

High Current NPN Amplifiers

Device Type	Polarity	Case	Maximum ratings				hFE1			hFE2			ft	VCE(sat)		Available in TO18	Notes	
			BV	BV	BV	ICM								IC	IC			
			CBO	CEO	EBO	mA	mA	min.	max.	mA	min.	max.		MHz	IC			V
			V	V	V										A			
BFT39	NPN	TO39	90	80	5	1000	100	50	250	1000	20	—	100	1.0	1.6	BFT29	hFE 25 min at 1mA	
BFT40	NPN	TO39	70	60	5	1000	100	75	250	1000	25	—	100	1.0	1.0	BFT30	hFE 45 min at 1mA	
BFT41	NPN	TO39	60	50	5	1000	100	100	300	1000	25	—	100	1.0	1.0	BFT31	hFE 45 min at 1mA	
BFY50	NPN	TO39	80	35	6	1000	150	30	—	1000	15	—	60	1.0	1.0	BFT53	hFE 20 min at 10mA	
BFY51	NPN	TO39	60	30	6	1000	150	40	—	1000	15	—	50	1.0	1.6	BFT54	hFE 30 min at 10mA	
BFY52	NPN	TO39	40	20	6	1000	150	60	—	1000	15	—	50	1.0	1.6	BFT55	hFE 30 min at 10mA	
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 _t min. MHz	VCE(sat)		Max. ton ns	Max. ts ns	Max. toff ns	Notes
			BV CBO	BV CEO	BV EBO	ICM								IC	IC				
			V	V	V	mA	mA	min.	max.	mA	min.	max.		mA	V				
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	—	1600	10	0.35	1.2	—	1.2	