

SMALL-SIGNAL TRANSISTORS — PLASTIC (continued)

Low Noise and Good H_{FE} Linearity

These devices are designed to use on applications where good H_{FE} linearity and low noise characteristics are required: Instrumentation, Hi-Fi Preamplifier.

NPN	PNP	BV_{CEO} (Volts) Amb.	P_d mW 25°C Min.	$H_{FE}@$ $I_C = 10\mu A$, $V_{CE} = 5V$		$H_{FE}@$ $I_C = 2 mA$, $V_{CE} = 5V$		V_T 120 Hz Typ.	mV Max.	N_F (dB) ² Typ.	Max.	F_T Typical (MHz)	Pinning
				Min.	Typ.	Min.	Max.						
BC239	BC309	45	625	—	—	120	800	9.5	—	2	4	240	CBE
BC413	BC415	30	625	100	—	180	800	8	12	0.6	2.5	250	CBE
BC414	BC416	45	625	100	—	180	800	8	12	0.6	2.5	250	CBE
BC549	BC559	30	625	100	—	180	800	8	12	0.6	2.5	250	CBE
BC549B	BC559	30	625	100	150	180	460	8	12	0.6	2.5	250	CBE
BC459C	BC559C	30	625	100	270	380	800	8	12	0.6	2.5	250	CBE
BC550	BC560	45	625	100	—	180	800	8	12	0.6	2.5	250	CBE
BC550B	BC560B	45	625	100	150	180	460	8	12	0.6	2.5	250	CBE
BC550C	BC560C	45	625	100	270	380	800	8	12	0.6	2.5	250	CBE
BC650C	—	30	625	—	—	380	820	—	7.6(6.8)*	—	1(§)	300	EBC
BC651C	—	45	625	—	—	380	820	—	7.6(6.8*)	—	1(§)	300	EBC
MPSA18	—	45	625	400	500	500	—	7	—	—	1.5	160	EBC
2N4123	2N4125	30	625	—	—	50	150 ³	—	—	—	6	300	EBC
2N4124	2N4126	25	625	—	—	120	360 ³	—	—	—	5	350	EBC
2N5088	—	30	625	300	900	350	—	—	—	—	3	150	EBC
2N5089	—	25	625	400	1200	450	—	—	—	—	2	150	EBC

¹ V_T : Total Input Noise Voltage (see Application Note, BC413/BC414 and BC415/BC416 Data Sheets) at $R_s = 2K\Omega$, $I_C = 200\mu A$, $V_{CE} = 5$ volts.

² N_F : Noise Figure at $R_s = 2K$, $I_C = 200\mu A$, $V_{CE} = 5$ Volts, $F = 30$ Hz to 15 KHz.

³ At $V_{CE} = 1$ V.

* "S" version.

(§) @ 1 KHz.

High Current Amplifier Transistors (TO-92)

Useful in Low Power Audio Output Stages and Medium Current Switches.

NPN	PNP	BV_{CEO} (Volts)	P_D mW 25°C Amb.	I_C (mA) Cont.	H_{FE}		@ I_C (mA)	V_{CE} (Volts)	F_T Typical (MHz)	Pinning
					Min.	Max.				
BC337	BC327	45	625	800	100	600	100	1	210	CBE
BC338	BC328	25	625	800	100	600	100	1	210	CBE
BC445	BC446	60	625	300	70	—	10	5	250/200 ¹	CBE
BC447	BC448	80	625	300	70	—	10	5	250/200 ¹	CBE
BC449	BC450	100	625	300	70	—	10	5	250/200 ¹	CBE
BC485	BC486	45	625	1000	60	400	100	2	200/150 ¹	CBE
BC487	BC488	60	625	1000	60	400	100	2	200/150 ¹	CBE
BC489	BC490	80	625	1000	60	400	100	2	200/150 ¹	CBE
MPSA05	MPSA55	60	625	500	50	—	100	1	150/175 ¹	EBC
MPSA06	MPSA56	80	625	500	50	—	100	1	150/175 ¹	EBC
MPS650	MPS750	40	625	2000	75	—	1000	2	100	EBC
					40	—	2000	2		

¹ Relevant to PNP.