

High-Speed Switching

Type No.	V _{CEO(sus)} V	V _{CER(sus)} V	P _T W	h _{FE} at V _{CE} = 10V						V _{CE(sat)} -V		t _r μs	t _f μs	JEDEC Package	
				Current - mA											
				0.01	0.1	10	50	150	500	I _C mA	I _B mA				
2N2102 FAMILY (n-p-n)			7W max	Complementary to 2N4036 Family; f _T = 120MHz min.											
2N697	-	50	2	-	-	-	-	40-120	-	1.5	150	15	-	-	TO-205AD/ TO-39
2N1613	-	50	3	-	20 min.	35 min.	-	40-120	20 min.	1.5	150	15	30†	-	
2N3053	40	50	5	-	-	-	-	50-250	-	1.4	150	15	-	-	
2N2270	45	60	5	-	-	-	-	50-200	-	0.9	150	15	-	-	
40407	50	-	1	-	-	*40-200	-	-	-	-	-	-	-	-	
2N3053A	60	70	5	-	-	-	-	50-250	-	0.3	150	15	-	-	
2N699	-	80	2	-	-	-	-	-	-	5	150	15	-	-	
2N2102	65	80	5	10 min.	20 min.	35 min.	-	40-120	25 min.	0.5	150	15	30†	-	
2N1893	80	100	3	-	20 min.	35 min.	-	40-120	-	5	150	15	-	-	
40408	90	-	1	-	-	*40-200	-	-	-	-	-	-	-	-	
2N2405	90	140	5	-	-	35 min.	-	60-200	-	0.5	150	15	-	-	
° - measured @ V _{CE} = 10V, I _C = 1mA * - measured @ V _{CE} = 4V, I _C = 10mA															
Type No.	V _{CEO(sus)} V	V _{CEx(sus)} V	P _T W	h _{FE}			V _{CE(sat)} -V			t _r μs	t _f μs	JEDEC Package			
				I _C A	V _{CE} V	I _C A	I _B A								
2N3879 FAMILY (n-p-n)			35W max	f _T to 60MHz min.											
2N3878	50	65‡	35	40-200	0.5	2	2	4	0.4	-	-	TO-213AA/ TO-66			
2N5202	50	75‡	35	10-100	4	1.2	1.2	4	0.4	0.4	0.4				
2N3879*	75	90‡	35	20-80	4	5	1.2	4	0.4	0.4	0.4				
2N6500	90	110‡	35	15-60	3	2	1.5	3	0.3	0.4	0.5				
2N4036 FAMILY (p-n-p)			7W max	Complementary to 2N2102 Family; f _T = 60MHz min.											
40319	-40	-	5	35-200	-50m	-4	-1.4	-150m	-15m	-	-	TO-205AD/ TO-39			
2N4037	-40	-60‡	7	50-250	-150m	-10	-1.4	-150m	-15m	-	-				
40362	-	-70‡	5	35-200	-50m	-4	-1.4	-150m	-15m	-	-				
2N4036	-65	-85‡	7	40-140	-150m	-10	-0.65	-150m	-15m	0.07	0.1				
2N4314	-65	-85‡	7	50-250	-150m	-10	-1.4	-150m	-15m	-	-				
40406	-50	-	1	30-200	-0.1m	-10	-	-	-	-	-				
2N5038 FAMILY (n-p-n)			140W max	f _T to 80MHz min.											
BDY92	60	80	40	30-120	5	5	0.5	5	0.5	-	0.2	TO-204AA/ TO-3			
BDY55	60	100	117	20-70	4	4	1.1	4	0.4	0.5	2				
2N5039*	75	120	140	20-100	10	5	1	10	1	0.5	0.5				
BDY91	80	100	40	30-120	5	5	0.5	5	0.5	-	0.2				
2N5038*	90	150	140	20-100	12	5	1	12	1.2	0.5	0.5				
BDY90	100	120	40	30-120	5	5	0.5	5	0.5	-	0.2				
2N6496	110	130‡	140	12-100	8	2	1	8	0.8	0.5	0.5				
2N6354	120	130	140	10-100	10	2	1	10	1	0.3	0.2				
BDY56	120	150	117	20-70	4	4	1.1	4	0.4	0.5	2				
BUX40A	125	150‡	120	15-80	10	4	1.2	10	1	1.2	0.4				
2N5320 FAMILY (n-p-n)			10W max	Complementary to 2N5322 Family; f _T = 50MHz min.											
2N5321	50	75**	10	40-250	500m	4	0.8	500m	50m	80†	800#	TO-205AD/ TO-39			
2N5320	75	100**	10	30-130	500m	4	0.5	500m	50m	80†	800				

*JAN types available † t_{on} units are ns # t_{off} units are ns m = mA value ‡ V_{CER(sus)} ** V_{CEV(sus)}