

TABLE 7 : NPN/PNP MEDIUM POWER

The transistors shown in this table have been designed to operate and provide useful gain at current levels up to 1 amp with power dissipation capabilities of 1000 mW at 25°C ambient temperature. Typical application areas include: Audio Frequency Drivers and Output Stages, Relay Switching, etc.

Type	V _{CBO} V	V _{CEO} V	Max I _C mA	Max V _{CE(sat)} at			h _{FE} at			Min f _T at		P _{tot} at T _{amb} = 25°C mW	Complement
				V	I _C mA	I _B mA	Min	Max	I _C mA	MHz	I _C mA		
NPN													
ZTX455§	160	140	1000	0.7	150	15	100	300	150	100	50	1000	ZTX555
ZTX454	140	120	1000	0.7	150	15	100	300	150	100	50	1000	ZTX554
ZTX453§	120	100	1000	0.7	150	15	40	200	150	150	50	1000	ZTX553
ZTX452	100	80	1000	0.7	150	15	40	150	150	150	50	1000	ZTX552
MPSA06	80	80	500	0.25	100	10	50	—	100	100	10	750	MPSA56
ZTX451§	80	60	1000	0.35	150	15	50	150	150	150	50	1000	ZTX551
BFS61	80	60	1000	0.35	150	15	40	160	150	150	50	500	BFS98
MPSA05	60	60	500	0.25	100	10	50	—	100	100	10	750	MPSA55
ZTX450§	60	45	1000	0.25	150	15	100	300	150	50	50	1000	ZTX550
BFS60	60	40	1000	0.25	150	15	100	300	150	150	50	500	BFS97
BFS59	60	30	1000	0.35	150	15	40	300	150	150	50	500	BFS96
ZTX337	50	45	800	0.7	500	50	100	630	100	200*	10	750	ZTX537
BC337P	50	45	800	0.7	500	50	100	630	100	100	10	625	BC327P
ZTX449§	50	30	1000	0.5	1000	100	100	300	500	150	50	1000	ZTX549
ZTX338	30	25	800	0.7	500	50	100	630	100	200*	10	750	ZTX538
BC338P	30	25	800	0.7	500	50	100	630	100	100	10	625	BC328P
PNP													
ZTX557§	300	300	500	0.3	50	5	50	300	50	75	50	1000	—
ZTX556	200	200	500	0.3	50	5	50	300	50	75	50	1000	—
ZTX555§	160	150	1000	0.3	100	10	50	300	300	100	50	1000	ZTX455
ZTX554	140	125	1000	0.3	100	10	50	300	300	100	50	1000	ZTX454
ZTX553§	120	100	1000	0.7	150	15	40	200	150	150	50	1000	ZTX453
ZTX552	100	80	1000	0.7	150	15	40	150	150	150	50	1000	ZTX452
MPSA56	80	80	500	0.25	100	10	50	—	100	100	10	750	MPSA06
ZTX551§	80	60	1000	0.35	150	15	50	150	150	150	50	1000	ZTX451
BFS98	80	60	1000	0.35	150	15	40	160	150	150	50	500	BFS61
MPSA55	60	60	500	0.25	100	10	50	—	100	100	10	750	MPSA05
ZTX550§	60	45	1000	0.25	150	15	100	300	150	150	50	1000	ZTX450
BFS97	60	40	1000	0.265	150	15	100	300	150	150	50	500	BFS61
BFS96	60	30	1000	0.35	150	165	40	300	150	150	50	500	BFS59
ZTX537	50	45	800	0.7	500	50	100	630	100	200*	10	750	ZTX337
BC327P	50	45	800	0.7	500	50	100	630	100	100	10	625	BC337P
ZTX549§	35	25	1000	0.5	1000	100	100	300	500	100	100	1000	ZTX449
ZTX538	30	25	800	0.7	500	50	100	630	100	200*	10	750	ZTX338
BC328P	30	25	800	0.7	500	50	100	630	100	100	10	625	BC338P

* Typical.

§ Also available with centre collector lead form option. See centre collector section for details.

SEMICONDUCTOR DICE

NPN MEDIUM POWER

Dice type	V _{CB0}	V _{CE0}	I _{CB0}		h _{FE}			V _{CE(sat)}			Max.	f _T	C _{OB0}	Chip geometry
	Min.	Min.	Max.	at V _{CB}	at I _C		V _{CE}	at I _C		I _B	Min.	Max.		
	Volts	Volts	nA	Volts	Min.	Max.	mA	Volts	Volts	mA	mA	MHz	pF	
ZTX653	120	100	100	100	100	300	500	2	0.3	1000	100	140	—	G10
ZTX453	120	100	100	100	40	200	150	10	0.7	150	15	150	15	G9
ZT91	120	100	100	120	40	120	200	10	1.2	200	20	60	25	G9
2N1893	120	80	10	90	40	120	150	10	0.5	150	15	50	15	G9
ZTX652	100	80	100	80	100	300	500	2	0.3	1000	100	140	—	G10
ZTX452	100	80	100	80	40	150	150	10	0.7	150	15	150	15	G9
MPSA06	80	80	100	80	50	—	100	1	0.25	100	10	100	—	G9
ZTX651	80	60	100	60	100	300	500	2	0.3	1000	100	140	—	G10
ZTX451	80	60	100	60	50	150	150	10	0.35	150	15	150	15	G9
BFY50	80	35	500	80	30	—	150	10	0.20	150	15	60	12	G9
2N1613	75	50*	10	60	40	120	150	10	1.5	150	15	—	25	G9
2N1711	75	50*	10	60	100	300	150	10	1.5	150	15	70	15	G9
ZT90	60	60	10	60	60	200	200	10	0.7	200	20	60	25	G9
MPSA05	60	60	100	60	50	—	100	1	0.25	100	10	100	—	G9
ZTX650	60	45	100	45	100	300	500	2	0.3	1000	100	140	—	G10
ZTX450	60	45	100	45	100	300	150	10	0.25	150	15	150	15	G9
BFY51	60	30	500	60	40	—	150	10	0.35	150	15	50	12	G9
BC337A	50†	45	100§	45	100	250	100	1	0.7	500	50	100	12	G9
BC337B	50†	45	100§	45	160	400	100	1	0.7	500	50	100	12	G9
BC337C	50†	45	100§	45	250	630	100	1	0.7	500	50	100	12	G9
ZTX449	50	30	100	40	100	300	500	2	0.5	1000	100	150	15	G11
BFY52	40	20	500	40	60	—	150	10	0.35	150	15	50	12	G9
ZTX649	35	25	100	30	100	300	1000	2	0.3	1000	100	150	50	G10

†V_{CES} §I_{CES} *V_{CER}

PNP MEDIUM POWER

Dice type	V _{CB0}	V _{CE0}	I _{CB0}		h _{FE}			V _{CE(sat)}			Max.	f _T	C _{OB0}	Chip geometry
	Min.	Min.	Max.	at V _{CB}	at I _C		V _{CE}	at I _C		I _B	Min.	Max.		
	Volts	Volts	nA	Volts	Min.	Max.	mA	Volts	Volts	mA	mA	MHz	pF	
ZTX753	120	100	100	100	100	300	500	2	0.3	1000	100	100	—	G12
ZTX553	120	100	100	100	40	200	150	10	0.25	150	15	150	12	G11
ZTX752	100	80	100	80	100	300	500	2	0.3	1000	100	100	—	G12
ZTX552	100	80	100	80	40	150	150	10	0.7	150	15	150	25	G11
MPSA56	80	80	100	80	50	—	100	1	0.25	100	10	100	—	G11
ZTX751	80	60	100	60	100	300	500	2	0.3	1000	100	100	—	G12
ZTX551	80	60	100	60	50	150	150	10	0.35	150	15	150	25	G11
MPSA55	60	60	100	60	50	—	100	1	0.25	100	10	100	—	G11
ZTX750	60	45	100	45	100	300	500	2	0.3	1000	100	100	—	G12
ZTX550	60	45	100	45	100	300	150	10	0.25	150	15	150	25	G11
BC327A	50†	45	100§	45	100	250	100	1	0.7	500	50	100*	12	G11
BC327B	50†	45	100§	45	160	400	100	1	0.7	500	50	100*	12	G11
BC327C	50†	45	100§	45	250	630	100	1	0.7	500	50	100*	12	G11
ZTX749	35	25	100	30	100	300	1000	2	0.3	1000	100	100	100	G12
ZTX549	35	25	100	30	100	300	500	2	0.5	1000	100	100	25	G11

†V_{CES} §I_{CES} *Typical values