

T-33-29

**10** Large current speed switching transistors

- These Ic can handle large current (up to 30 or 50 Amps) yet the switching speed is very high.
- Efficient parallel operation.
- Motor speed controls, inverter and chopper use.

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 weight grams
	volts	volts	(sus) volts	cont. amps.	watts	min.	amps.	volts	t <sub>on</sub> μsec.	t <sub>stg</sub> μsec.	t <sub>f</sub> μsec.		
2SC2930	650	400	400	30	200	15	10	5	1.0	3.0	1.0	TO-3	19
2SC2443	650	450	450	50	400	10	40	5	2.0	7.0	1.0	MD-18	40

**11** High power darlington transistors

- Best suited for motor control applications.
- Low saturation voltage
- I<sub>c</sub> cont. is as large as 50 Amps and DC current gain is high.
- Permit the control circuits to be simplified.

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 weight grams	Equivalent circuit (Page 40)
	volts	volts	(sus) volts	cont. amps.	watts	min.	amps.	volts	t <sub>on</sub> μsec.	t <sub>stg</sub> μsec.	t <sub>f</sub> μsec.			
ET125	400	400	300	50	300	200	50	5	2	10	2.5	MD-18	40	Fig. B6
2SD806	650	650	450	50	400	100	50	5	3	12	4	MD-18	53	Fig. B6

**12** Building block transistors

- Suitable for motor control applications.
- High voltage, large current capacity
- V<sub>CE0</sub> : 300—1000 V, I<sub>c</sub> : 100—500 A
- Easily connected in parallel and control currents up to 1200 A.

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 weight grams	Equivalent circuit (Page 40)
	volts	volts	(sus) volts	cont. amps.	watts	min.	amps.	volts	t <sub>on</sub> μsec.	t <sub>stg</sub> μsec.	t <sub>f</sub> μsec.			
ET188	400	400	300	100	600	200	100	5	2	12	3	BBTII	145	Fig. B3
ET127	600	600	450	100	960	100	100	5	4	10	3	BBT	200	Fig. B9
2SC2770	600	600	450	100	960	8	60	5	4	8	3	BBT	200	Fig. A2
ETN01-055	600	600	550	200	1500	8	120	5	2	8	2	BBTIII	270	Fig. A4
ETN31-055	600	600	550	200	1500	70	200	5	2	12	3	BBTIII	270	Fig. B9
ETM36-030	400	400	320	200	1000	150	200	5	2.0	10.0	1.2	BBTIII	270	Fig. B4
ETN36-030	400	400	320	300	1500	150	300	5	2.0	10.0	1.2	BBTIII	270	Fig. B4
ET1257	1000	1000	1000*	200	1500	4	120	5	—	—	—	BBTIII	450	Fig. A4
1D200A-020	300	300	200	200	800	100	200	5	2	12	3	BBTII	145	Fig. B6
1D500A-030	400	400	300	500	2500	500	500	2	2	12	4	BBTIV	365	Fig. B19

\* : V<sub>CEX</sub> (sus)