

PNP Transistors

Medium Power



Type No.	Case Style	V <sub>CE0</sub> (V) Min	V <sub>CE0</sub> (V) Min	V <sub>BE0</sub> (V) Min	I <sub>CE0</sub> <sup>*</sup> I <sub>CB0</sub> (mA) Max	V <sub>CB</sub> (V)	I <sub>FE</sub> @ I <sub>C</sub> & V <sub>CE</sub> (mA) Min Max	V <sub>CE(SAT)</sub> (V) & V <sub>BE(SAT)</sub> (V) @ I <sub>C</sub> (mA) Max Min Max	COB (pF) Max	f <sub>T</sub> (MHz) @ I <sub>C</sub> (mA) Min Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.	
2N4030	TO-39	60	60	5	50	50	15 25 40 30	1A 500 100 0.1	5 5 5 5	1.0 0.5 0.15	400		(Note 3)	67	
2N4031	TO-39	80	80	5	50	60	10 25 40 30	1A 500 100 0.1	5 5 5 5	0.5 0.15	400		(Note 3)	67	
2N4032	TO-39	60	60	5	50	50	40 70 100 75	1A 500 100 0.1	5 5 5 5	1.0 0.5 0.15	400		(Note 3)	67	
2N4033 also Avail. JAN/TX/V Versions	TO-39	80	80	5	50	60	25 70 100 75	1A 500 100 0.1	5 5 5 5	0.5 0.15	400		(Note 3)	67	
2N4036	TO-39	90	85	7	20	60	20 40 20	500 150 10	10 10	0.6	700		(Note 4)	67	
2N4037	TO-39	60	40	7	250	60	50 15	150 1	10 10	1.4				67	
2N4314	TO-39	90	65		250	60	50 15	150 1	10 10	1.4				67	
2N4354		Same as PN4354													67
2N4355		Same as PN4355													67
2N4356		Same as PN4356													67

Medium Power (Continued)

Type No.	Case Style	V <sub>CE0</sub> (V) Min	V <sub>CE0</sub> (V) Min	V <sub>BE0</sub> (V) Min	I <sub>CE0</sub> <sup>*</sup> (mA) Max	V <sub>CB</sub> (V) Max	I <sub>FE</sub> @ I <sub>C</sub> (mA) Min Max	I <sub>C</sub> (mA) Min Max	V <sub>CE(SAT)</sub> (V) & V <sub>BE(SAT)</sub> (V) Min Max	I <sub>C</sub> (mA) Min Max	COB (pF) Max	f <sub>T</sub> (MHz) Min Max	I <sub>C</sub> (mA) Min Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
MPSA55	TO-92 (92)	60	4	100	60	50	100 1	100 1	0.25	100		50	100				67
MPSA56	TO-92 (92)	80	4	100	80	50	100 1	100 1	0.25	100		50	100				67
MPS4354	TO-92 (92)	Same as PN4354															
MPS4355	TO-92 (92)	Same as PN4355															
MPS4356	TO-92 (92)	Same as PN4356															
MPS6562	TO-92 (92)	25	5	100	20	50	200 500 1	500 1	0.5	500	30	60	10				67
PN4354	TO-92 (92)	60	5	50	50	30	500 10	150 10	0.15	0.9	30	100	50	400	3	14/15	67
PN4355	TO-92 (92)	60	5	50	50	75	100 10	500 10	0.5	1.1							67
PN4356	TO-92 (92)	80	5	50	50	30	500 10	150 10	0.15	0.9	30	100	50	400	3	14/15	67
PN5855	TO-92 (92)	60	5	100	40	50	300 150 10	15 10 10	0.4	1.3	15	100	50				67

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Medium Power (Continued)

Type No.	Case Style	V <sub>CB0</sub> (V) Min	V <sub>CEO</sub> (V) Min	V <sub>EB0</sub> (V) Min	ICES* I <sub>CB0</sub> (mA) @ (V) Max	h <sub>FE</sub> Min	I <sub>C</sub> (mA) Max	V <sub>CE</sub> (V) Max	V <sub>CE(SAT)</sub> (V) Max	V <sub>BE(SAT)</sub> (V) Min	I <sub>C</sub> (mA) Max	COB (pF) Max	f <sub>T</sub> (MHz) Min	I <sub>C</sub> (mA) Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
PN5857	TO-92 (92)	80	80	5	100 60	50 300	150 10	10	0.4	1.3	15	15	100	50				67
TN4033	TO-237 (91)	80	80	5	50 60	75 300	0.1 5	5	0.15	0.9	150 500	20	150 500	50				67
TN4036	TO-237 (91)	90	65	7	20 60	40 140	0.1 10	10	0.65	1.4	150	30	60 50					67
TN4037	TO-237 (91)	60	40	7	250 60	15 50	1 10	10	1.4		150	30	60 200	50				67
TN4314	TO-237 (91)	90	65		250 60	15 50	1 10	10	1.4		150	30	60	50				67
MPSA92	TO-92 (92)	300	300	5	250 200	25 40	1 10	10	0.5	0.9	20	6	50	10				76
MPSA93	TO-92 (92)	200	200	5	250 160	25 40	1 10	10	0.4	0.9	20	8	50	10				76
MPSW92	TO-92 (99)	200	200	5	250 200	25 40	1 10	10	0.5	0.9	20	6	50	10				76
2N6726	TO-237 (91)	40	30	5	100 40	55 60	10 1	1	0.5		1A		50	50				77
2N6727	TO-237 (91)	50	40	5	100 50	55 80	10 1	1	0.5		1A		50 500	50				77
92PU51	TO-237 (91)		30		100 40	50 60	1A 1	1	0.5		1A	30	50	50				77

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Medium Power (Continued)														
Type No.	Case Style	V <sub>CE0</sub> (V) Min	V <sub>CE0</sub> (V) Min	V <sub>BE0</sub> (V) Min	I <sub>CE0</sub> <sup>*</sup> I <sub>CB0</sub> (mA) Max	I <sub>CE0</sub> <sup>*</sup> V <sub>CB</sub> (V) Max	h <sub>FE</sub> @ I <sub>C</sub> & V <sub>CE</sub> (V) Min Max	V <sub>CE(SAT)</sub> (V) & V <sub>BE(SAT)</sub> (V) @ I <sub>C</sub> (mA) Max Min Max	COB (pF) Max	f <sub>T</sub> (MHz) @ I <sub>C</sub> (mA) Min Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
92PU51A	TO-237 (91)		40		100 50		50 1A 1 60 100 1 55 10 1	0.5 1A	30	80 50				77
NSD202	TO-202 (55)		45	5	100 60		25 1A 5 40 500 5 50 150 100 5 40 10 5	0.2 0.9 100 0.4 1.2 500	30	60 50				77
NSD203	TO-202 (55)		45	5	100 60		30 1A 5 50 500 5 120 360 100 5 50 10 5	0.2 0.9 100 0.4 1.2 500	30	60 50				77
NSDU51	TO-202 (55)		30	5	100 30		50 1A 1 60 100 1 55 10 1	0.7 1A	30	50 50				77
NSDU51A	TO-202 (85)		40	5	100 40		50 1A 1 60 100 1 55 10 1	0.7 1A	30	50 50				77
D41D1	TO-202 (55)		30		100* 45		10 1A 2 50 150 100 2	0.5 1.5 500						78
D41D2	TO-202 (55)		30		100* 45		20 1A 2 120 300 100 2	0.5 1.5 500						78
D41D4	TO-202 (55)		45		100* 60		10 1A 2 50 150 100 2	0.5 1.5 500						78
D41D5	TO-202 (55)		45		100* 60		20 1A 2 120 360 100 2	0.5 1.5 500						78
D41D7	TO-202 (55)		60		100* 75		10 1A 2 50 150 100 2	1.0 1.5 500						78
D41D8	TO-202 (55)		60		100* 75		20 1A 2 120 360 100 2	1.0 1.5 500						78
D41D10	TO-202 (55)		75		100* 90		10 1A 2 50 150 100 2	1.0 1.5 500						78

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Medium Power (Continued)																			
Type No.	Case Style	V <sub>CB0</sub> (V) Min	V <sub>CEO</sub> (V) Min	V <sub>EB0</sub> (V) Min	ICES* ICBO @ (mA) Max	hFE Min	hFE Max	IC @ (mA)	V <sub>CE</sub> & (V)	V <sub>CE(SAT)</sub> (V) & Max	V <sub>BE(SAT)</sub> (V) @ Min	IC (mA) Max	COB (pF) Max	f <sub>T</sub> (MHz) Min	f <sub>T</sub> (MHz) Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
D41D11	TO-202 (55)		75		100*	20	360	1A 100	2 2	1.0	1.5	500							78
D41D13	TO-202 (55)		75		100*	50	150	100	2 2	1.0	1.5	500							78
D41D14	TO-202 (55)		75		100*	120	360	100	2 2	1.0	1.5	500							78
D41E1	TO-202 (55)		30		100*	10	50	1A 100	2 2	1.0	1.3	1A							78
D41E5	TO-202 (55)		60		100*	10	50	1A 100	2 2	1.0	1.3	1A							78
D41E7	TO-202 (55)		80		100*	10	50	1A 100	2 2	1.0	1.3	1A							78
NSDU52	TO-202 (55)	60	40	5	100	30	300	500 150 10	10 10	0.4	1.3	150 20	20	150	20				78
2N6554	TO-202 (55)	60	60	5	100	25	60	500 1 250 1 80 300 50 1 80 10 1	1 1	1.0	1A	100 250 100	18	75 250	100				78*
2N6555	TO-202 (55)	60	60	5	100	25	60	500 1 250 1 80 300 50 1 60 10 1	1 1	1.0	1A	100 250 100	18	78 250	100				78
2N6556	TO-202 (55)	100	100	5	100	25	60	500 1 250 1 80 300 50 1 60 10 1	1 1	1.0	1A	100 250 100	18	75 250	100				78

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Medium Power (Continued)																	
Type No.	Case Style	V <sub>CSO</sub> (V) Min	V <sub>CEO</sub> (V) Min	V <sub>EB0</sub> (V) Min	I <sub>CS</sub> <sup>*</sup> I <sub>CS0</sub> (mA) Max	V <sub>CB</sub> (V)	h <sub>FE</sub> @ I <sub>C</sub> & V <sub>CE</sub> (V)	V <sub>CE(SAT)</sub> (V) Max	V <sub>BE(SAT)</sub> (V) Min	I <sub>C</sub> (mA) Max	COB (PF) Max	f <sub>T</sub> (MHz) Min	I <sub>C</sub> (mA) Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
2N6706	TO-237 (90)	60	45	5	100	60	40 50 2 40 250 2 25 500 2	1.0	1A	1A		50	50				78
2N6709	TO-237 (90)	80	60	5	100	80	40 50 2 40 250 2 25 500 2	1.0	1A	500		50	50				78
2N6710	TO-237 (90)	100	80	5	100	100	40 50 2 40 250 2 25 500 2	1.0	1A	500		50	50				78
MPS6727	TO-92 (99)	50	40	5	100	50	60 100 1 50 250 1A 1	0.5	1.2	1A	30						78
NSD6180	TO-202 (55)		75		500	80	10 1A 2 40 250 500 2 30 50 2	0.5	1.2	500	30	50	50				78
NSD6181	TO-202 (55)		50		500	60	10 1A 2 40 250 500 2 30 50 2	0.5	1.2	500	30	50	50				78
NSDU55	TO-202 (55)	60	60	4	100	60	20 500 1 50 250 1 80 50 1	0.35		250	30	50	200				78
PE8550	TO-92 (92)	30	25	6	100	20	50 200 10 1 65 200 100 1 65 200 500 1 40 200 1A 1	0.15	0.9	200	40	100	50				78
TN4234	TO-237 (91)	40	40	7	0.1 mA	40	40 100 1 30 150 250 1 20 500 1 10 1A 1	0.6	1.5	1A	100					T-31-01	78
TN4235	TO-237 (91)	60	60	7	0.1 mA	60	40 100 1 30 150 250 1 20 500 1 10 1A 1	0.6	1.5	1A	100						78

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Medium Power (Continued)																				
Type No.	Case Style	V <sub>CB0</sub> (V) Min	V <sub>CE0</sub> (V) Min	V <sub>EB0</sub> (V) Min	ICES* I <sub>CB0</sub> (mA) Max	V <sub>CB</sub> (V) Max	h <sub>FE</sub> Min	h <sub>FE</sub> Max	I <sub>C</sub> (mA) Max	V <sub>CE</sub> (V) Max	V <sub>BE(SAT)</sub> (V) Max	V <sub>BE(SAT)</sub> (V) Min	I <sub>C</sub> (mA) Max	CoB (pF) Max	f <sub>T</sub> (MHz) Min	f <sub>T</sub> (MHz) Max	t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
TN4236	TO-237 (91)	80	80	7	0.1 mA	80	40	100	1	0.6	1.5	1A	100							78
2N6728	TO-237 (91)	60	60	5	100	40	80	50	1	0.35		250	50		50					79
2N6729	TO-237 (91)	80	80	5	100	60	80	50	1	0.35		250	50		50					79
2N6730	TO-237 (91)	100	100	5	100	80	80	50	1	0.35		250	50		50					79
2N6732	TO-237 (91)	100	80	5	100	80	100	300	2	0.35		350	50		50					79
92PU55	TO-237 (91)		60		100	40	20	500	1	0.35		250	50	30	50	200				79
92PU56	TO-237 (91)		80		100	60	20	500	1	0.35		250	50	30	50	200				79
92PU57	TO-237 (91)		100		100	80	20	500	1	0.35		250	50	30	50	200				79
NSD204	TO-202 (55)	100	80	7	100	100	10	1A	5	0.2	0.9	100	60		60	50			T-31-01	79
NSD205	TO-202 (55)	100	80	7	100	100	20	360	5	0.2	0.9	100	60		60	50				79

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**Medium Power** (Continued)

Type No.	Case Style	V <sub>CB0</sub> (V)		V <sub>CEO</sub> (V)		V <sub>EB0</sub> (V)		I <sub>CS</sub> <sup>*</sup> (nA)		h <sub>FE</sub> @ I <sub>C</sub> & V <sub>CE</sub> (V)		V <sub>CE(SAT)</sub> (V) & V <sub>BE(SAT)</sub> (V) @ I <sub>C</sub> (mA)		f <sub>T</sub> (MHz) @ I <sub>C</sub> (mA)		t <sub>OFF</sub> (ns) Max	NF (dB) Max	Test Conditions	Process No.
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
NSD206	TO-202 (55)	140	100	7	100	140	100	140	25	500	5	0.2	0.9	100	30	50			79
										150	5	0.5	1.2	500					
NSDU56	TO-202 (55)	80	80	4	80	80	100	80	20	500	1	0.35		250	30	200			79
									50	250	1			50	50				
NSDU57	TO-202 (55)	100	100	4	100	100	100	100	20	500	1	0.35		250	30	200			79
									50	250	1			50	50				

**TEST CONDITIONS:**

Note 1: I<sub>C</sub> = 50 mA, V<sub>CC</sub> = 100V, I<sub>B</sub><sup>1</sup> = I<sub>B</sub><sup>2</sup> = 5 mA.  
 Note 2: I<sub>C</sub> = 500 μA, V<sub>CE</sub> = 10V, f = 1 kHz.  
 Note 3: I<sub>C</sub> = 500 mA, I<sub>B</sub><sup>1</sup> = I<sub>B</sub><sup>2</sup> = 50 mA.  
 Note 4: I<sub>C</sub> = 150 mA, V<sub>CC</sub> = 30V, I<sub>B</sub><sup>1</sup> = I<sub>B</sub><sup>2</sup> = 15 mA.

Note 5: I<sub>C</sub> = 100 μA, V<sub>CC</sub> = 10V, f = 1 kHz.  
 Note 6: I<sub>C</sub> = 500 mA, V<sub>CC</sub> = 30V, I<sub>B</sub><sup>1</sup> = I<sub>B</sub><sup>2</sup> = 50 mA.  
 Note 7: I<sub>C</sub>/I<sub>B</sub> = 8.

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