

SMALL-SIGNAL LOW NOISE AMPLIFIERS


Type No.	POLARITY	P _D T _A = 25 C (mW)	V _(BR) CBO Volts	V _(BR) CEO Volts	V _(BR) EBO Volts	I _{CBO} nA Max.	D-C CURRENT GAIN (h _{FE})				V _{CE(SAT)}		f _T Min. (MHz)	C _{cb} Max. (pF)	t _{off} Max. (nsec)	N.F. Max. (dB)		
							Conditions		Limits		I _C (mA)	V _{CE} Volts					I _C (mA)	Max. Volts
							I _C (mA)	V _{CE} Volts	Min.	Max.								
2N3565	NPN	625	30	25	6	50	1	10	150	600	10	0.35	40	4.0	—	—		
2N5133	NPN	625	20	18	3	50	1	5	60	1000	1	0.40	50	5.0	—	—		
2N5138	PNP	625	30	30	5	50	0.1	10	50	800	10	0.30	30	9.0	—	—		
2N5376	NPN	500	60	30	5	10	0.01	5	100	500	10	0.20	30	8.0	—	2		
2N5377	NPN	500	60	30	5	10	0.01	5	40	200	10	0.20	30	8.0	—	3		
2N5378	PNP	500	40	30	5	10	0.01	5	100	500	10	0.20	20	10.0	—	2		
2N5379	PNP	500	40	30	5	10	0.01	5	40	200	10	0.20	20	10.0	—	3		
TP107	NPN	400	50	45	6	15	2	5	125	900	10	0.20	150	4.5	—	10		
TP107A	NPN	400	50	45	6	15	2	5	125	260	10	0.20	150	4.5	—	10		
TP107B	NPN	400	50	45	6	15	2	5	240	500	10	0.20	150	4.5	—	10		
TP108	NPN	400	30	20	5	15	2	5	125	900	10	0.20	150	4.5	—	10		
TP108A	NPN	400	30	20	5	15	2	5	125	260	10	0.20	150	4.5	—	10		
TP108B	NPN	400	30	20	5	15	2	5	240	500	10	0.20	150	4.5	—	10		
TP108C	NPN	400	30	20	5	15	2	5	450	900	10	0.20	150	4.5	—	10		
TP109	NPN	400	30	20	5	15	2	5	240	900	10	0.20	150	4.5	—	10		
TP109A	NPN	400	30	20	5	15	2	5	125	260	10	0.20	150	4.5	—	4		
TP109B	NPN	400	30	20	5	15	2	5	240	500	10	0.20	150	4.5	—	4		
TP109C	NPN	400	30	20	5	15	2	5	450	900	10	0.20	150	4.5	—	4		
TP251A	PNP	400	45	45	5	50	2	5	125	260	10	0.25	—	—	—	6		
TP251B	PNP	400	45	45	5	50	2	5	240	500	10	0.25	—	—	—	6		
TP251CA	PNP	400	45	45	5	50	2	5	450	900	10	0.25	—	—	—	6		
TP252A	PNP	400	20	20	5	50	2	5	125	260	10	0.25	—	—	—	6		
TP252B	PNP	400	20	20	5	50	2	5	240	500	10	0.25	—	—	—	6		
TP252CA	PNP	400	20	20	5	50	2	5	450	900	10	0.25	—	—	—	6		
TP253A	PNP	400	20	20	5	50	2	5	125	260	10	0.25	—	—	—	2.5		
TP253B	PNP	400	20	20	5	50	2	5	240	500	10	0.25	—	—	—	2.5		
TP253CA	PNP	400	20	20	5	50	2	5	450	900	10	0.25	—	—	—	2.5		

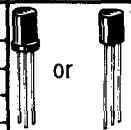

BR
Package
(TO-92
Body
with
TO-18
Pinning)
or


TO-92
Formed
to
TO-18
(CBE)

DARLINGTON AMPLIFIERS

Type No.	POLARITY	P _D T _A = 25 C (mW)	V _(BR) CBO Volts	V _(BR) CEO Volts	V _(BR) EBO Volts	I _{CBO} μA Max.	D-C CURRENT GAIN (h _{FE})				V _{CE(SAT)}		f _T Min. (MHz)	C _{cb} Max. (pF)	t _{off} Max. (nsec)	N.F. Max. (dB)		
							Conditions		Limits		I _C (mA)	V _{CE} Volts					I _C (mA)	Max. Volts
							I _C (mA)	V _{CE} Volts	Min.	Max.								
MPS-A12	NPN	360	20†	20	10	0.10	10	5	20000	—	10	1.00	—	8.0	—	—		
MPS-A13	NPN	360	30	30	10	0.10	10	5	5000	—	100	1.50	125	8.0*	—	2.0*		
MPS-A14	NPN	360	30	30	10	0.10	10	5	10000	—	100	1.50	125	8.0*	—	2.0*		
MPS5305	NPN	400	25	25	12	0.10	2	5	2000	20000	200	1.40	60	10.0	—	—		
MPS5306	NPN	400	25	25	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	—		
MPS5306A	NPN	400	25	25	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	**		
MPS5307	NPN	400	40	40	12	0.10	2	5	2000	20000	200	1.40	60	10.0	—	—		
MPS5308	NPN	400	40	40	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	—		
MPS5308A	NPN	400	40	40	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	**		
2N5305	NPN	400	25	25	12	0.10	2	5	2000	20000	200	1.40	60	10.0	—	—		
2N5306	NPN	400	25	25	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	—		
2N5306A	NPN	400	25	25	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	**		
2N5307	NPN	400	40	40	12	0.10	2	5	2000	20000	200	1.40	60	10.0	—	—		
2N5308	NPN	400	40	40	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	—		
2N5308A	NPN	400	40	40	12	0.10	2	5	7000	70000	200	1.40	60	10.0	—	**		
D16P1	NPN	400	18	12	12	0.10	100	5	6000	—	200	1.40	—	10.0	—	—		


TO-92
Package
(EBC)


TO-98
or
TO-92
(ECB)
Packages

†BV_{CEs}

*Typical value

**Noise Voltage e_n ≤ 230 nV/√Hz @ I_C = 0.6mA, V_{CE} = 5V, R_g = 160kΩ, f = 10Hz to 10kHz, BW = 15.7kHz.