

Core Drivers

Device Type	Polarity	Case	Maximum ratings				hFE1			hFE2			ft min. MHz	VCE(sat)		Max. ton ns	Max. ts ns	Max. toff ns	Notes
			BV CBO	BV CEO	BV EBO	ICM	IC mA	min.	max.	IC mA	min.	max.		IC mA	V				
			V	V	V	mA													
2N3724A	NPN	TO39	50	30	6	1200	100	60	150	1500	25	—	300	100	0.20	35	50	60	} Guaranteed switching time at 1 amp
2N3725A	NPN	TO39	80	50	6	1200	100	60	150	1500	20	—	300	100	0.26	35	50	60	
2N3244	PNP	TO39	40	40	5	1000	500	50	150	750	25	—	175	150	0.3	—	140	—	

Very High Voltage Amplifiers

Device Type	Polarity	Case	Maximum ratings				hFE1			hFE2			ft typ MHz	VCE(sat)		Notes
			BV CBO	BV CEO	BV EBO	ICM	IC mA	min.	max.	IC mA	min.	max.		IC mA	V	
			V	V	V	mA										
BF257	NPN	TO5	160	160	5	200	30	25	—	—	—	—	110	30	1.0	} Designed as high voltage video amplifiers
BF258	NPN	TO5	250	250	5	200	30	25	—	—	—	—	110	30	1.0	
BF259	NPN	TO5	300	300	5	200	30	25	—	—	—	—	110	30	1.0	
BF336	NPN	TO5	185	180	5	100	30	20	—	—	—	—	80	30	—	} Intended for Video Applications
BF337	NPN	TO5	250	200	5	100	30	20	—	—	—	—	80	—	—	
BF338	NPN	TO5	300	225	5	100	30	20	—	—	—	—	80	—	—	
BF177	NPN	TO5	115	60	5	100	15	20	—	20	20	—	120	—	—	
BF178	NPN	TO5	160	115	5	100	20	20	—	30	20	—	120	—	—	
BF179	NPN	TO5	250	115	5	100	20	20	—	—	—	—	120	—	—	
BFT57	NPN	TO18	160	160	5	200	30	25	—	—	—	—	110	30	1.0	
BFT58	NPN	TO18	250	250	5	200	30	25	—	—	—	—	110	30	1.0	
BFT59	NPN	TO18	300	300	5	200	30	25	—	—	—	—	110	30	1.0	
BC312	NPN	TO5	100	100	5	150	1	40	—	30	50	200	100	50	2.0	
BD150A	NPN	TO5	300	220	6	500	40	20	—	80	20	—	—	80	1.0	} Designed as High Current Line Drivers
BD150B	NPN	TO5	250	150	6	500	40	20	—	80	20	—	—	80	1.0	
BD150C	NPN	TO5	200	150	6	500	40	20	—	80	20	—	—	80	1.0	
2N3440	NPN	TO5	300	250	7	1000	20	40	160	—	—	—	15*	50	0.5	} For High Current Applications
2N3439	NPN	TO5	450	350	7	1000	20	40	160	—	—	—	15*	50	0.5	
BFQ35	PNP	TO5	160	160	5	200	10	50	400	50	10	—	80	20	0.5	} BF257/8/9 Complementary Types
BFQ36	PNP	TO5	250	250	5	200	10	40	350	50	10	—	80	20	0.5	
BFQ37	PNP	TO5	300	300	5	200	10	30	300	50	10	—	80	20	0.5	

Complementary Pairs

Medium Current Amplifiers & Switches

NPN TO5	PNP
2N2218	2N2904
2N2218A	2N2904A
2N2219	2N2905
2N2219A	2N2905A

Low level G.P. Amplifiers

NPN TO18	PNP
BC107	BC177
BC108	BC178
BC109	BC179

High Current Amplifiers

NPN TO5	PNP
BFT39	BFT79
BFT40	BFT80
BFT41	BFT81
BFY50	BFT60
BFY51	BFT61
BFY52	BFT62

NPN TO18	PNP
2N2221	2N2906
2N2221A	2N2906A
2N2222	2N2907
2N2222A	2N2907A

NPN TO18	PNP
BC325	2N2483
BC326	2N2484
BCW34	BCW35

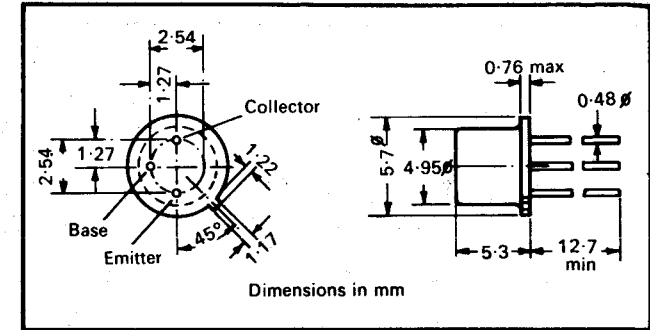
NPN TO5	PNP
BC142	BC143
BC301	BC303
BC302	BC304
BFT32	BFT35
BFT33	BFT36
BFT34	BFT37

Small Signal Transistors

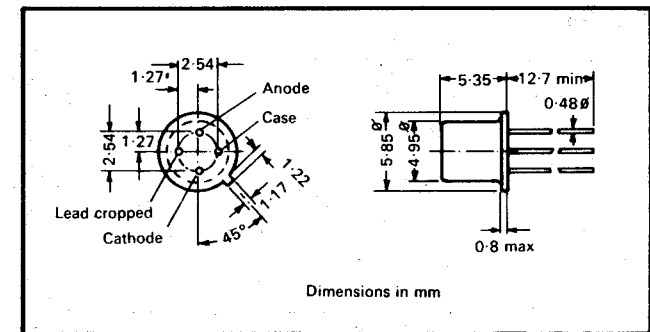
BS Type Number	Commercial Equivalent	Case Outline	Polarity	Absolute Maximum Rating			hFE at Collector Current			Min. ft MHz	Comments
				V _{CB} V	V _{CE} V	V _{EB} V	hFE min.	hFE max.	I _C mA		
BS9300 C328	2S104	TO18	NPN	60	45	6	80	200	5	80	ton 140 ns toff 500 ns ton 140 ns toff 500 ns High Voltage hFE 35-100 in IC-1mA
BS9300 C371	2N2221A*	TO18	NPN	60	45	6	35	85	10	150	
BS9300 C372	2N2222A*	TO18	NPN	60	45	6	75	170	10	150	
BS9300 C404	2N1893	TO5	NPN	120	80	7	40	120	150	60	
BS9300 C460	2N1613	TO5	NPN	75	50	7	40	120	150	60	High Gain General Purpose Amplifier SRDE. Low Level Amplifier High Frequency Amplifier and Fast Switch Low Level Low Noise High Gain Amplifiers Medium Power High Gain General Purpose Amplifier Complementary to CV7580 & CV7581 Complementary to CV7495 & CV7496
BS9300 C461	2S103	TO18	NPN	60	45	6	40	100	5	60	
BS9300 C462	2N2411	TO18	PNP	25	20	5	20	60	10	150	
BS9300 C463	2N2412	TO18	PNP	25	20	5	40	120	10	150	
BS9300 C478	2N918	TO12	NPN	30	15	3	30	—	3	100	
BS9300 C492	2N929	TO18	NPN	45	45	5	40	120	0.01	30	
BS9300 C493	2N930	TO18	NPN	45	45	5	100	300	0.01	30	
BS9300 C495	2N696	TO5	NPN	60	40	5	20	60	150	50	
BS9300 C496	2N697	TO5	NPN	60	40	5	40	120	150	50	
BS9300 C580	2N1131	TO5	PNP	50	35	5	20	45	150	50	
BS9300 C581	2N1132	TO5	PNP	50	35	5	30	90	150	60	
BS9300 C588	2S104	TO18	NPN	60	45	6	80	200	5	100	
BS9300 C596	2S103	TO18	NPN	60	45	6	40	100	5	80	
BS9300 C630	2N2696	TO18	PNP	25	25	4	30	130	50	100	
BS9300 C631	2N2927	TO5	PNP	25	25	4	30	130	50	100	
BS9300 C633	2N1893	TO5	PNP	120	100	6	65	200	200	60	
BS9300 C637	2N2905*	TO5	PNP	32	32	5	80	160	1.0	40	General Purpose PNP Amplifiers High Speed Medium Power Switching and General Purpose Amplifiers High Speed Switching and General Purpose Medium Power Amplifiers
BS9300 C638	2N2905A*	TO5	PNP	60	60	5	60	120	1.0	40	
BS9300 C644	BC107A*	TO18	NPN	65	65	5	50	200	10	50	
BS9300 C669	2N2904	TO5	PNP	60	40	5	40	120	150	200	
BS9300 C670	2N2905	TO5	PNP	60	40	5	100	300	150	200	
BS9300 C671	2N2904A	TO5	PNP	60	60	5	40	120	150	200	
BS9300 C672	2N2905A	TO5	PNP	60	60	5	100	300	150	200	
BS9300 C673	2N2906	TO18	PNP	60	40	5	40	120	150	200	
BS9300 C674	2N2907	TO18	PNP	60	40	5	100	300	150	200	
BS9300 C675	2N2906A	TO18	PNP	60	60	5	40	120	150	200	
BS9300 C676	2N2907A	TO18	PNP	60	60	5	100	300	150	200	
BS9300 C722	BFY50	TO5	NPN	80	35	6	30	100	150	50	
BS9300 C723	BFY51	TO5	NPN	60	30	6	40	120	150	50	
BS9300 C724	BFY52	TO5	NPN	40	20	6	60	200	150	50	
BS9300 C725	BFY50	TO5	NPN	80	35	6	30	—	150	50	General Purpose Amplifier and Saturated Switches 1 Amp hFE Minimum 10 High Gain Medium Power Amplifier Very High Gain Low Noise Low Level Amplifier
BS9300 C726	BFY51	TO5	NPN	60	30	6	35	—	150	50	
BS9300 C727	BFY52	TO5	PNP	40	20	6	50	—	150	50	
BS9300 C735	2N1711	TO5	PNP	75	50	7	100	300	150	70	
BS9300 C736	2N2484	TO18	NPN	60	60	6	100	500	0.01	60	
BS9300 C748	2N2221*	TO18	NPN	25	25	4	38	162	10	120	High Frequency, Low Power Switching and Amplifier Applications. Fully Complementary High Frequency, Medium Power NPN Amplifier High Current Switches
BS9300 C749	2N2906*	TO18	PNP	25	25	4	38	162	10	120	
BS9300 C750	2N2221A*	TO18	NPN	45	35	4	38	162	10	120	
BS9300 C751	2N2906A*	TO18	PNP	45	35	4	38	162	10	120	
BS9300 C752	2N2222A*	TO18	NPN	45	35	4	75	250	10	120	
BS9300 C753	2N2907A*	TO18	PNP	45	35	4	75	250	10	120	
BS9300 C754	2N2222*	TO18	NPN	25	25	4	75	250	10	120	
BS9300 C755	2N2907*	TO18	PNP	25	25	4	75	250	10	120	
BS9300 C756	2N2218	TO5	NPN	60	30	5	40	120	150	250	
BS9300 C764	2N2219	TO5	NPN	60	30	5	100	300	150	250	
BS9300 C765	2N2218A	TO5	NPN	75	40	6	40	120	150	250	
BS9300 C766	2N2219A	TO5	NPN	75	40	6	100	300	150	250	
BS9300 C767	2N2221	TO18	NPN	60	30	5	40	120	150	250	TO18 Version of CV7763-66 General Purpose Amplifier High Voltage Amplifier
BS9300 C768	2N2222	TO18	NPN	60	30	5	100	300	150	250	
BS9300 C769	2N2221A	TO18	NPN	75	40	6	40	120	150	250	
BS9300 C770	2N2222A	TO18	NPN	75	40	6	100	300	150	250	
BS9300 C774	2N2194	TO5	NPN	60	40	5	20	60	150	50	
BS9300 C775	2N2243A	TO5	NPN	120	80	7	40	120	150	50	

*Near Equivalent

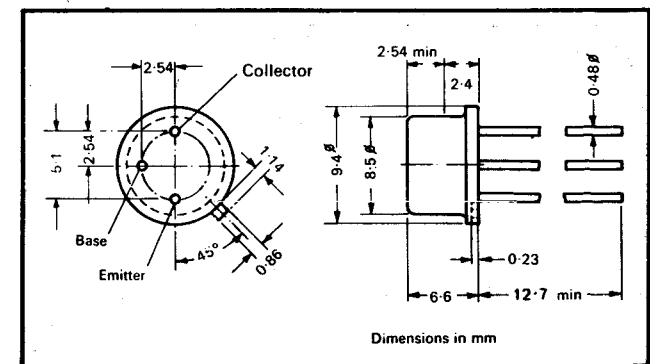
Case Outlines



TO-18



TO-72



TO-5