

High-Speed Switching

Type No.	V <sub>CEO(sus)</sub> V	V <sub>CER(sus)</sub> V	P <sub>T</sub> W	h <sub>FE</sub> at V <sub>CE</sub> = 10V						V <sub>CE(sat)</sub> -V		t <sub>r</sub> μs	t <sub>f</sub> μs	JEDEC Package	
				Current - mA						I <sub>C</sub> mA	I <sub>B</sub> mA				
				0.01	0.1	10	50	150	500						
<b>2N2102 FAMILY (n-p-n)</b>			7W max	Complementary to 2N4036 Family; f <sub>T</sub> = 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 <sub>CE</sub> = 10V, I <sub>C</sub> = 1mA * - measured @ V <sub>CE</sub> = 4V, I <sub>C</sub> = 10mA															
Type No.	V <sub>CEO(sus)</sub> V	V <sub>CEX(sus)</sub> V	P <sub>T</sub> W	h <sub>FE</sub>		V <sub>CE(sat)</sub> -V		t <sub>r</sub> μs	t <sub>f</sub> μs	JEDEC Package					
				I <sub>C</sub> A	V <sub>CE</sub> V	I <sub>C</sub> A	I <sub>B</sub> A								
<b>2N3879 FAMILY (n-p-n)</b>			35W max	f <sub>T</sub> 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				
<b>2N4036 FAMILY (p-n-p)</b>			7W max	Complementary to 2N2102 Family; f <sub>T</sub> = 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	-	-	-	-	-				
<b>2N5038 FAMILY (n-p-n)</b>			140W max	f <sub>T</sub> 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				
<b>2N5320 FAMILY (n-p-n)</b>			10W max	Complementary to 2N5322 Family; f <sub>T</sub> = 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 † I<sub>on</sub> units are ns # I<sub>off</sub> units are ns m = mA value ‡ V<sub>CER(sus)</sub> \*\* V<sub>CEV(sus)</sub>