



# MOLD TYPE BIPOLAR TRANSISTORS

## Ratings and Specifications

### 5 High voltage high speed switching transistors

- The transistor is best suited for use with 240V AC input switching regulators.
- Can operate within the 30kHz range

Device type	V <sub>CB0</sub>	V <sub>CE0</sub>	V <sub>CE0</sub>	I <sub>c</sub>	P <sub>c</sub>	h <sub>FE</sub>	I <sub>c</sub>	V <sub>CE</sub>	Switching time (Max.)			Package	Net mass	Equivalent circuit
	Volts	Volts	(sus) Volts	cont. Amps	Watts				min.	Amps	Volts			
	Volts	Volts	Volts	Amps	Watts	min.	Amps	Volts	μsec.	μsec.	μsec.		Grams	Page 31
2SC3505	900	700	700	6	80	10	2	5	1.0	5.0	1.0	TO-3P	6	—
2SD2234	1500	700	700	3	40	18	0.6	5	1.0	4.0	0.5	TO-220F17	2.5	—
2SD2047	1500	700	700	5	80	18	1	5	1.0	3.0	0.5	TO-3PF	6	—
2SC3866	900	800	800	3	40	10	1	5	1.0	4.0	0.8	TO-220F17	2.5	—
2SC3549	900	800	800	3	40	10	1	5	1.0	4.0	0.8	TO-220AB	2	—
2SC3550	900	800	800	3	80	10	1	5	1.0	4.0	0.8	TO-3P	6	—
2SC4603	900	800	800	3	80	10	1	5	1.0	4.0	0.8	TO-3PF	6	—
2SC3551	900	800	800	5	80	10	2	5	1.0	4.0	0.8	TO-3P	6	—
2SC4538	900	800	800	5	80	10	2	5	1.0	4.0	0.8	TO-3PF	6	—
2SC4419	900	800	800	6	100	10	2	5	1.0	4.0	0.8	TO-3P	6	—
2SC3030	900	800	800	7	80	8	3	5	0.5	2.5	0.8	TO-3P	6	Fig. B5

### 6 Low voltage high current switching transistors

- High speed switching performance
- Suitable for motor control applications such as DC-DC converters, golf carts, fork-lifts and industrial sewing machines using battery power supply.

Device type	V <sub>CB0</sub>	V <sub>CE0</sub>	V <sub>CE0</sub>	I <sub>c</sub>	P <sub>c</sub>	h <sub>FE</sub>	I <sub>c</sub>	V <sub>CE</sub>	Switching time (Max.)			Package	Net mass	Equivalent circuit
	Volts	Volts	(sus) Volts	cont. Amps	Watts				min.	Amps	Volts			
	Volts	Volts	Volts	Amps	Watts	min.	Amps	Volts	μsec.	μsec.	μsec.		Grams	Page 31
2SD1049	120	80	80	25	80	20	25	5	1.0	2.5	0.4	TO-3P	6	—

### 7 Ultra high β transistors (UBT)

- The DC current gain is extraordinarily high (min.250).
- h<sub>FE</sub> – I<sub>c</sub> characteristics are linear.
- No drive-stage transistor is required.
- Ideally suited for series regulators, color TV, power supplies and similar devices

Device type	V <sub>CB0</sub>	V <sub>CE0</sub>	V <sub>CE0</sub>	I <sub>c</sub>	P <sub>c</sub>	h <sub>FE</sub>	I <sub>c</sub>	V <sub>CE</sub>	Switching time (Max.)			Package	Net mass	Equivalent circuit
	Volts	Volts	(sus) Volts	cont. Amps	Watts				min.	Amps	Volts			
	Volts	Volts	Volts	Amps	Watts	min.	Amps	Volts	μsec.	μsec.	μsec.		Grams	Page 31
2SD1158	80	50	50	8	40	250	1	5	0.5	3.0	0.8	TO-220AB	2	—
2SD1118	80	50	50	10	50	300	1	5	0.5	3.0	0.3	TO-220AB	2	—
2SD1740	150	100	80	5	30	700	1	4	—	—	—	TO-220F17	2.5	Fig. B1
2SD1128	150	100	100	5	30	700	1	4	—	—	—	TO-220AB	2	Fig. B1
2SD923	150	100	100	10	80	700	3	4	—	—	—	TO-3P	6	Fig. B1
2SD982	200	180	180	5	60	700	1	4	—	—	—	TO-220AB	2	Fig. B1
2SD921	200	180	180	5	80	700	1	4	—	—	—	TO-3P	6	Fig. B1
2SD2431	200	180	180	5	80	700	1	4	—	—	—	TO-3PF	6	Fig. B1
ET382	200	180	180	5	40	700	1	4	—	—	—	TO-220F17	2.5	Fig. B1