

# SEMICONDUCTOR DICE

## NPN SWITCHING TRANSISTORS

Dice type	V <sub>CB0</sub>	V <sub>CE0</sub>	t <sub>ON</sub>	t <sub>OFF</sub>	h <sub>FE</sub>			V <sub>CE(sat)</sub>			Max.	f <sub>T</sub>	C <sub>OB0</sub>	Chip geometry
	Min.	Min.	Max.	Max.	at	I <sub>C</sub>	V <sub>CE</sub>	at	I <sub>C</sub>	I <sub>B</sub>	Min.	Max.	pF	
	Volts	Volts	ns	ns	Min.	Max.	mA	Volts	Volts	mA	mA	MHz		
2N2218A	75	40	35	285	40	120	150	10	0.3	150	15	250	8	G4
2N2219A	75	40	35	285	100	300	150	10	0.3	150	15	300	8	G4
2N2221A	75	40	35	285	40	120	150	10	0.3	150	15	250	8	G4
2N2222A	75	40	35	285	100	300	150	10	0.3	150	15	300	8	G4
2N3904	60	40	70	250	100	300	10	1	0.3	50	5	300	4	G3
2N2218	60	30	25*	175*	40	120	150	10	0.4	150	15	250	8	G4
2N2219	60	30	25*	200*	100	300	150	10	0.4	150	15	250	8	G4
2N2221	60	30	25*	175*	40	120	150	10	0.4	150	15	250	8	G4
2N2222	60	30	25*	200*	100	300	150	10	0.4	150	15	250	8	G4
2N2369	40	15	12	18	40	120	10	1	0.24	10	1	—	4	G5
2N2369A	40	15	12	18	—	120	10	1	0.2	10	1	—	4	G5
ZTX314	40	15	200	20	40	120	10	1	0.2	10	1	500	4	G5
ZTX313	40	15	200	20	40	120	10	1	0.24	10	1	500	4	G5
ZTX312	30	12	200	20	40	—	10	1	0.24	10	1	400	4	G5
ZTX311	20	15	200	15	50	200	10	0.35	—	—	—	200	4	G5
ZTX310	25	12	200	15	20	—	10	1	0.6	10	1	200	4	G5

\* Typical

## PNP SWITCHING TRANSISTORS

Dice type	V <sub>CB0</sub>	V <sub>CE0</sub>	t <sub>ON</sub>	t <sub>OFF</sub>	h <sub>FE</sub>			V <sub>CE(sat)</sub>			Max.	f <sub>T</sub>	C <sub>OB0</sub>	Chip geometry
	Min.	Min.	Max.	Max.	at	I <sub>C</sub>	V <sub>CE</sub>	at	I <sub>C</sub>	I <sub>B</sub>	Min.	Max.	pF	
	Volts	Volts	ns	ns	Min.	Max.	mA	Volts	Volts	mA	mA	MHz		
2N2907A	60	60	45	100	100	300	150	10	0.4	150	15	200	8	G6
2N2907	60	40	45	100	100	300	150	10	0.4	150	15	200	8	G6
BCY70	50	40	65	420	100	300	1.0	1	0.5	50	5	250	6	G7
BCY71	45	45	—	—	100	300	1.0	1	0.5	50	5	—	6	G7
BCY72	30	25	65	420	100	300	1.0	1	0.5	50	5	250	6	G7
2N4403	40	40	35	255	100	300	150	2	0.4	150	15	200	9	G6
2N3906	40	40	70	300	100	300	10	1	0.4	50	5	250	5	G7
2N2894	12	12	60	90	40	150	30	0.5	0.2	30	3	400	6	G8
ZTX510	12	12	60	90	40	150	30	0.5	0.2	30	3	400	6	G8