

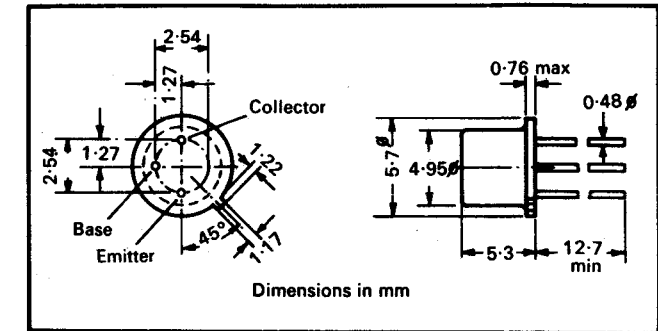
## High Current NPN Amplifiers

Device Type	Polarity	Case	Maximum ratings				hFE1			hFE2			f <sub>t</sub> MHz	VCE(sat)		Available in TO18	Notes
			BV CBO	BV CEO	BV EBO	ICM	Ic	min.	max.	Ic	min.	max.		IC	V		
			V	V	V	mA											
BFT39	NPN	TO39	90	80	5	1000	100	50	250	1000	20	—	100	1.0	1.6	BFT29	hFE 25 min at 1mA hFE 45 min at 1mA
BFT40	NPN	TO39	70	60	5	1000	100	75	250	1000	25	—	100	1.0	1.0	BFT30	
BFT41	NPN	TO39	60	50	5	1000	100	100	300	1000	25	—	100	1.0	1.0	BFT31	
BFY50	NPN	TO39	80	35	6	1000	150	30	—	1000	15	—	60	1.0	1.0	BFT53	hFE 20 min at 10mA hFE 30 min at 10mA
BFY51	NPN	TO39	60	30	6	1000	150	40	—	1000	15	—	50	1.0	1.6	BFT54	
BFY52	NPN	TO39	40	20	6	1000	150	60	—	1000	15	—	50	1.0	1.6	BFT55	
BC142	NPN	TO39	80	60	5	800	200	20	—	—	—	—	40	0.2	0.4		
BC300	NPN	TO39	120	80	7	1000	150	40	240	500	20	—	120	0.15	0.5	hFE 20 min at 100μA Available in 3 hFE Bands at Ic=150 mA	
BC301	NPN	TO39	90	60	7	1000	150	40	240	500	20	—	120	0.15	0.5		
BC302	NPN	TO39	60	45	7	1000	150	40	240	500	20	—	120	0.15	0.5		
2N697	NPN	TO39	60	40	5	1000	150	40	120	—	—	—	50	0.15	1.5	hFE 20 min at 100μA hFE 35 min at 100μA	
2N1613	NPN	TO39	75	50	7	1000	150	40	120	500	20	—	60	0.15	1.5		
2N1711	NPN	TO39	75	50	7	1000	150	100	300	500	40	—	70	0.15	1.5		
2N1890	NPN	TO39	100	60	7	—	150	100	300	—	—	—	60	0.15	5.0	hFE 20 min at 100μA	
2N1893	NPN	TO39	120	80	7	500	150	40	120	10	35	—	50	0.15	5.0		
2N2243A	NPN	TO39	120	80	7	1000	150	40	120	10	30	—	50	0.15	0.25		

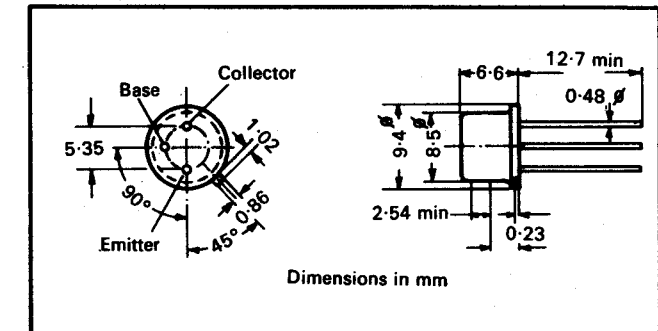
## PNP Amplifiers and Fast Switches

Device Type	Polarity	Case	Maximum ratings				hFE1			hFE2			f <sub>t</sub> min. MHz	VCE(sat)		Max. ton ns	Max. ts ns	Max. toff ns	Notes
			BV CBO	BV CEO	BV EBO	ICM	Ic	min.	max.	Ic	min.	max.		IC	V				
			V	V	V	mA													
2N2411	PNP	TO18	25	20	5	300	10	20	60	50	10	—	140	10	0.20	25	90	100	hFE 10 min at 50μA hFE 20 min at 50μA hFE 25 min at 100mA
2N2412	PNP	TO18	25	20	5	300	10	40	120	50	20	—	140	10	0.20	25	90	100	
2N2894	PNP	TO18	12	12	4	200	10	30	—	30	40	150	400	10	0.15	60	—	90	
2N3012	PNP	TO18	12	12	4	200	10	25	—	30	30	120	400	10	0.15	60	—	75	hFE 30 min at 100mA VCE(sat) 0.5V max at 100mA hFE 25 min at 100mA
2N3576	PNP	TO18	20	15	5	200	10	40	120	100	10	—	400	10	0.15	30	30	50	
2N3829	PNP	TO52	35	20	20	500	10	25	—	30	30	120	350	10	0.18	25	50	65	
2N4260	PNP	TO72	15	15	45	30	10	30	150	30	20	—	1800	10	0.35	1.2	—	1.2	

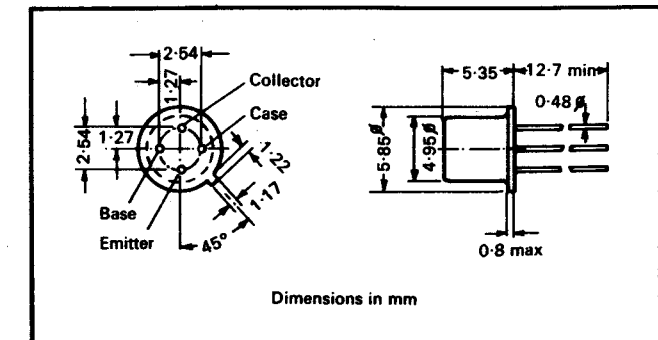
## Case Outlines



TO-18



TO-39



TO-72