (A)	50	30	5	600	625	100@50	100
2N3705	CDIL	TO-92 (A)	50	30	5	600	625	50@50	100
2N3904	CDIL	TO-92 (B)	60	40	6	200	625	100@10	300
2N4401	CDIL	TO-92 (B)	40	60	6	600	625	150@100	250

	Order code	1+	25+	100+	500+
MPSA13	**81-0142**	**0.06**	**0.05**	**0.032**	**0.025**
MPSA14	**81-0310**	**0.12**	**0.10**	**0.08**	**0.06**
MPSA27	**81-0312**	**0.12**	**0.10**	**0.065**	**0.05**
MPSA42	**81-0144**	**0.10**	**0.07**	**0.032**	**0.029**
TIS97	**81-0008**	**0.10**	**0.09**	**0.072**	**0.048**
BC107	**81-0010**	**0.12**	**0.11**	**0.10**	**0.09**
BC107B	**81-0012**	**0.14**	**0.13**	**0.11**	**0.10**
BC108	**81-0014**	**0.12**	**0.11**	**0.095**	**0.09**
BC108B	**81-0016**	**0.14**	**0.13**	**0.11**	**0.10**
BC108C	**81-0018**	**0.14**	**0.13**	**0.11**	**0.10**
BC109	**81-0020**	**0.12**	**0.11**	**0.095**	**0.09**
BC109C	**81-0022**	**0.14**	**0.13**	**0.11**	**0.10**
BC182	**81-0032**	**0.08**	**0.045**	**0.032**	**0.022**
BC182L	**81-0034**	**0.08**	**0.07**	**0.032**	**0.025**
BC183L	**81-0036**	**0.07**	**0.05**	**0.03**	**0.02**
BC184	**81-0038**	**0.07**	**0.05**	**0.03**	**0.02**
BC184L	**81-0040**	**0.07**	**0.05**	**0.03**	**0.02**
BC237B	**81-0046**	**0.07**	**0.05**	**0.03**	**0.02**
BC238B	**81-0048**	**0.07**	**0.05**	**0.02**	**0.02**
ZTX321	**81-0360**	**0.26**	**0.21**	**0.14**	**0.11**
ZTX325	**81-0362**	**0.26**	**0.21**	**0.14**	**0.11**
BC337	**81-0052**	**0.07**	**0.06**	**0.04**	**0.02**
ZTX455	**81-0364**	**0.26**	**0.21**	**0.14**	**0.11**
ZTX457	**81-0368**	**0.26**	**0.21**	**0.14**	**0.11**
BC517	**81-0062**	**0.10**	**0.09**	**0.07**	**0.042**
BC547B	**81-0064**	**0.07**	**0.05**	**0.026**	**0.016**
BC548B	**81-0066**	**0.07**	**0.05**	**0.026**	**0.016**
BC549B	**81-0068**	**0.07**	**0.05**	**0.026**	**0.016**
ZTX603	**81-0372**	**0.48**	**0.39**	**0.26**	**0.21**
2N2222A	**81-0256**	**0.18**	**0.16**	**0.13**	**0.11**
2SC2547E	**81-0304**	**0.76**	**0.65**	**0.488**	**0.39**
2N3053	**81-0264**	**0.20**	**0.19**	**0.17**	**0.15**
2N3704	**81-0272**	**0.07**	**0.06**	**0.045**	**0.035**
2N3705	**81-0274**	**0.07**	**0.06**	**0.04**	**0.03**
2N3904	**81-0278**	**0.07**	**0.06**	**0.04**	**0.02**
2N4401	**81-0282**	**0.10**	**0.08**	**0.05**	**0.03**

Low power, silicon PNP transistors.

A range of low power, general purpose silicon PNP transistors.

Technical specification

Device	Man	Case style	V (max) Vcb	Vce	Ic (max) Veb	mA	Ptot mW	hFE (min) @ Ic (mA)	fT MHz
MPSA63	Fair	TO-92 (B)	30	30	-	100	350	20000	@100
BCY70	–	TO-18	50	40	5	200	350	100@10	250
BCY71	–	TO-18	45	45	5	200	350	100@10	250
BFX88	CDIL	TO-39	45	40	6	800	800	40@10	100
MPSA92	Fair	TO-92 (B)	300	300	5	500	625	25@30	50
BC177	–	TO-18	-	45	5	100	300	125@2	200
BC178	CDIL	TO-18	30	25	5	200	600	120@2	200
BC179	CDIL	70-18	25	20	5	200	600	180@2	200
BC212L	CDIL	TO-92 (A)	60	50	5	100	350	60@2	280
BC327	Fair	TO-92 (C)	50	45	5	800	625	100@100	100
BC477	–	TO-18	-	80	6	150	360	125@2	-
BC557B	–	TO-92 (C)	50	45	5	100	500	180@2	
BC558B	Fair	TO-92 (C)	30	30	5	100	500	180@2	150
ZTX558	Zetex	E LINE	400	400	-	200	1W	100@50	50
BC636	CDIL	TO-92 (A)	45	45	5	1A	800	40@150	50
BC640	CDIL	TO-92 (A)	80	80	5	1A	800	40@150	50
ZTX712	Zetex	E LINE	60	60	-	800	1W	3000@100	160
2SA1085E	Hit	TO-92 (A)	120	120	5	1A	400	80@2	90
2N2905	–	TO-39	60	40	5	600	600	100@150	200
2N2905A	–	TO-39	60	60	5	600	600	100@150	200
2N2907A	ONS	TO-18	60	60	5	600	400	100@150	200
2N3702	CDIL	TO-92 (A)	40	25	5	600	625	60@50	100
2N3906	CDIL	TO-92 (B)	40	40	5	200	625	100@10	250
2N4403	NSC	TO-92 (B)	40	40	5	600	625	100@150	200

	Order code	1+	25+	100+	500+
MPSA63	**81-0314**	**0.12**	**0.10**	**0.065**	**0.05**
BCY70	**81-0086**	**0.26**	**0.24**	**0.21**	**0.18**
BCY71	**81-0088**	**0.26**	**0.24**	**0.21**	**0.18**
BFX88	**81-0118**	**0.25**	**0.24**	**0.22**	**0.18**
MPSA92	**81-0146**	**0.10**	**0.07**	**0.032**	**0.029**
BC177	**81-0026**	**0.16**	**0.14**	**0.11**	**0.09**
BC178	**81-0028**	**0.16**	**0.14**	**0.11**	**0.09**
BC179	**81-0030**	**0.16**	**0.14**	**0.11**	**0.09**
BC212L	**81-0044**	**0.07**	**0.05**	**0.03**	**0.02**
BC327	**81-0050**	**0.07**	**0.06**	**0.04**	**0.02**
BC477	**81-0058**	**0.40**	**0.25**	**0.32**	**0.26**
BC557B	**81-0070**	**0.07**	**0.05**	**0.03**	**0.02**
BC558B	**81-0072**	**0.07**	**0.05**	**0.03**	**0.02**
ZTX558	**81-0366**	**0.29**	**0.24**	**0.16**	**0.132**
BC636	**81-0076**	**0.10**	**0.07**	**0.032**	**0.029**
BC640	**81-0082**	**0.10**	**0.07**	**0.032**	**0.029**
ZTX712	**81-0378**	**0.28**	**0.23**	**0.15**	**0.124**
2SA1085E	**81-0294**	**0.59**	**0.50**	**0.36**	**0.29**
2N2905	**81-0258**	**0.23**	**0.21**	**0.18**	**0.13**
2N2905A	**81-0260**	**0.25**	**0.23**	**0.20**	**0.15**
2N2907A	**81-0262**	**0.20**	**0.18**	**0.15**	**0.11**
2N3702	**81-0270**	**0.07**	**0.06**	**0.04**	**0.03**
2N3906	**81-0280**	**0.07**	**0.06**	**0.04**	**0.02**
2N4403	**81-0284**	**0.10**	**0.08**	**0.05**	**0.03**

Medium power silicon NPN transistors

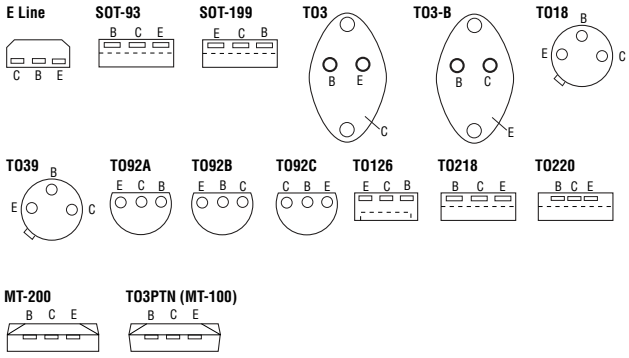
A range of medium power, NPN silicon transistors.

Technical specification

Device	Man	Case style	Volts (max) Vcb	Vce	Ic (max) Veb	mA	Ptot mW	hFE (min) @ Ic (mA)	fT MHz
BCX38B	Zetex	E LINE	80	60	10	800	1W	2000@100	-
BFY50	CDIL	TO-39	80	35	6	1A	800	30@150	60
BFY51	CDIL	TO-39	60	30	6	1A	800	40@150	50
BFY52	CDIL	TO-39	40	20	6	1A	800	60@150	50
BFX85	CDIL	TO-39	100	60	6	1A	800	70@150	50
BC142	-	TO-39	80	60	7	1A	750	20@200	80
BF259	-	TO-39	300	300	5	100	5W	25@30	90
BC441	-	TO-39	75	60	5	2A	1W	40 @ 500	50
ZTX450	Zetex	E LINE	60	45	5	1A	1W	100@150	150
ZTX451	Zetex	E LINE	80	60	5	1A	1W	150@150	150
ZTX453	Zetex	E LINE	120	100	5	1A	1W	40@150	150
ZTX600B	Zetex	E LINE	160	140	10	1A	1W	10000@500	150
ZTX605	Zetex	E LINE	140	120	10	1A	1W	5000@500	150
BC635	CDIL	TO-92 (A)	45	45	5	1A	800	40@150	200
BC637	CDIL	TO-92 (A)	60	60	5	1A	800	40@150	200
BC639	CDIL	TO-92 (A)	80	80	5	1A	800	40@150	200
ZTX651	Zetex	E LINE	80	60	5	2A	1W	100@500	140
ZTX653	Zetex	E LINE	120	100	5	2A	1W	100@500	140
ZTX689B	Zetex	E LINE	20	20	5	3A	1.5W	400@2A	150
ZTX690B	Zetex	E LINE	45	45	5	2A	1.5W	400@1A	150
ZTX851	Zetex	E LINE	150	60	6	5A	1.2W	100@2A	130
ZTX853	Zetex	E LINE	200	100	6	4A	1.2W	100@2A	130
ZTX1048A	Zetex	E LINE	50	17.5	5	4A	1W	300@1A	150
ZTX1051A	Zetex	E LINE	150	40	5	4A	1W	300	
ZTX1053A	Zetex	E LINE	150	75	5	3A	1W	300	

	Order code	1+	25+	100+	500+
BCX38B	**81-0084**	**0.19**	**0.17**	**0.135**	**0.105**
BFY50	**81-0120**	**0.20**	**0.18**	**0.16**	**0.14**
BFY51	**81-0122**	**0.22**	**0.20**	**0.16**	**0.14**
BFY52	**81-0124**	**0.20**	**0.18**	**0.16**	**0.14**
BFX85	**81-0116**	**0.22**	**0.20**	**0.16**	**0.13**
BC142	**81-0024**	**0.40**	**0.38**	**0.36**	**0.32**
BF259	**81-0114**	**0.25**	**0.11**	**0.095**	**0.16**
BC441	**81-0054**	**0.48**	**0.43**	**0.35**	**0.33**
ZTX450	**81-0202**	**0.18**	**0.16**	**0.14**	**0.12**
ZTX451	**81-0204**	**0.23**	**0.19**	**0.12**	**0.09**
ZTX453	**81-0206**	**0.24**	**0.22**	**0.18**	**0.16**
ZTX600B	**81-0218**	**0.35**	**0.30**	**0.23**	**0.18**
ZTX605	**81-0220**	**0.37**	**0.32**	**0.24**	**0.19**
BC635	**81-0074**	**0.12**	**0.09**	**0.055**	**0.045**
BC637	**81-0078**	**0.12**	**0.09**	**0.055**	**0.045**
BC639	**81-0080**	**0.12**	**0.09**	**0.055**	**0.045**
ZTX651	**81-0224**	**0.28**	**0.26**	**0.20**	**0.20**
ZTX653	**81-0226**	**0.35**	**0.31**	**0.26**	**0.22**
ZTX689B	**81-0228**	**0.32**	**0.27**	**0.20**	**0.18**
ZTX690B	**81-0230**	**0.32**	**0.27**	**0.20**	**0.18**
ZTX851	**81-0244**	**0.44**	**0.38**	**0.30**	**0.25**
ZTX853	**81-0246**	**0.45**	**0.39**	**0.30**	**0.25**
ZTX1048A	**81-0250**	**0.42**	**0.37**	**0.30**	**0.24**
ZTX1051A	**81-0252**	**0.42**	**0.37**	**0.30**	**0.24**
ZTX1053A	**81-0254**	**0.42**	**0.37**	**0.30**	**0.24**

Drawings & Manufacturers Key



CDIL	Continental Devices	Philips	Philips Semiconductors
DC	DC Components	Samsung	Samsung
Fair	Fairchild	San	Sanken
GS	General Semiconductor	Siemens	Siemens
Harris	Harris Semiconductors	ST	ST Microelectronics
Hit	Hitachi	Temic	Temic Semiconductors
IR	International Rectifier	Toshiba	Toshiba
NSC	National Semiconductors	Zetex	Zetex
ONS	On Semiconductor		

Medium power silicon PNP transistors

A range of medium power silicon PNP transistors

Technical specification Device	Man	Case style	Volts (max) Vcb	Vce	Veb	Ic (max) A	Ptot (max) W	hFE (min) @ Ic (mA)	fT (min) MHz
BC461	CDIL	TO-39	75	60	5	2	1	40 @ 500	50
ZTX549	Zetex	E LINE	30	30	-	1	1	100@1	100
ZTX550	Zetex	E LINE	60	45	5	1	1	100@150	150
ZTX551	Zetex	E LINE	80	60	5	1	1	50@150	150
ZTX705	Zetex	E LINE	140	120	10	1	1	3000@1A	160
ZTX751	Zetex	E LINE	80	60	5	2	1	100@500	100
ZTX753	Zetex	E LINE	120	100	5	2	1	100@500	100
ZTX776	Zetex	E LINE	200	200	-	1	1	50@500	30
ZTX790A	Zetex	E LINE	50	40	5	2	1.5	250@500	100
ZTX1147A	Zetex	E LINE	15	12	5	4	1	200@2A	115
ZTX1149A	Zetex	E LINE	30	25	5	3	1	195@2A	135
ZTX1151A	Zetex	E LINE	45	40	5	3	1	180@2A	115

	Order code	1+	25+	100+	500+
BC461	**81-0056**	**0.35**	**0.32**	**0.28**	**0.24**
ZTX549	**81-0374**	**0.21**	**0.18**	**0.14**	**0.12**
ZTX550	**81-0212**	**0.22**	**0.19**	**0.15**	**0.12**
ZTX551	**81-0214**	**0.25**	**0.20**	**0.13**	**0.11**
ZTX705	**81-0232**	**0.35**	**0.30**	**0.23**	**0.20**
ZTX751	**81-0236**	**0.32**	**0.29**	**0.25**	**0.21**
ZTX753	**81-0238**	**0.40**	**0.35**	**0.28**	**0.24**
ZTX776	**81-0380**	**0.28**	**0.23**	**0.17**	**0.12**
ZTX790A	**81-0242**	**0.35**	**0.30**	**0.23**	**0.20**
ZTX1147A	**82-2134**	**0.46**	**0.40**	**0.308**	**0.28**
ZTX1149A	**82-2136**	**0.46**	**0.40**	**0.308**	**0.28**
ZTX1151A	**82-2138**	**0.46**	**0.40**	**0.308**	**0.28**

High power silicon NPN transistors

Extended range

A range of high power silicon NPN transistors.

Technical specification Device	Man	Case style	Volts (max) Vcb	Vce	Veb	Ic (max) A	Ptot (max)	hFE(min) @Ic mA	fT (min) MHz
2N3055	CDIL	TO-3	100	60	7	15A	117W	20@4A	2.5
2N3055H	-	TO-3	100	100	7	15A	100W	20@4A	2.5
2SC3264	Sanyo	MT-200	230	230	5	17A	200W	50@5A	3.5
2SC4382	Sanyo	TO-220	200	200	6	2A	25	60@700	15
2SC5200	Toshiba	TO3	230	230	5	15A	150W	80@1A	30
2SD1459	Sanyo	TO-220	150	150	5	1.5A	30W	50@1A	8
BD131	-	TO-126	70	45	6	3A	11W	40 @ 500	60
BD135	CDIL	TO-126	45	45	5	1.5A	12.5W	40@150	-
BD139		TO-126	100	80	5	1.5A	12.5W	40@150	-
BD237	ST	SOT-32	100	80	5	2A	25W	40@150	-
BD435	ST	SOT-32	32	32	5	4A	36W	40@10	-
BD437	ST	TO-126	45	45	5	4A	36W	40@2A	3
BD679	ST	TO-126	80	80	5	4A	40W	1@1.5A	-
BDW93C	ST	TO-220	100	100	-	12A	80W	750@5A	-
BU208A	ST	TO3-B	-	700	10	8A	150W	-	7
BU508AFI	Philips	SOT-199	-	700	-	8A	34W	6@100	7
MJE340	CDIL	TO-126	-	300	3	500	20W	30@50	-
TIP29A	-	TO-220	60	60	5	1A	30W	40@200	3
TIP29C	Samsung	TO-220	100	100	5	1A	30W	40@200	3
TIP31A	CDIL	TO-220	60	60	5	3A	40W	10@1A	3
TIP31C	CDIL	TO-220	100	100	5	3A	40W	10@1A	3
TIP41A	CDIL	TO-220	60	60	5	6A	65W	15@3A	3
TIP47	Samsung	TO-220	350	250	5	1A	40W	30@300	10
TIP120	CDIL	TO-220	60	60	5	5A	65W	1000@3A	-
TIP121	CDIL	TO-220	80	80	5	5A	65W	1000@3A	-
TIP122	CDIL	TO-220	100	100	5	5A	65W	1000@3A	-
TIP141	ST	TO-218	80	80	5	10A	125W	1000@5A	-
TIP142	ST	TO-218	100	100	5	10A	125W	1000@5A	-
TIP3055	ST	TO-218	100	60	1.8	15A	90W	15	

	Order code	1+	25+	100+	500+
2N3055	**81-0266**	**0.55**	**0.49**	**0.38**	**0.35**
2N3055H	**81-0268**	**0.75**	**0.64**	**0.59**	**0.55**
2SC3264	**81-0286**	**4.48**	**3.90**	**3.20**	**2.54**
2SC4382	**81-0300**	**0.91**	**0.75**	**0.63**	**0.50**
2SC5200	**81-0290**	**2.32**	**1.81**	**1.34**	**1.18**
2SD1459	**81-0296**	**0.49**	**0.42**	**0.31**	**0.24**
BD131	**81-0090**	**0.38**	**0.35**	**0.30**	**0.26**
BD135	**81-0094**	**0.25**	**0.21**	**0.16**	**0.13**
BD139	**81-0098**	**0.25**	**0.21**	**0.16**	**0.13**
BD237 *NEW*	**81-0400**	**0.68**	**0.31**	**0.23**	**0.14**
BD435 *NEW*	**81-0404**	**0.57**	**0.25**	**0.18**	**0.145**
BD437	**81-0102**	**0.25**	**0.21**	**0.16**	**0.13**
BD679	**81-0106**	**0.25**	**0.21**	**0.17**	**0.14**
BDW93C	**81-0110**	**0.45**	**0.41**	**0.36**	**0.28**
BU208A	**81-0126**	**1.10**	**0.97**	**0.85**	**0.75**
BU508AFI	**81-0130**	**1.40**	**1.18**	**0.96**	**0.89**
MJE340	**81-0138**	**0.28**	**0.25**	**0.22**	**0.17**
TIP29A	**81-0148**	**0.28**	**0.23**	**0.19**	**0.16**
TIP29C	**81-0150**	**0.40**	**0.32**	**0.26**	**0.20**
TIP31A	**81-0154**	**0.30**	**0.26**	**0.19**	**0.14**
TIP31C	**81-0156**	**0.28**	**0.24**	**0.19**	**0.16**
TIP41A	**81-0162**	**0.38**	**0.31**	**0.25**	**0.19**
TIP47	**81-0166**	**0.35**	**0.30**	**0.26**	**0.22**
TIP120	**81-0168**	**0.28**	**0.26**	**0.22**	**0.165**
TIP121	**81-0170**	**0.32**	**0.28**	**0.20**	**0.16**
TIP122	**81-0172**	**0.24**	**0.22**	**0.20**	**0.17**
TIP141	**81-0180**	**0.80**	**0.73**	**0.64**	**0.51**
TIP142	**81-0190**	**0.80**	**0.73**	**0.64**	**0.51**
TIP3055	**81-0196**	**0.60**	**0.57**	**0.52**	**0.42**

High power silicon PNP transistors

Extended range

A range of high power, silicon PNP transistors.

Technical specification

Device	Man	Case style	Volts (max) Vcb	Vce	Veb	Ic (max) mA	Ptot (max)	hFE (min) @ Ic (mA)	fT (min) MHz
2SA1295	Sanken	MT-200	200	200	5	17A	200W	50@5A	35
2SA1668	Sanken	TO-280	200	200	6	2A	25W	60@700	20
2SA1943	Toshiba	TO-3PBL	230	230	5	15A	150W	80@1A	30
2SB1037	Sanyo	TO-220	150	150	5	1.5A	30W	50@1A	8
BD132	-	TO-126	45	45	4	3A	11W	40 @ 500	60
BD136	CDIL	TO-126	45	45	5	1.5A	12.5W	40@150	-
BD140	Philips	TO-126	100	80	5	1.5	8W	40@150	75
BD238	ST	SOT-32	100	80	5	2A	25W	40@150	
BD436	ST	SOT-32	32	32	5	4A	36W	40@10	
BD438	ST	TO-126	45	45	5	4A	36W	40@2A	3
BD680	Samsung	TO-126	100	80	3	6A	40W	2200@500	-
BDW94C	ST	TO-220	100	100	-	12A	80W	750@5A	-
MJE350	CDIL	TO-126	-	300	3	500	20W	30@50	-
MJ2955	ST	TO-3	100	60	7	15A	150W	5	
TIP32A	Samsung	TO-220	60	60	5	3A	40W	25@1A	3
TIP32C	CDIL	TO-220	100	100	5	3A	40W	10@1A	3
TIP42A	Samsung	TO-220	60	60	5	6A	65W	15@3A	3
TIP125	CDIL	TO-220	60	60	5	5A	65W	1000@3A	-
TIP126	CDIL	TO-220	80	80	5	5A	65W	1000@3A	-
TIP127	CDIL	TO-220	100	100	5	5A	65W	1000@3A	-
TIP147	ST	TO-218	100	100	5	10A	125W	1000@5A	-
TIP2955	ST	TO-218	100	100	1.8	15A	90W	15@1A	3

	Order code	1+	25+	100+	500+
2SA1295	**81-0288**	**4.48**	**3.97**	**3.20**	**2.54**
2SA1668	**81-0302**	**0.98**	**0.84**	**0.63**	**0.54**
2SA1943	**81-0292**	**2.32**	**1.93**	**1.34**	**1.18**
2SB1037	**81-0298**	**0.76**	**0.65**	**0.48**	**0.39**
BD132	**81-0092**	**0.38**	**0.35**	**0.30**	**0.26**
BD136	**81-0096**	**0.25**	**0.21**	**0.16**	**0.13**
BD140	**81-0100**	**0.25**	**0.21**	**0.16**	**0.13**
BD238 *NEW*	**81-0402**	**0.68**	**0.31**	**0.23**	**0.14**
BD436 *NEW*	**81-0406**	**0.16**	**0.14**	**0.13**	**0.12**
BD438	**81-0104**	**0.28**	**0.24**	**0.18**	**0.15**
BD680	**81-0108**	**0.22**	**0.19**	**0.155**	**0.13**
BDW94C	**81-0112**	**0.48**	**0.44**	**0.37**	**0.29**
MJE350	**81-0140**	**0.28**	**0.26**	**0.22**	**0.17**
MJ2955	**81-0136**	**0.75**	**0.68**	**0.57**	**0.45**
TIP32A	**81-0158**	**0.28**	**0.24**	**0.19**	**0.16**
TIP32C	**81-0160**	**0.30**	**0.26**	**0.195**	**0.17**
TIP42A	**81-0164**	**0.40**	**0.34**	**0.26**	**0.20**
TIP125	**81-0174**	**0.28**	**0.26**	**0.165**	**0.165**
TIP126	**81-0176**	**0.28**	**0.26**	**0.22**	**0.165**
TIP127	**81-0178**	**0.35**	**0.31**	**0.24**	**0.19**
TIP147	**81-0192**	**0.80**	**0.74**	**0.64**	**0.51**
TIP2955	**81-0194**	**0.70**	**0.65**	**0.58**	**0.49**

Darlington NPN transistors

Extended range

A range of NPN darlington transistors.

Technical specification

Device	Mnfr	Case	Volts max Vcb	Vce	Vbe	IC max mA	Ptot W	hFE min @ ICmA	Ft Mhz
MPSA13	Fair	TO-92(B)	30	30	10	500	0.625	5@10	125
MPSA14	Fair	TO-92(B)	30	30	10	1200	0.6	20000	100
MPSA27	Fair	TO-92B	60	60	10	800	0.6	10000	100
BDX33C	ST	TO-220	100	100	2.5	10A	70	750@3A	-
BCX38B	Zetex	E-Line	80	60	10	800	1	2000@100	100
BDX53C	ST	TO-220	100	100	5	8A	60	750@3A	-
BDW93C	ST	TO-220	100	100	4	12A	80	750@5A	-
TIP112	ST	TO-220	100	100	5	2A	2	1000@1A	-
TIP120	Cdil	TO-220	60	60	5	5A	65	1000@3A	-
TIP121	Cdil	TO-220	80	80	5	5A	65	1000@3A	-
TIP122	Cdil	TO-220	100	100	5	5A	65	1000@3A	-
TIP142	ST	TO-218	100	100	5	10A	125	1000@5A	-
ZTX600	Zetex	E-Line	160	140	10	1A	1	2000@500	150
ZTX600B	Zetex	E-Line	160	140	10	1A	1	10000@500	150
ZTX603	Zetex	E-Line	80	80	-	1A	1	5000@500	150
ZTX605	Zetex	E-Line	140	120	10	1A	1	5000@500	150
BD677	ST	SOT-32	60	60	5	6A	40	750@1.5A	-
BD679	ST	TO-126	80	80	5	4A	40	1@1.5A	-

Type	Order code	1+	25+	100+	500+
MPSA13	**81-0142**	**0.06**	**0.05**	**0.032**	**0.025**
MPSA14	**81-0310**	**0.12**	**0.10**	**0.08**	**0.06**
MPSA27	**81-0312**	**0.12**	**0.10**	**0.065**	**0.05**
BDX33C *NEW*	**81-0428**	**0.95**	**0.72**	**0.65**	**0.44**
BCX38B	**81-0084**	**0.19**	**0.17**	**0.135**	**0.105**
BDX53C *NEW*	**81-0424**	**0.84**	**0.54**	**0.42**	**0.27**
BDW93C	**81-0110**	**0.45**	**0.41**	**0.36**	**0.28**
TIP112 *NEW*	**81-0432**	**0.57**	**0.38**	**0.31**	**0.21**
TIP120	**81-0168**	**0.28**	**0.26**	**0.22**	**0.165**
TIP121	**81-0170**	**0.32**	**0.28**	**0.20**	**0.16**
TIP122	**81-0172**	**0.24**	**0.22**	**0.20**	**0.17**
TIP141	**81-0180**	**0.80**	**0.73**	**0.64**	**0.51**
TIP142	**81-0190**	**0.80**	**0.73**	**0.64**	**0.51**
ZTX600	**81-0216**	**0.35**	**0.30**	**0.23**	**0.18**
ZTX600B	**81-0218**	**0.35**	**0.30**	**0.23**	**0.18**
ZTX603	**81-0372**	**0.48**	**0.39**	**0.26**	**0.21**
ZTX605	**81-0220**	**0.37**	**0.32**	**0.24**	**0.19**
BD677 *NEW*	**81-0420**	**0.65**	**0.26**	**0.19**	**0.15**
BD679	**81-0106**	**0.25**	**0.21**	**0.17**	**0.14**

Darlington PNP transistors

Extended range

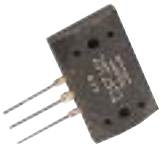
A range of PNP darlington transistors.

Technical specification

Device	Mnfr	Case	Volts max Vcb	Vce	Vbe	IC max mA	Ptot W	hFE min @ ICmA	Ft Mhz
BDX34B	ST	TO-220	100	100	2.5	10A	70	750@3A	-
BDX54B	ST	TO-220	100	100	5	8A	60	750@3A	-
MPSA63	Fair	TO-92(B)	30	30	10	100	0.35	20000@100	125
BDW94C	ST	TO-220	100	100	4	12A	80	750@5A	-
TIP117	ST	TO-220	100	100	5	2A	50	1000@1A	-
TIP125	Cdil	TO-220	60	60	5	5A	65	1000@3A	-
TIP126	Cdil	TO-220	80	80	5	5A	65	1000@3A	-
TIP127	Cdil	TO-220	100	100	5	5A	65	1000@3A	-
TIP147	ST	TO-218	100	100	5	10A	125	1000@5A	-
BD678	ST	SOT-32	100	100	5	4A	40	750@2A	-
ZTX705	Zetex	E-line	140	120	10	1A	1	3000@1A	160
ZTX712	Zetex	E-line	60	60	-	800	1	3000	

Type	Order code	1+	25+	100+	500+
BDX34C *NEW*	**81-0430**	**0.84**	**0.54**	**0.42**	**0.27**
BDX54C *NEW*	**81-0426**	**0.84**	**0.54**	**0.42**	**0.27**
MPSA63	**81-0314**	**0.12**	**0.10**	**0.065**	**0.05**
BDW94C	**81-0112**	**0.48**	**0.44**	**0.37**	**0.29**
TIP117 *NEW*	**81-0434**	**0.28**	**0.27**	**0.24**	**0.22**
TIP125	**81-0174**	**0.28**	**0.26**	**0.165**	**0.165**
TIP126	**81-0176**	**0.28**	**0.26**	**0.22**	**0.165**
TIP127	**81-0178**	**0.35**	**0.31**	**0.24**	**0.19**
TIP147	**81-0192**	**0.80**	**0.74**	**0.64**	**0.51**
BD678 *NEW*	**81-0422**	**0.56**	**0.26**	**0.19**	**0.15**
ZTX705	**81-0232**	**0.35**	**0.30**	**0.23**	**0.20**
ZTX715	**81-0378**	**0.28**	**0.23**	**0.15**	**0.124**

Complementary high power audio transistors — Sanken/Sanyo/Toshiba



A range of complementary high power transistors intended for audio applications, but also suitable for general switching type applications. All types have a wide SOA (safe operating area), the Sanyo devices feature built-in ballast resistors for this reason, and can be used in the most demanding applications. The Sanken devices feature a multi-emitter construction for excellent high frequency response. The Sanken MT200 package features two hole fixing to ensure good thermal contact with the heatsink. Devices 2SC4388 and 2SA1673 have an isolated package for ease of assembly requiring no heatsink compound.

Technical specification

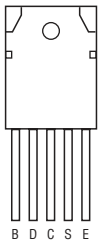
Device	Type	Case	V_{CB}	V_{CE}	V_{EB}	I_C	h_{FE}	f_T	Ptot	Order code
2SC4388	NPN	FM100	180	180	5	15A	50@3A	20MHz	90W	**81-0348**
2SA1673	PNP	FM100	180	180	5	15A	50@3A	20MHz	90W	**81-0350**
2SD1047*	NPN	T03PB	150	140	5	12A	100@1A	15MHz	100W	**81-0340**
2SB817*	PNP	T03PB	160	140	5	12A	100@1A	15MHz	100W	**81-0342**
2SC3519	NPN	MT100	160	160	5	15A	50@5A	50MHz	130W	**81-0336**
2SA1386	PNP	MT100	160	160	5	15A	50@5A	40MHz	130W	**81-0338**
2SC3263	NPN	MT100	230	230	5	15A	40@5A	60MHz	130W	**81-0328**
2SA1294	PNP	MT100	230	230	5	15A	40@5A	35MHz	130W	**81-0330**
2SC5200**	NPN	T03PBL	230	230	5	15A	80@1A	30MHz	150W	**81-0290**
2SA1943**	PNP	T03PBL	230	230	5	15A	80@1A	30MHz	150W	**81-0292**
2SC2922	NPN	MT200	180	180	5	17A	30@8A	50MHz	200W	**81-0320**
2SA1216	PNP	MT200	180	180	5	17A	30@8A	40MHz	200W	**81-0322**
2SC3264	NPN	MT200	230	230	5	17A	40@5A	60MHz	200W	**81-0286**
2SA1295	PNP	MT200	230	230	5	17A	40@5A	45MHz	200W	**81-0288**

* = Sanyo devices
** = Toshiba devices

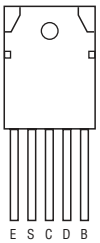
	Order code	1+	100+	500+
2SC4388	**81-0348**	**2.40**	**2.22**	**2.10**
2SA1673	**81-0350**	**3.18**	**2.80**	**2.52**
2SD1047	**81-0340**	**1.88**	**1.58**	**1.22**
2SB817	**81-0342**	**1.98**	**1.64**	**1.32**
2SC3519	**81-0336**	**2.40**	**2.22**	**2.10**
2SA1386	**81-0338**	**2.40**	**2.22**	**2.10**
2SC3263	**81-0328**	**2.90**	**2.68**	**2.40**
2SA1294	**81-0330**	**2.72**	**2.54**	**2.24**
2SC5200	**81-0290**	**2.32**	**1.81**	**1.34**
2SA1943	**81-0292**	**2.32**	**1.93**	**1.34**
2SC2922	**81-0320**	**4.68**	**4.38**	**3.96**
2SA1216	**81-0322**	**4.42**	**4.12**	**3.70**
2SC3264	**81-0286**	**4.48**	**3.90**	**3.20**
2SA1295	**81-0288**	**4.48**	**3.97**	**3.20**

SAP15 complementary power Darlington transistors — Sanken

A complementary pair of high power, high gain Darlington transistors featuring an in-built temperature sensor and on-built emitter resistors, and designed for high power amplifiers and general switching applications. Typical value for emitter resistance is 0.220Ω.



(NPN)



(PNP)

Technical specification

	Type	Vcb	Vce	Veb	I_A	Base current	Power dissipation	Diode forward current	DC gain (approx)
SAP15N	NPN	160V	160V	5.0V	15A	1A	150W	10mA	10000
SAP15P	PNP	-160V	-160V	-5.0V	-15A	-1A	150W	-10mA	10000

	Order code	1+	10+	25+	100+
NPN power Darlington	**81-0324**	**4.20**	**3.98**	**3.54**	**3.12**
PNP power Darlington	**81-0326**	**4.20**	**3.98**	**3.54**	**3.12**

Complementary high power Darlington transistors — Sanken

A complementary pair of Darlington high power audio and switching transistors that feature high current and high frequency characteristics with low distortion. Supplied in a MT100 package.

Technical specification

Device	Type	Case	V_{CB}	V_{CE}	V_{EB}	I_C	h_{FE} (max)	f_T	Ptot	Order code
2SD2390	NPN	MT100	160	150	5	10A	30000@7A	50MHz	100W	**81-0332**
2SB1560	PNP	MT100	160	150	5	10A	30000@7A	50MHz	100W	**81-0334**

	Order code	1+	100+	500+
2SD2390	**81-0332**	**1.66**	**1.52**	**1.36**
2SB1560	**81-0334**	**1.90**	**1.76**	**1.66**

Complementary audio driver/switching transistors — Sanyo

A range of complementary, high voltage audio driver and switching transistors for demanding applications. The 2SC4159/2SA1606 devices are housed in an isolated T0220ML package. 2SD1459/2SB1037 have a low output capacitance, and are housed in a T0220 package

Technical specification

Device	Type	Vce	Vcb	Ic	H_{fe} @10mA	f_T	Ptot	Case
2SC4159	NPN	160V	180V	1.5A	45min	100MHz	15W	TO220ML
2S1606	PNP	-160V	-180V	-1.5A	45min	100MHz	15W	TO220ML
2SD1459	NPN	150V	150V	1.5A	50 typ	8MHz	30W	TO220
2SB1037	PNP	-150V	-150V	-1.5A	50 typ	15MHz	30W	TO220

	Order code	1+	100+	500+
2SD1459	**81-0296**	**0.49**	**0.42**	**0.31**
2SB1037	**81-0298**	**0.76**	**0.65**	**0.48**
2SC4159	**81-0358**	**0.62**	**0.54**	**0.46**
2SA1606	**81-0356**	**0.92**	**0.79**	**0.67**

Common NPN transistor information

Type of transistor	Order code	Case	IC (max)	Vce mA	HFE (max)V	Power (min)	Application mW
BC107	81-0010	TO-18	200	45	100	600	Audio
BC108	81-0014	TO-18	200	25	100	600	General
BC548B	81-0066	TO-92(C)	100	30	180	500	General
BC109	81-0020	TO-18	200	25	200	600	Low noise audio
2N3904	81-0278	TO-92(B)	200	40	100	625	Switching
ZTX300	81-0198	E-LINE	500	25	50	300	General
2N3053	81-0264	TO-39	700	40	50	500	General
BFY51	81-0122	TO-39	1000	30	40	800	General
BC639	81-0080	TO-92(A)	1000	80	150	800	General
BFY52	81-0124	TO-39	1000	20	60	800	General
BC441	81-0054	TO-39	2000	60	40	1000	General
2N3055	81-0266	TO-3	15000	60	20	117000	High power

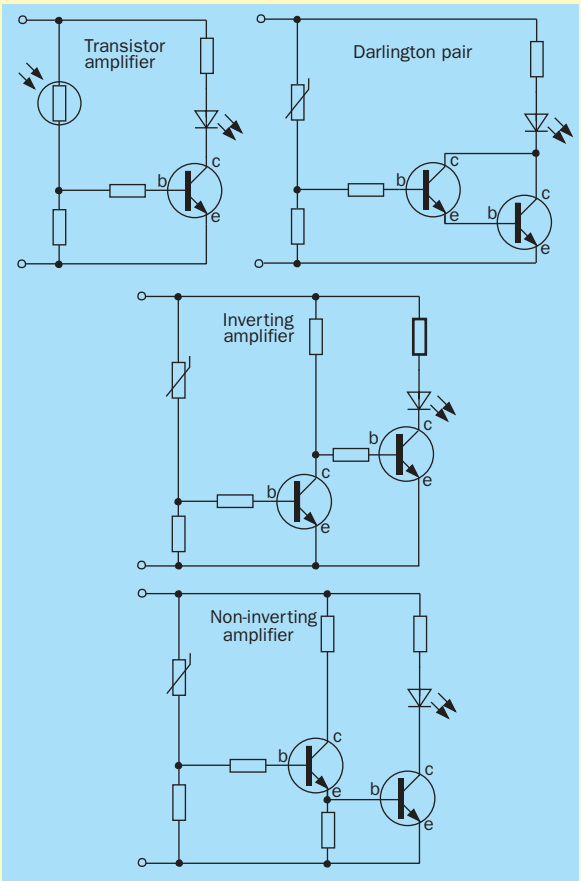
Common PNP transistor information

Type of transistor	Order code	Case	IC (max) mA	Vce (max)V	HFE (min)	Power mW	Application
BC178	81-0028	TO-18	200	25	120	600	General
BC327	81-0050	TO-92(C)	800	45	100	625	General
BC478	81-0060	TO-18	150	40	125	360	General
ZTX500	81-0208	E-LINE	500	25	50	300	General
2N2907A	81-0262	TO-18	600	60	100	400	General

Darlington pair

Type of transistor	Order code	Case	IC (max)	Vce mA	HFE (max)V	Power (min)	Application mW
TIP120	81-0168	TO-220	5000	60	1000	65000	General
BCX38B	81-0084	E-LINE	800	60	2000	1000	General
TIP121	81-0170	TO-220	5000	80	1000	65000	General

Useful transistor circuits



Unijunction transistors

Type	Manufr.	Case	Standard ratio	Interbase resistance KΩ	Max. emitter current	Emitter rev. current	Min. valley current
2N2646	-	T018	0.56-0.75	4.7 to 9.1	5µA	12µA @ 30V	4mA

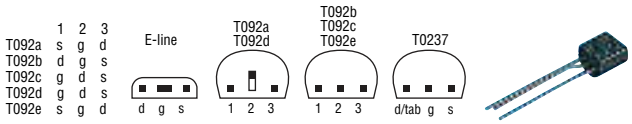
Type	Order code	1+	100+	500+
2N2646	**47-3380**	**0.95**	**0.78**	**0.69**

Programmable unijunction transistors

Type	Manufr.	Case	Max. point current @ RG=10K	Min. valley current @ RG=10K	pulsed output voltage Vo	Max. DC anode current
2N6027	ONS	T092B	5µA	70µA	6V min.	160mA

Manufr's code	Order code	1+	100+	500+
2N6027	**47-3348**	**0.30**	**0.23**	**0.19**

Low power MOSFET transistors



Technical specification

VDS V	N chan P chan	RDS (on) Ω	ID cont @ 25°C A	IDM pulsed A	PD @25°C W	Package	Manufacturer	Device
60	N	5.00	0.200	0.50	0.400	T092b	Temic	**2N7000**
60	N	5.00	0.270	3.00	0.625	E-line	Zetex	**ZVN3306A**
60	N	5.00	0.500	1.20	0.830	T092a		**BS170**
60	N	2.00	0.450	8.00	0.700	E-line	Zetex	**ZVN2106A**
60	N	1.50	0.600	8.00	0.700	E-line	Zetex	**ZVN4206A***
60	N	0.45	1.100	15.00	0.850	E-line	Zetex	**ZVN4306A***
60	P	14.00	0.160	1.60	0.625	E-line	Zetex	**ZVP3306A**
60	P	5.00	0.280	4.00	0.700	E-line	Zetex	**ZVP2106A**
100	N	1.80	0.450	6.00	0.700	E-line	Zetex	**ZVN4210A**
100	N	0.65	0.900	12.00	0.850	E-line	Zetex	**ZVN4310A***
100	P	8.00	0.230	3.00	0.700	E-line	Zetex	**ZVP2110A**
100	P	10.00	0.14	2.00	0.625	E-line	Zetex	**ZVP3310A**
200	N	28.00	0.250	0.50	0.350	T092e		**BS107**
200	P	10.00	0.012	1.00	0.750	E-line	Zetex	**ZVP4424A**
240	N	6.00	0.260	1.00	0.750	E-line	Zetex	**ZVN4424A***
240	P	10.00	0.045	1.00	0.700	E-line	Zetex	**ZVP44424A**
450	P	10.00	0.045	1.00	0.700	E-line	Zetex	**ZVP0545A**

*** Logic level device with optimised design for 5V drive**

	Order code	1+	25+	100+	250+
BS107	**47-0140**	**0.22**	**0.16**	**0.14**	**0.125**
BS170	**47-0142**	**0.15**	**0.11**	**0.08**	**0.07**
ZVP0545A	**47-4156**	**0.68**	**0.39**	**0.31**	**0.29**
ZVN2106A	**47-0156**	**0.40**	**0.30**	**0.24**	**0.22**
ZVN3306A	**47-0160**	**0.27**	**0.22**	**0.16**	**0.135**
ZVN4206A	**47-0162**	**0.46**	**0.38**	**0.30**	**0.26**
ZVN4210A	**47-0164**	**0.45**	**0.37**	**0.26**	**0.23**
ZVN4306A	**47-0166**	**0.65**	**0.57**	**0.40**	**0.37**
ZVN4310A	**47-0168**	**0.52**	**0.44**	**0.35**	**0.32**
ZVN4424A	**47-0170**	**0.51**	**0.43**	**0.32**	**0.31**
ZVP2106A	**47-0174**	**0.53**	**0.44**	**0.33**	**0.29**
ZVP2110A	**47-0176**	**0.42**	**0.33**	**0.25**	**0.23**
ZVP2120A	**47-4154**	**0.48**	**0.26**	**0.21**	**0.19**
ZVP3306A	**47-0178**	**0.35**	**0.29**	**0.21**	**0.175**
ZVP3310A	**47-4158**	**0.30**	**0.18**	**0.16**	**0.14**
ZVP4424A	**47-4150**	**0.58**	**0.31**	**0.24**	**0.22**
2N7000	**47-0180**	**0.18**	**0.13**	**0.105**	**0.09**

Power MOSFETs 20V to 80V TO-220 package – N channel

Technical specification

VDS V	RDS (on) Ω	ID cont. @ 25°C	IDM pulsed A	PD @ 25°C W	Manufacturer	Device
50	0.12	16.0	64	70	ST	**BUZ71A**
50	0.1	18.0	72	85	ST	**BUZ71**
50	0.055	27.0	108	90	ST	**BUZ11A**
30	0.024	45.0	180	86	Philips	**PHP45N03T**

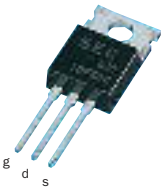
	Order code	1+	25+	100+	250+
BUZ11A	**47-0206**	**0.78**	**0.60**	**0.49**	**0.45**
BUZ71	**47-0210**	**0.60**	**0.44**	**0.32**	**0.29**
BUZ71A	**47-0212**	**0.45**	**0.36**	**0.28**	**0.26**
PHP45N03T	**47-0220**	**0.78**	**0.62**	**0.46**	**0.38**

Field effect transistors

Type	Manufr.	Pol/Mat	Case	Vds (max.) V	Vgs (max.) V	Vp (max.) V	Id (max.) mA	Ptot (Max.) mW	Gfs (min.)	Cis (max.)
J108	Fairchild	ND	TO02	25	25	10	80	350	–	15
J110	Fairchild	ND	TO92	25	25	4	10	350	–	15
BF244B	NSC	ND	TO92D	30	30	8	25	300	3-6.5	4
2N3819	NSC	ND	TO92E	25	25	8	–	360	2-6.5	8
2N5457	Fairchild	ND	TO92	25	25	6	10	350	–	10

Manufr's code	Order code	1+	100+	500+
J108	**47-3510**	**0.28**	**0.23**	**0.20**
J110	**47-3508**	**0.28**	**0.23**	**0.20**
BF244B	**47-3342**	**0.26**	**0.23**	**0.20**
2N3819	**47-3344**	**0.30**	**0.24**	**0.21**
2N5457	**47-3506**	**0.24**	**0.22**	**0.18**

Power MOSFETs 100V to 1000V TO-220 package



Technical specification

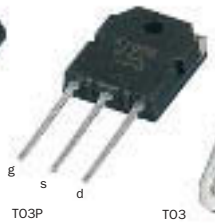
V_{DS} V	Type	R_{DS} (on) Ω	I_D cont. @ 25°C A	I_{DM} pulsed A	P_D @ 25°C W	Manufacturer	Device
100	N	0.23	10.0	40	70	ST	**IRF520**
100	N	0.25	11.0	44	40	ST	**BUZ72A**
100	N	0.12	16.0	64	90	ST	**IRF530**
100	N	0.065	30.0	120	100	ST	**IRF540**
200	N	0.4	10.0	40	100	ST	**IRF630**
200	N	0.15	18.0	72	125	ST	**IRF640**
400	N	1.0	5.5	22	73	Samsung	**IRF730A**
400	N	0.75	5.5	22	100	ST	**IRF730**
400	N	0.48	10.0	40	125	ST	**IRF740**
500	N	3.0	2.4	9.5	40	Siemens	**BUZ74**
500	N	1.35	4.5	18	100	ST	**IRF830**
500	N	0.75	8.0	32	125	ST	**IRF840**
1000	N	3.0	4.0	12	100	Toshiba	**25K1119**

	Order code	1+	25+	100+	250+
BUZ72A	**47-0272**	**0.48**	**0.42**	**0.32**	**0.26**
BUZ74	**47-0274**	**0.68**	**0.58**	**0.49**	**0.38**
IRF520	**47-0312**	**0.56**	**0.38**	**0.24**	**0.19**
IRF530	**47-0314**	**0.62**	**0.42**	**0.28**	**0.225**
IRF540	**47-0316**	**0.93**	**0.65**	**0.46**	**0.33**
IRF630	**47-0290**	**0.47**	**0.36**	**0.27**	**0.22**
IRF640	**47-0318**	**0.87**	**0.625**	**0.42**	**0.35**
IRF730A	**47-0294**	**0.45**	**0.36**	**0.27**	**0.24**
IRF730	**47-0320**	**0.64**	**0.46**	**0.31**	**0.27**
IRF740	**47-0322**	**0.89**	**0.72**	**0.58**	**0.42**
IRF830	**47-0324**	**0.71**	**0.49**	**0.33**	**0.27**
IRF840	**47-0326**	**0.95**	**0.66**	**0.43**	**0.39**
2SK1119	**47-0304**	**1.80**	**1.64**	**1.38**	**1.24**

Audio FETs

Semelab/Hitachi

TO247



TO3P

TO3

A range of high power devices specifically aimed at the audio industry.

Technical specification

V_{DS} V	R_{DS} (on) Ω	I_D cont @ 25°C A	P_D @ 25°C W	Package	Manufacturer	Device N-Channel	Device P-Channel
160	1.7	7	100	TO3P	Hitachi	**2SK1058***	**2SJ162***
160	1.5	8	125	TO3	Semelab	**BUZ900**	**BUZ905**
160	1.5	8	125	TO247	Semelab	**BUZ900P**	**BUZ905P**
160	0.75	16	250	TO3	Semelab	**BUZ900D**	**BUZ905D**
160	0.75	16	250	TO247	Semelab	**BUZ900DP**	**BUZ905DP**

*** Sold in pairs**

	Order code	1+	10+	25+	100+
BUZ900	**47-0370**	**5.50**	**4.95**	**4.50**	**3.70**
BUZ900D	**47-0372**	**8.60**	**7.80**	**7.20**	**5.80**
BUZ900DP	**47-0374**	**9.40**	**7.70**	**6.40**	**5.50**
BUZ900P	**47-0376**	**5.50**	**4.95**	**4.50**	**3.70**
BUZ905	**47-0378**	**5.50**	**4.95**	**4.50**	**3.70**
BUZ905D	**47-0380**	**8.60**	**7.80**	**7.20**	**5.80**
BUZ905DP	**47-0382**	**9.40**	**7.70**	**6.40**	**5.50**
BUZ905P	**47-0384**	**5.50**	**4.95**	**4.50**	**3.70**
2SK1058/2SJ162 Pair	**47-0386**	**7.90**	**6.70**	**5.80**	**4.90**

Lateral MOSFET audio drivers

Sanyo

A range of driver transistors intended for driving lateral MOSFETS in high quality audio applications. Their low Cob and high linear gain minimise the distortion caused by the Miller effect when working with high voltage swings. They have very low distortion and high breakdown voltages.

Technical specification

Device	Type	Vce	Vcb	Ic	H_{fe} @10mA	f_T	PTOT	Cob	Case
2SA1208	PNP	–120V	–180V	–70mA	140-400	150MHz	900mW	2.5pF	T092
2SC2910	NPN	160V	180V	70mA	140-400	150MHz	900mW	2.0pF	T092
2SA1209	PNP	–160V	–180V	–140mA	100-280	150MHz	10W	4.0pF	T0126
2SC2911	NPN	160V	180V	140mA	100-280	150MHz	10W	3.0pF	T0126

	Order code	1+	25+	100+	250+
2SA1208 PNP driver	**81-0344**	**0.39**	**0.32**	**0.27**	**0.21**
2SC2910 NPN driver	**81-0346**	**0.39**	**0.32**	**0.27**	**0.21**
2SA1209 PNP driver	**81-0352**	**0.62**	**0.54**	**0.46**	**0.38**
2SC2911 NPN driver	**81-0354**	**0.68**	**0.57**	**0.48**	**0.40**

Fully autoprotected power MOSFETs

ST

A range of fully autoprotected power MOSFETs, intended as replacements for standard power MOSFETs in DC to 50kHz applications. Built-in thermal shutdown, linear current limitation and overvoltage clamp protect the device in harsh environments. Housed in a standard TO-220 package, other features include:

- Short circuit protection
- Logic level input threshold
- ESD protection
- High noise immunity
- Schmitt trigger on input
- Low current drawn from input pin

Technical specification

Device	V_{CLAMP}	$R_{DS(on)}$	I_{lim}	P_{tot}
VNP5N07	70V	0.2Ω	5A	31W
VNP7N04	42V	0.14Ω	7A	31W
VNP10N06	60V	0.3Ω	10A	42W
VNP20N07	70V	0.05Ω	20A	83W
VNP35N07	70V	0.028Ω	35A	125W
VNP49N04	42V	0.02Ω	49A	125W

	Order code	1+	25+	100+	250+
VNP5N07	**47-0402**	**0.98**	**0.64**	**0.52**	**0.44**
VNP7N04	**47-0404**	**0.98**	**0.64**	**0.52**	**0.44**
VNP10N06	**47-0388**	**0.90**	**0.60**	**0.50**	**0.42**
VNP20N07	**47-0394**	**1.88**	**1.30**	**1.10**	**0.94**
VNP35N07	**47-0398**	**3.68**	**2.60**	**1.95**	**1.84**
VNP49N04	**47-0400**	**3.30**	**2.24**	**1.90**	**1.54**

N-channel power IGBT

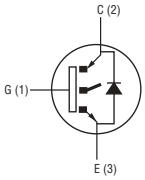
ST

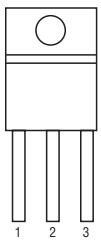
This advanced range of power IGBTs offers outstanding performance, optimised to achieve very low switching times for high frequency applications (<120kHz) such as motor control, smps and phase power control in both hard switch and resonant circuitry.

Features include:

- High input impedance
- Low on-voltage drop
- Low gate charge
- High current capability

Supplied in a standard TO-220 package.





Technical specification

Device	V_{CES}	$V_{CE(sat)}$	Ic	P_{TOT}
STGP3NB60HD*	600V	<2.8V	3A	70W
STGP7NB60HD*	600V	<2.8V	7A	80W

* includes ESD diode.

	Order code	1+	25+	100+	250+
STGP3NB60HD	**47-0454**	**1.48**	**1.20**	**0.98**	**0.72**
STGP7NB60HD	**47-0456**	**1.68**	**1.30**	**1.02**	**0.84**

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