

# PNP GENERAL PURPOSE

**TABLE 2 – PNP SILICON PLANAR GENERAL PURPOSE TRANSISTORS**

The devices shown in this table are general purpose transistors designed for small and medium signal amplification from d.c. to radio frequencies. Typical application areas include: AUDIO FREQUENCY AMPLIFIERS, DRIVERS and OUTPUT STAGES, OSCILLATORS, and GENERAL PURPOSE SWITCHES.

The transistors are listed in order of decreasing breakdown voltages ( $V_{CB0}$  and  $V_{CE0}$ ), then order of decreasing collector current ( $I_C$ ), power dissipation ( $P_{tot}$ ) etc.

Type	$V_{CB0}$ V	$V_{CE0}$ V	Max $I_C$ mA	Max $V_{CE(sat)}$ at			$h_{FE}$ at			Min $f_T$ at		$P_{tot}$ at $T_{amb} = 25^\circ C$ mW	Complement
				V	$I_C$ mA	$I_B$ mA	Min	Max	$I_C$ mA	MHz	$I_C$ mA		
MPSA56	80	80	500	0.25	100	10	50	—	100	100	10	750	MPSA06
BC556P	80	65	200	0.25	10	0.5	75	450	2	150*	10	500	BC546P
ZTX551	80	60	1000	0.25	150	15	50	150	150	150	50	1000	ZTX451
BFS98	80	60	1000	0.35	150	15	40	160	150	150	50	500	BFS61
ZTX504	70	70	500	0.6	50	5	50	300	10	150	10	300	ZTX304
MPS2907A	60	60	600	1.6	500	50	100	300	150	200	50	500	MPS2222A
MPSA55	60	60	500	0.25	100	10	50	—	100	100	10	750	MPSA05
BCY77P	60	60	100	0.25	10	0.25	120	460	2	180*	10	1000†	BCY65EP
ZTX212	60	50	200	0.25	10	0.5	60	400	2	200	10	500	ZTX107
BC212P	60	50	200	0.6	100	5	60	400	2	200	10	300	BC182P
ZTX550	60	45	1000	0.25	150	15	100	300	150	150	50	1000	ZTX450
BFS97	60	40	1000	0.25	150	15	100	300	150	50	150	500	BFS60
MPS2907	60	40	600	1.6	500	50	100	300	150	200	50	500	MPS2222
BFS96	60	30	1000	0.35	150	15	40	300	150	150	50	500	BFS59
BC557P	50	45	200	0.25	10	0.5	75	450	2	150*	10	500	BC547P
BC177P	50	45	200	0.2	10	0.5	120	460	2	130	10	300	BC107P
BC307P	50	45	200	0.2	10	0.5	120	460	2	130*	10	300	BC237P
MPS3703 } ZTX3703 }	50	30	500	0.25	50	5	30	150	50	100	50	500	MPS3704 ZTX3704 MPS3705 ZTX3705
ZTX503	45	45	500	0.35	50	5	50	300	10	150	10	300	ZTX303

\*Typical †at  $T_{case} = 45^\circ C$

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# MEDIUM POWER

**TABLE 7 – NPN/PNP SILICON PLANAR MEDIUM POWER TRANSISTORS**

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 in excess of 500 mW at 25°C ambient temperature.

Typical application areas include: Audio Frequency Drivers and Output Stages, Relay Switching, etc.

The transistors are listed in order of decreasing breakdown voltages ( $V_{CB0}$  and  $V_{CEO}$ ), then order of decreasing current ( $I_C$ ), power dissipation ( $P_{tot}$ ) etc.

Type	$V_{CB0}$ V	$V_{CEO}$ V	Max $I_C$ mA	Max $V_{CE(sat)}$ at			$h_{FE}$ at			Min $f_T$ at		$P_{tot}$ at $T_{amb} = 25^\circ C$ mW	Complement
				V	$I_C$ mA	$I_B$ mA	Min	Max	$I_C$ mA	MHz	$I_C$ mA		
<b><u>NPN</u></b>													
ZTX453	120	100	1000	0.7	150	15	40	200	150	150	50	1000	—
ZTX452	100	80	1000	0.7	150	15	40	150	150	150	50	1000	—
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
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
ZTX337	50	45	1000	0.7	500	50	100	630	100	200*	10	750	ZTX537
BC337P	50	45	1000	0.7	500	50	100	630	100	100	10	625	BC327P
ZTX338	30	25	1000	0.7	500	50	100	630	100	200*	10	750	ZTX538
BC338P	30	25	1000	0.7	500	50	100	630	100	100	10	625	BC328P
<b><u>PNP</u></b>													
MPSA56	80	80	500	0.25	100	10	50	—	100	100	10	750	MPSA06
ZTX551	80	60	1000	0.25	150	15	50	150	150	150	50	1000	ZTX451
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
ZTX537	50	45	1000	0.7	500	50	100	630	100	200*	10	750	ZTX337
BC327P	50	45	1000	0.7	500	50	100	630	100	100	10	625	BC337P
ZTX538	30	25	1000	0.7	500	50	100	630	100	200*	10	750	ZTX338
BC328P	30	25	1000	0.7	500	50	100	630	100	100	10	625	BC338P

\*Typical