

# PNP SWITCHING

**TABLE 4 — SILICON PLANAR MEDIUM AND HIGH SPEED SWITCHING TRANSISTORS**  
The devices shown in this table are characterised for medium and high speed switching applications in Commercial, Industrial and Military equipments.

The devices are listed in order of decreasing Breakdown Voltage ( $V_{CE0}$ ), decreasing Collector Current ( $I_C$ ), Power Dissipation ( $P_{tot}$ ), etc.

Type	$V_{CE0}$ V	Max $I_C$ mA	Max $V_{CE(sat)}$ at			$h_{FE}$ at			$f_T$ Min at		Switching times (Max.) at			Package	Comple- ment
			V	$I_C$ mA	$I_B$ mA	Min	Max	$I_C$ mA	MHz	$I_C$ mA	$t_{on}$ ns	$t_{off}$ ns	$I_C$ mA		
BSV17	80	1000	1.0	500	25	40	100	100	50	50	500	650	100	TO-39	—
ZT189	70	500	0.2	50	5	75	250	10	150	10	120*	250*	20	TO-18	ZT89
2N4036	65	1000	0.65	150	15	40	140	150	—	—	110	700	150	TO-39	2N2102
BFX30	65	600	0.4	150	15	50	200	10	200	50	50	290	100	TO-39	—
2N2904A	60	600	0.4	150	15	40	120	150	200	50	45	100	150	TO-39	2N2218A
BFX29	60	600	0.4	150	15	40	120	150	100	50	60	150	150	TO-39	—
2N2905A	60	600	0.4	150	15	100	300	150	200	50	45	100	150	TO-39	2N2219A
BSV16	60	1000	1.0	500	25	40	100	100	50	50	500	650	100	TO-39	—
2N2906A	60	600	0.4	150	15	40	120	150	200	50	45	100	150	TO-18	2N2221A
2N2907A	60	600	0.4	150	15	100	300	150	200	50	45	100	150	TO-18	2N2222A
BCY77	60	100	0.25	10	0.25	120	460	2	180*	10	150	800	10	TO-18	BCY65E
BFX87	50	600	0.4	150	15	40	120	150	100	50	60	150	150	TO-39	—
ZT183	45	500	0.4	50	5	38	85	10	150	10	120*	250*	20	TO-18	ZT83
ZT184	45	500	0.4	50	5	75	170	10	150	10	120*	250*	20	TO-18	ZT84
BCY79	45	200	0.25	10	0.25	120	460	2	180*	10	150	800	10	TO-18	BCY59
BFX88	40	600	0.4	150	15	40	120	150	100	50	60	150	150	TO-39	—
2N2904	40	600	0.4	150	15	40	120	150	200	50	45	100	150	TO-39	2N2218
BSV15	40	1000	1.0	500	25	40	100	100	50	50	500	650	100	TO-39	—
2N2905	40	600	0.4	150	15	100	300	150	200	50	45	100	150	TO-39	2N2219
2N2906	40	600	0.4	150	15	40	120	150	200	50	45	100	150	TO-18	2N2221
2N2907	40	600	0.4	150	15	100	300	150	200	50	45	100	150	TO-18	2N2222
ZT181	35	500	0.2	10	1	38	162	10	150	10	120*	250*	20	TO-18	ZT81
ZT182	35	500	0.2	10	1	75	260	10	150	10	120*	250*	20	TO-18	ZT82
BCY78	32	200	0.25	10	0.25	120	630	2	180*	10	150	800	10	TO-18	BCY58
ZT180	25	500	0.2	10	1	38	162	10	150	10	120*	250*	20	TO-18	ZT80
ZT187	25	500	0.2	10	1	75	250	10	150	70	120*	250*	20	TO-18	ZT87
2N2894	12	200	0.15	10	1	40	150	30	400	30	60	90	30	TO-18	—

\*Typical