

HIGH-VOLTAGE VIDEO OUTPUT TRANSISTOR

Type No.	POLARITY	P _D T _A = 25 C Watts	MAX. RATINGS			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)
			V _(BR) CBO Volts	V _(BR) CEO Volts	V _(BR) EBO Volts		Conditions		Limits		I _C (mA)	Max. Volts				
			I _C (mA)	V _{CE} Volts	Min.		Max.	Min.	Max.							
2N3440	NPN	1.0	300	250	7	20	20	10	40	—	20	0.5	15	10	—	—



SWITCHES, AMPLIFIERS AND CHOPPERS *

Type No.	POLARITY	P _D @ 25 C mW Max.	MAX. RATINGS			I _{CBO} nA Max.	I _{EBO} nA Max.	h _{FE} Min.-Max.	SATURATION VOLTAGE Max.				V _{OFF} @ I _B = 1mA mV Max.	r _s ohms Max.	f _T Min. MHz	C _{ib} Max. pF	C _{ob} Max. pF	N.F. Max. dB	
			V _(BR) CBO Volts	V _(BR) CEO Volts	V _(BR) EBO Volts				I _C mA	I _B mA	V _{CE} Volts	V _{BE} Volts	I _B = 1mA mV Max.	r _s ohms Max.	f _T Min. MHz	C _{ib} Max. pF	C _{ob} Max. pF	N.F. Max. dB	
			I _C mA	I _B mA	V _{CE} Volts				V _{BE} Volts	I _B = 1mA mV Max.	r _s ohms Max.	f _T Min. MHz	C _{ib} Max. pF	C _{ob} Max. pF	N.F. Max. dB				
2N2944	PNP	400	15	10	15	0.1	0.1	80-450	—	—	—	—	0.6	20	10	6	10	—	
2N2945	PNP	400	25	20	25	0.2	0.2	40-250	—	—	—	—	1.0	35	5	6	10	—	
2N2946	PNP	400	40	35	40	0.5	0.5	30-150	—	—	—	—	2.0	45	3	6	10	—	
2N3058	PNP	400	6	6	6	0.1	0.1	40-120	—	—	—	1.0	—	—	—	—	10	—	
2N3059	PNP	400	10	10	10	0.1	0.1	100-300	—	—	—	1.0	—	—	—	—	10	3	
2N3060	PNP	400	70	60	30	5.0	5.0	30-90	10	2	0.30	—	1.0	30	—	—	—	10	—
2N3061	PNP	400	70	60	40	5.0	5.0	60-180	10	2	0.30	—	1.0	30	—	—	—	10	—
2N3217	PNP	400	15	10	15	1.0	1.0	40	5	0.5	0.10	1.0	1.25	20	1	8	14	—	
2N3218	PNP	400	25	20	25	1.0	1.0	30	5	0.5	0.10	1.0	1.50	35	1	8	14	—	
2N3219	PNP	400	40	35	40	1.0	1.0	20	5	0.5	0.15	1.0	2.50	45	1	8	14	—	
2N3677	PNP	400	30	20	30	1.0	—	—	—	—	—	—	1.0	8	5	—	—	—	
2N3840	PNP	400	50	50	50	0.5	0.5	50	5	0.5	0.10	0.85	2.0	20	6	6	9	—	
2N3977	PNP	400	15	10	15	1.0	1.0	40	5	0.5	0.10	1.0	1.0	20	1	8	14	—	
2N3978	PNP	400	25	20	25	1.0	1.0	30	5	0.5	0.10	1.0	2.0	35	1	8	14	—	
2N3979	PNP	400	40	35	40	1.0	1.0	20	5	0.5	0.15	1.0	3.0	45	1	8	14	—	
2N4007	PNP	400	20	15	20	0.3	0.3	30	—	—	—	—	0.5	20	15	—	10	—	
2N4008	PNP	400	35	30	35	0.3	0.3	20	—	—	—	—	0.3	20	15	—	10	—	



- ⊙ V_{CE} = -0.5V, I_C = 1.0mA
- ⊙ V_{CE} = 0.5V, I_C = 1mA
- ⊙ I_E = 1μA, V_{EC} = 6V
- ⊙ V_{CE} = -0.5V, I_C = -0.1μA
- ⊙ V_{CE} = -0.5V, I_C = -5mA
- ⊙ I_B = 100μA
- ⊙ V_{CE} = -3V, I_C = 10μA
- ⊙ I_B = -200μA
- ⊙ Typical

* Available until present stock is exhausted. Electrically equivalent types packaged in the TO-92 package are available (see page 12).

SMALL-SIGNAL AMPLIFIERS (PRO-ELECTRON SERIES)

Type No.	POLARITY	P _D T _A = 25°C (mW)	MAX. RATINGS			DC CURRENT GAIN (h _{FE})				V _{CE(SAT)}		f _T Min. (MHz)	C _{cb} Max. (pF)	N.F. Max. (dB)
			V _(BR) CBO Volts	V _(BR) CEO Volts	V _(BR) EBO Volts	Conditions		Limits		I _C (mA)	Max. Volts			
			I _C (mA)	V _{CE} Volts	Min.	Max.	Min.	Max.						
BC140-6	NPN	3.7 *	80	40	7	100	1	40	100	1A	1.0	50	8	—
BC140-10	NPN	3.7 *	80	40	7	100	1	63	160	1A	1.0	50	8	—
BC140-16	NPN	3.7 *	80	40	7	100	1	100	250	1A	1.0	50	8	—
BC141-6	NPN	3.7 *	100	60	7	100	1	40	100	1A	1.0	50	8	—
BC141-10	NPN	3.7 *	100	60	7	100	1	63	160	1A	1.0	50	8	—
BC141-16	NPN	3.7 *	100	60	7	100	1	100	250	1A	1.0	50	8	—
BC160-6	PNP	3.2 *	40	40	5	100	1	40	100	1A	1.0	50	12	—
BC160-10	PNP	3.2 *	40	40	5	100	1	63	160	1A	1.0	50	12	—
BC160-16	PNP	3.2 *	40	40	5	100	1	100	250	1A	1.0	50	12	—
BC161-6	PNP	3.2 *	60	60	5	100	1	40	100	1A	1.0	50	12	—
BC161-10	PNP	3.2 *	60	60	5	100	1	63	160	1A	1.0	50	12	—
BC161-16	PNP	3.2 *	60	60	5	100	1	100	250	1A	1.0	50	12	—
BC107A	NPN	300	50	45	6	2	5	125	260	10	0.20	150	5	10
BC107B	NPN	300	50	45	6	2	5	240	500	10	0.20	150	5	10
BC108A	NPN	300	30	20	5	2	5	125	260	10	0.20	150	5	10
BC108B	NPN	300	30	20	5	2	5	240	500	10	0.20	150	5	10
BC108C	NPN	300	30	20	5	2	5	450	900	10	0.20	150	5	10
BC109B	NPN	300	30	20	5	2	5	240	500	10	0.20	150	5	4
BC109C	NPN	300	30	20	5	2	5	450	900	10	0.20	150	5	4
BC110	NPN	300	80	80	8	2	5	30	—	50	0.6	100	5	—
BC177A	PNP	300	45	45	5	2	5	125	260	10	0.20	150	7	6
BC177B	PNP	300	45	45	5	2	5	240	500	10	0.20	150	7	6
BC178A	PNP	300	20	20	5	2	5	125	260	10	0.20	150	7	6
BC178B	PNP	300	20	20	5	2	5	240	500	10	0.20	150	7	6
BC178C	PNP	300	20	20	5	2	5	450	900	10	0.20	150	7	6
BC179B	PNP	300	20	20	5	2	5	240	500	10	0.20	150	7	2.5
BC179C	PNP	300	20	20	5	2	5	450	900	10	0.20	150	7	2.5



*P_D at T_C = 25°C