

BIPOLAR TRANSISTORS

ELECTRICAL CHARACTERISTICS at $T_A = +25^\circ\text{C}$

Device Type	Allegro Type	Polarity	I_C Max. (mA)	$V_{(BR)CBO}$ (V)	$V_{(BR)CEO}$ (V)	$V_{(BR)EBO}$ (V)	I_{CBO}		I_{CEO}	
							Max. (nA)	@ V_{CB} (V)	Max. (nA)	@ V_{CE} (V)
2N918	THC918	NPN	50	30	15	3.0	10	15	—	—
2N2222A	THC2222A	NPN	800	75	40	6.0	10	60	10	3.0
2N2369	THC2369	NPN	200	40	15	4.5	400	20	—	—
2N2484	THC2484	NPN	50	60	60	6.0	10	45	10	5.0
2N2907A	THC2907A	PNP	600	-60	-60	-5.0	10	50	—	—
2N2945	THC2945	PNP	100	-25	-20 ⁽²⁾	-25	0.2	25	0.2	25
2N3019	THC3019	NPN	1.0 A	140	80	7.0	10	90	10	5.0
2N3117	THC3117	NPN	100	60	60	6.0	10	45	—	—
2N3251A	THC3251A	PNP	200	-60	-60	-5.0	—	—	—	—
2N3798	THC3798	PNP	100	-60	-60	-5.0	10	50	—	—
2N3799	THC3799	PNP	200	-60	-60	-5.0	10	50	20	0.4
2N3904	THC3904	NPN	200	60	40	6.0	50 ⁽⁵⁾	30	—	—
2N3906	THC3906	PNP	200	-40	-40	-5.0	50 ⁽⁵⁾	30	—	—
2N4033	THC4033	PNP	1.0 A	-80	-80	-5.0	50	60	—	—
2N4399	THC4399	PNP	30 A	-140	-60	-7.0	—	—	—	—
2N4401	THC4401	NPN	500	60	40	6.0	100	30	—	—
2N4403	THC4403	PNP	600	-40	-40	-5.0	100	35	—	—
2N5401	THC5401	PNP	600	-160	-150	-5.0	50	120	50	3.0
2N5551	THC5551	NPN	600	180	160	6.0	50	120	50	4.0
2N6274	THC6274	NPN	50 A	312	100	4.0	—	—	—	—
2N6377	THC6377	PNP	50 A	164	80	3.0	—	—	—	—
BC108B	THBC108B	NPN	500	30 ⁽⁶⁾	20	5.0	15 ⁽⁶⁾	30	—	—
BC307B	THBC307B	PNP	200	-50	-45	-5.0	100	20	—	—
BC327-16	THBC327-16	PNP	1.0 A	-50	-45	-5.0	100	45	—	—
BC337-16	THBC337-16	NPN	1.0 A	50	45	5.0	100	45	—	—
BC337-25	THBC337-25	NPN	1.0 A	50	45	5.0	100	45	—	—
BC847C	THBC847C	NPN	100	50	45	6.0	—	—	—	—
BCY71	THBCY71	PNP	200	-45	-45	-5.0	50	40	—	—

*Alternative geometries for many devices (as shown in parentheses) are available on special order.

NOTES:

1. Maximum at typical JEDEC conditions.
2. Measured in both forward and reverse modes.
3. Offset voltage, V_{EC} at $I_E = 0$.
4. Typical Value.
5. I_{CEX} at $V_{CE} = 30\text{ V}$, $V_{BE} = 3.0\text{ V}$.
6. $V_{(BR)CES}$ or I_{CES} as applicable.

DC Current Gain				$V_{CE(sat)}$			f_T		$C_{ob}^{(1)}$ (pF)	Geometry*
h_{FE} Min.	h_{FE} Max.	@ I_C (mA)	@ V_{CE} (V)	Max. (V)	@ I_C (mA)	@ I_E (mA)	Min. (MHz)	@ I_C (mA)		
20	—	3.0	1.0	0.4	10	1.0	600	4.0	1.7	DM
40	300	150	10	0.3	150	15	300	20	8.0	BB (DC, JG, KJ)
40	120	10	1.0	0.25	10	1.0	500	10	4.0	KL
100	500	0.01	5.0	0.35	1.0	0.1	60	0.5	4.5	BA
100	300	150	10	0.4	150	15	200	50	8.0	BD (DD)
40	—	1.0	0.5	0.001 ⁽³⁾	—	1.0	5.0	1.0	10	SH
100	300	150	10	0.5	500	50	100	50	12	DS
250	500	0.01	5.0	0.35	1.0	—	60	0.5	4.5	BA
100	300	10	1.0	0.25	10	—	300	20	6.0	BT
150	450	0.5	5.0	0.25	1.0	—	100	1.0	4.0	BC
300	900	0.5	5.0	0.25	1.0	0.1	100	1.0	4.0	BX
100	300	10	1.0	0.2	10	1.0	300	10	4.0	TV (KF)
100	300	10	1.0	0.25	10	1.0	250	10	4.5	SM (BT)
100	300	100	5.0	0.15	150	15	150	50	20	YD
15	60	15 A	2.0	1.0	15 A	1.5 A	—	—	—	KY
100	300	150	1.0	0.4	150	—	250	20	6.5	DC
100	300	150	1.0	0.4	150	15	200	20	8.5	DD
60	240	10	5.0	0.2	10	1.0	100	10	6.0	BC
80	250	10	5.0	0.15	10	1.0	100	10	6.0	VX
30	120	20 A	4.0	1.0	20 A	2.0 A	—	—	—	KP
30	120	20 A	4.0	1.2	20 A	2.0 A	—	—	—	KG
180	460	2.0	5.0	0.6	100	—	85	0.5	7.0	BB
180	460	2.0	5.0	0.2	10	—	130	10	6.0	BD
100	250	100	1.0	0.7	500	—	100	10	12	DJ
100	250	100	1.0	0.7	500	—	100	10	12	DI
160	400	100	1.0	0.7	500	—	100	10	12	DI
420	800	2.0	5.0	0.25	10	—	300	—	—	FE
100	600	10	1.0	0.5	50	—	—	—	6.0	BX