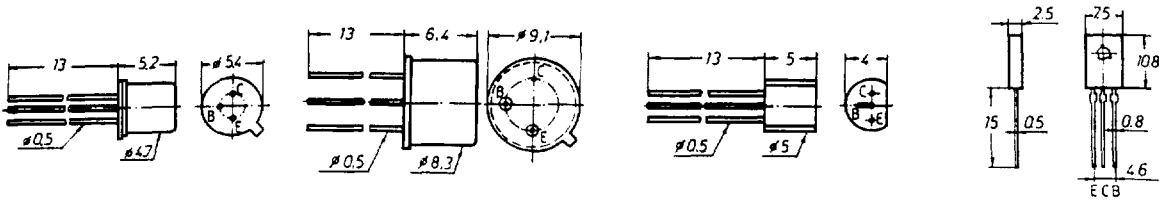


# SMALL SIGNAL TRANSISTORS

## SPECIAL TYPES



CASES: TO-18a                      TO-39                      TO-92a                      TO-126 (SOT-32)

### LOW NOISE TRANSISTORS

TYPE		$P_{tot}$ (*) (W)	$V_{CBO}$ $V_{CES}$ min. (V)	$V_{CEO}$ min. (V)	$I_C$ (mA)	$h_{fe}$ $h_{FE}$ min.-max.	$I_C$ (mA)	$V_{CEsat}$ max. (mV)	$I_C$ (mA)	$f_T$ typ. (MHz)	NF max. (dB)	$C_{ob}$ max. (pF)	CASE
NPN	PNP												
BC 170		0.3	20	20	100	35-600 (1)	1	400	30	250		6	TO-92a
BC 171		0.3	50	45	100	125-1000 (2)	2	600	100	250	10	6	TO-92a
BC 172		0.3	30	25	100	125-1000 (2)	2	600	100	250	10	6	TO-92a
BC 173		0.3	30	25	100	125-900 (2)	2	600	100	250	4	6	TO-92a
BC 174		0.3	70	64	100	125-500 (2)	2	600	100	250	10	6	TO-92a
BC 237		0.3	50	45	100	125-1000 (2)	2	600	100	250	10	6	TO-92a
BC 238		0.3	30	25	100	125-900 (2)	2	600	100	250	10	6	TO-92a
BC 239		0.3	30	25	100	125-900 (2)	2	600	100	250	4	6	TO-92a
	BC 250	0.3	20	20	100	35-600 (1)	1	300	10	250	3	6	TO-92a
	BC 251	0.3	50	45	100	125-900 (2)	2	300	10	250	10	6	TO-92a
	BC 252	0.3	30	25	100	125-900 (2)	2	300	10	250	10	6	TO-92a
	BC 253	0.3	30	25	100	125-900 (2)	2	300	10	250	4	6	TO-92a
	BC 256	0.3	64	64	100	125-500 (2)	2	300	10	250	10	6	TO-92a
	BC 307	0.3	50	45	100	125-900 (2)	2	500	100	250	10	6	TO-92a
	BC 308	0.3	30	25	100	125-900 (2)	2	500	100	250	10	6	TO-92a
	BC 309	0.3	30	25	100	125-900 (2)	2	500	100	250	3	6	TO-92a
BC 413	BC 415	0.3	45	30	100	240-900 (2)	2	600	100	250	3	2.5	TO-92a
BC 414	BC 416	0.3	50	45	100	240-900 (2)	2	600	100	250	3	2.5	TO-92a
BC 546	BC 556	0.3	80	65	100	125-500 (2)	2	600	100	150	10	6	TO-92a
BC 547	BC 557	0.3	50	45	100	125-500 (2)	2	600	100	150	10	6	TO-92a
BC 548	BC 558	0.3	30	30	100	125-900 (2)	2	600	100	150	10	6	TO-92a
BC 549	BC 559	0.3	30	30	100	240-900 (2)	2	600	100	150	4	6	TO-92a
BC 550	BC 560	0.3	50	45	100	240-900 (2)	2	600	100	150	3	6	TO-92a

Different  $h_{fe}$  groups: (1) A: 35-100; B: 80-250; C: 200-600.  
(2) A: 125-260; B: 240-500; C: 450-900/1000.

### HIGH VOLTAGE & VIDEO AMPLIFIER TRANSISTORS

TYPE		$P_{tot}$ @ $T_A=25^\circ C$ (W)	$V_{CEO}$ $V_{CER}$ min. (V)	$I_C$ (mA)	$I_C$ min.-max. (mA)	$V_{CE}$ (V)	$V_{CEsat}$ @ $I_C$ & $I_B$ (mV)	$I_C$ (mA)	$I_B$ (mA)	$f_T$ min. (MHz)	$C_{ob}$ max. (pF)	CASE	
NPN	PNP												
BF 257		0.8	160	100	25-	30	1000	30	6	50	4.7	TO-39	
BF 257E		0.8	210	100	25-	30	1000	30	6	50	4.7	TO-39	
BF 258		0.8	250	100	25-	30	1000	30	6	50	4.7	TO-39	
BF 259		0.8	300	100	25-	30	1000	30	6	50	4.7	TO-39	
BF 297		0.625*	160	100	25-	30	1000	30	6	50	5.5	TO-92a	
BF 298		0.625*	250	100	25-	30	1000	30	6	50	5.5	TO-92a	
BF 299		0.625*	300	100	25-	30	1000	30	6	50	5.5	TO-92a	
BF 420A	BF 421A	0.83 #	300	25	40-	25	20			60	1.6	TO-92a	
BF 422A	BF 423A	0.83 #	250	25	50-	25	20			60	1.6	TO-92a	
BF 457		1.2	160	100	25-	30	1000	30	6	50	5.5	TO-126	
BF 457E		1.2	210	100	25-	30	1000	30	6	50	5.5	TO-126	
BF 458		1.2	250	100	25-	30	1000	30	6	50	5.5	TO-126	
BF 459		1.2	300	100	25-	30	1000	30	6	50	5.5	TO-126	
BF 469	BF 470	2 +	250	25	50-	25	20			60	1.8	TO-126	
BF 471	BF 472	2 +	300	25	40-	25	20			60	1.8	TO-126	
\$ 2N 3439		1	350	1 k	40-160	20	10	500	50	4	15	10	TO-39
\$ 2N 3440		1	250	1 k	40-160	20	10	500	50	4	15	10	TO-39
\$ 2N 5415		1	200	1 k	30-150	50	10	2500	50	5	15	10	TO-39
\$ 2N 5416		1	300	1 k	30-120	50	10	2500	50	5	15	10	TO-39

\$ Preliminary data

Notes : \* With the leads kept at 25°C, at 2 mm near the case.

# This value applies if the collector lead has max. 3 mm length and is soldered on a copper cooling area of minimum 10 mm x 10 mm and with a minimum thickness of 35 um.

+  $T_C \leq 110^\circ C$

^  $T_A \leq 50^\circ C$