17 Plastic Power Transistors

2-6A Up to 65W TO-220AB Plastic Packages

Device Type	Polarity	Max Ratings at Tcase = 25°C					Characteristics Tcase = 25°C						fT
							hFE			VCE(sat)			
		VCER	VCEO	VEBO	cont IC	Ptot	IC			IC	IB	max.	min.
		V	V	V	A	W	A	min.	max.	A	V	V	MHz
BD239	NPN	55	45	5	2	30	1	15	—	1	0.2	0.7	3
BD239A	NPN	70	60	5	2	30	1	15	—	1	0.2	0.7	3
BD239B	NPN	90	80	5	2	30	1	15	—	1	0.2	0.7	3
BD239C	NPN	115	100	5	2	30	1	15	—	1	0.2	0.7	3
BD240	PNP	55	45	5	2	30	1	15	—	1	0.2	0.7	3
BD240A	PNP	70	60	5	2	30	1	15	—	1	0.2	0.7	3
BD240B	PNP	90	80	5	2	30	1	15	—	1	0.2	0.7	3
BD240C	PNP	115	100	5	2	30	1	15	—	1	0.2	0.7	3
BD241	NPN	55	45	5	3	40	3	10	—	3	0.6	1.2	3
BD241A	NPN	70	60	5	3	40	3	10	—	3	0.6	1.2	3
BD241B	NPN	90	80	5	3	40	3	10	—	3	0.6	1.2	3
BD241C	NPN	115	100	5	3	40	3	10	—	3	0.6	1.2	3
BD242	PNP	55	45	5	3	40	3	10	—	3	0.6	1.2	3
BD242A	PNP	70	60	5	3	40	3	10	—	3	0.6	1.2	3
BD242B	PNP	90	80	5	3	40	3	10	—	3	0.6	1.2	3
BD242C	PNP	115	100	5	3	40	3	10	—	3	0.6	1.2	3
BD243	NPN	55	45	5	6	65	3	15	—	6	1.0	1.5	3
BD243A	NPN	70	60	5	6	65	3	15	—	6	1.0	1.5	3
BD243B	NPN	90	80	5	6	65	3	15	—	6	1.0	1.5	3
BD243C	NPN	115	100	5	6	65	3	15	—	6	1.0	1.5	3
BD244	PNP	55	45	5	6	65	3	15	—	6	1.0	1.5	3
BD244A	PNP	70	60	5	6	65	3	15	—	6	1.0	1.5	3
BD244B	PNP	90	80	5	6	65	3	15	—	6	1.0	1.5	3
BD244C	PNP	115	100	5	6	65	3	15	—	6	1.0	1.5	3

0.1-1.5A Up to 20W SOT-32 Packages

Device Type	Polarity	Max Ratings at Tcase = 25°C					Characteristics Tcase = 25°C						fT
							hFE			VCE(sat)			
		VCBO	VCEO	VEBO	cont IC	Ptot	IC			IC	IB	max.	min.
		V	V	V	A	W	A	min.	max.	A	V	V	MHz
BF457	NPN	160	160	5	0.1	8	0.03	25	—	0.03	0.006	1	90
BF458	NPN	250	250	5	0.1	8	0.03	25	—	0.03	0.006	1	90
BF459	NPN	300	300	5	0.1	8	0.03	25	—	0.03	0.006	1	90
P7029	NPN	—	300	5	1.0	20	0.05	30	240	—	—	—	—
BD410	NPN	500	325	6	1.0	20	0.05	30	240	0.1	0.015	0.5	90
BD135	NPN	45	45	5	1.5	6.5	0.15	40	250	0.5	0.05	0.5	50
BD136	PNP	45	45	5	1.5	6.5	0.15	40	250	0.5	0.05	0.5	50
BD137	NPN	60	60	5	1.5	6.5	0.15	40	160	0.5	0.05	0.5	50
BD138	PNP	60	60	5	1.5	6.5	0.15	40	160	0.5	0.05	0.5	50
BD139	NPN	80	80	5	1.5	6.5	0.15	40	160	0.5	0.05	0.5	50
BD140	PNP	80	80	5	1.5	6.5	0.15	40	160	0.5	0.05	0.5	50

10-25A Up to 125W TO-3 Plastic Packages

Device Type	Polarity	Max Ratings at Tcase = 25°C					Characteristics Tcase = 25°C						fT
							hFE			VCE(sat)			
		VCER	VCEO	VEBO	cont IC	Ptot	IC			IC	IB	max.	min.
		V	V	V	A	W	A	min.	max.	A	V	V	MHz
BD245	NPN	55	45	5	10	80	3	20	—	10	2.5	4	3
BD245A	NPN	70	60	5	10	80	3	20	—	10	2.5	4	3
BD245B	NPN	90	80	5	10	80	3	20	—	10	2.5	4	3
BD245C	NPN	115	100	5	10	80	3	20	—	10	2.5	4	3
BD246	PNP	55	45	5	10	80	3	20	—	10	2.5	4	3
BD246A	PNP	70	60	5	10	80	3	20	—	10	2.5	4	3
BD246B	PNP	90	80	5	10	80	3	20	—	10	2.5	4	3
BD246C	PNP	115	100	5	10	80	3	20	—	10	2.5	4	3
BD249	NPN	55	45	5	25	125	15	10	—	25	5.0	4	3
BD249A	NPN	70	60	5	25	125	15	10	—	25	5.0	4	3
BD249B	NPN	90	80	5	25	125	15	10	—	25	5.0	4	3
BD249C	NPN	115	100	5	25	125	15	10	—	25	5.0	4	3
BD250	PNP	55	45	5	25	125	15	10	—	25	5.0	4	3
BD250A	PNP	70	60	5	25	125	15	10	—	25	5.0	4	3
BD250B	PNP	90	80	5	25	125	15	10	—	25	5.0	4	3
BD250C	PNP	115	100	5	25	125	15	10	—	25	5.0	4	3

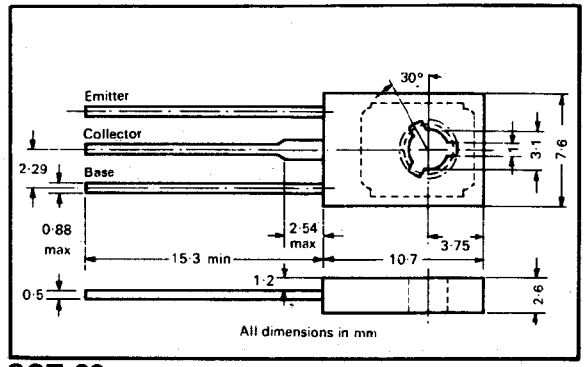
5-8A Up to 70W TO-220AB Plastic Packages SUPER SPECIFICATION

BD539	NPN	40	40	5	5	45	3	12	—	3	0.375	0.8	3
BD539A	NPN	60	60	5	5	45	3	12	—	3	0.375	0.8	3
BD539B	NPN	80	80	5	5	45	3	12	—	3	0.375	0.8	3
BD539C	NPN	100	100	5	5	45	3	12	—	3	0.375	0.8	3
BD539D	NPN	120	120	5	5	45	3	12	—	3	0.375	0.8	3
BD540	PNP	40	40	5	5	45	3	12	—	3	0.375	0.8	3
BD540A	PNP	60	60	5	5	45	3	12	—	3	0.375	0.8	3
BD540B	PNP	80	80	5	5	45	3	12	—	3	0.375	0.8	3
BD540C	PNP	100	100	5	5	45	3	12	—	3	0.375	0.8	3
BD540C	PNP	120	120	5	5	45	3	12	—	3	0.375	0.8	3
BD543	NPN	40	40	5	8	70	5	15	—	8	1.6	1	3
BD543A	NPN	60	60	5	8	70	5	15	—	8	1.6	1	3
BD543B	NPN	80	80	5	8	70	5	15	—	8	1.6	1	3
BD543C	NPN	100	100	5	8	70	5	15	—	8	1.6	1	3
BD543D	NPN	120	120	5	8	70	5	15	—	8	1.6	1	3
BD544	PNP	40	40	5	8	70	5	15	—	8	1.6	1	3
BD544A	PNP	60	60	5	8	70	5	15	—	8	1.6	1	3
BD544B	PNP	80	80	5	8	70	5	15	—	8	1.6	1	3
BD544C	PNP	100	100	5	8	70	5	15	—	8	1.6	1	3
BD544D	PNP	120	120	5	8	70	5	15	—	8	1.6	1	3

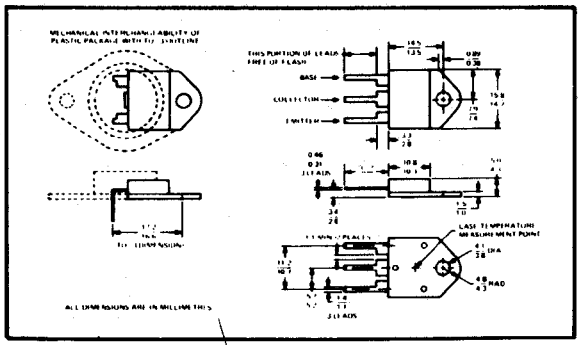
15A, 85W TO-3 Plastic Packages SUPER SPECIFICATION

BD545	NPN	40	40	5	15	85	10	10	—	10	2	1	3
BD545A	NPN	60	60	5	15	85	10	10	—	10	2	1	3
BD545B	NPN	80	80	5	15	85	10	10	—	10	2	1	3
BD545C	NPN	100	100	5	15	85	10	10	—	10	2	1	3
BD545D	NPN	120	120	5	15	85	10	10	—	10	2	1	3
BD546	PNP	40	40	5	15	85	10	10	—	10	2	1	3
BD546A	PNP	60	60	5	15	85	10	10	—	10	2	1	3
BD546B	PNP	80	80	5	15	85	10	10	—	10	2	1	3
BD546C	PNP	100	100	5	15	85	10	10	—	10	2	1	3
BD546D	PNP	120	120	5	15	85	10	10	—	10	2	1	3

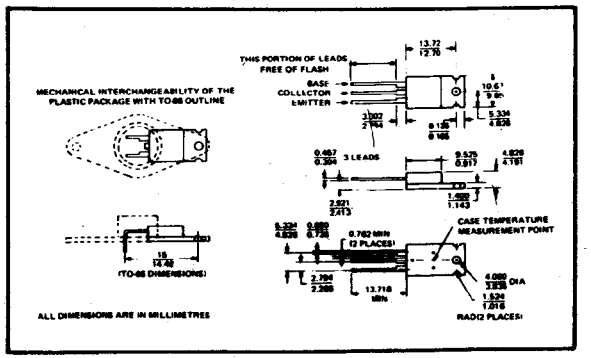
Case Outlines



SOT-32



TO-3 Plastic



TO-220AB Plastic