

6501130 NATL SEMICOND, (DISCRETE)

28C 35454



MEDIUM POWER

Type No.	Case Style	V _{CE0} (V) Min	V _{EB0} (V) Min	I _{CB0} (mA) Max	I _{CB0} (mA) Max	h _{FE} Min	h _{FE} Max	I _C (mA) & V _{CE} (V)	V _{CE(SAT)} (V) Max	V _{BE(SAT)} (V) Min	I _C (mA) Max	C _{ob} (pF) Max	f _T (MHz) Min	f _T (MHz) Max	I _C (mA) Max	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
2N4030	TO-39	60	5	50	50	15	40	1A 5 500 5 100 5	1.0 0.5 0.15	0.9	1A 500 150	20	100	400	50	400		3	67
2N4031	TO-39	80	5	50	60	10	30	1A 5 500 5 100 5	0.5 0.15	0.9	500 150	20	100	400	50	400		3	67
2N4032	TO-39	60	5	50	50	40	70	1A 5 500 5 100 5	1.0 0.5 0.15	0.9	1A 500 500 150	20	150	500	50	400		3	67
2N4033	TO-39	80	5	50	60	25	75	1A 5 500 5 100 5	0.5 0.15	0.9	500 150	20	150	500	50	400		3	67
2N4036	TO-39	90	7	20	60	20	40	500 10 150 10 0.1 10	0.6	1.4	150	30	60	50	700		4	67	
2N4037	TO-39	60	7	250	60	50	15	250 10 150 10 1 10	1.4		150	30	60	50					67
2N4314	TO-39	90		250	60	15	15	1 10 1 10	1.4		150	30	60	50					67
40319	TO-39	40		250	15	35	200	50 4	1.4		150								67
TN4030	TO-237 (91)	60	5	50	50	30	40	0.1 5 120 5 500 5	0.5 0.15	0.9	500 150 1A	20	100	400	50				67
TN4033	TO-237 (91)	80	5	50	60	75	100	0.1 5 300 5 500 5	0.15 0.5	0.9	150 500	20	150	500	50				67
TN4314	TO-237 (91)	90		250	60	15	50	1 10 250 10 150 10	1.4		150		60	50					67
TN3244	TO-237 (91)	40	5	50	30	60	50	150 1 150 1 750 5	0.3 0.5 1.0	1.1 1.5 2.0	150 500 750	25	175	50					70

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TEST CONDITIONS: (1) I_C = 50 mA, V_{CC} = 100V, I_B¹ = I_B² = 5 mA. (2) I_C = 500 μA, V_{CE} = 10V, f = 1 kHz. (3) I_C = 500 mA, V_{CE} = 30V, I_B¹ = I_B² = 50 mA. V_{CC} = 10V, f = 1 kHz. (6) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 50 mA. (4) I_C = 150 mA, V_{CC} = 30V, I_B¹ = I_B² = 15 mA. (5) I_C = 100 μA.

PNP Transistors

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PNP Transistors

6501130 NATL SEMICOND, (DISCRETE)

28C 35455 D

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Type No.	Case Style	VCBO (V) Min	VCEO (V) Min	VEBO (V) Min	ICES* ICBO (mA) Max	VCB (V)	hFE @ IC & VCE (V)		VCE(SAT) & VBE(SAT) (V)			IC (mA) @ VCE(SAT) Min Max	Cob (pF) Max	fr (MHz) Min Max	IC (mA) @ VCE(SAT) Min Max	toff (ns) Max	NF (dB) Max	Test Conditions	Process No.
							Min	Max	Max	Min	Max								
TN3245	TO-237 (91)	50	50	5	50	50	35	150	1	0.35	1.1	150	25	150	50				70
TN3467	TO-237 (91)	40	40	5	100	30	20	500	1	0.6	1.5	500							70
TN5022	TO-237 (91)	50	50	5	100	30	40	150	1	0.3	1.0	150	25	175	50				70
TN5023	TO-237 (91)	30	30	5	100	30	25	500	1	0.2	1.0	100	25	170	50	90		6	70
NSE872	TO-202 (51)	300	300		100	200	25	100	5	0.4	1.4	500				90		6	70
2N6726	TO-237 (91)	40	40	5	100	40	40	100	1	0.17	1.0	100							76
2N6727	TO-237 (91)	50	40	5	100	50	55	100	1	0.35	1.4	500							77
92PU51	TO-237 (91)		30		100	40	50	100	1	0.5	1.75	1A							77
92PU51A	TO-237 (91)		40		100	50	55	100	1	0.5	1.75	1A							77
NSD202	TO-202 (55)	60	45	5	100	60	25	1A	5	0.2	0.9	100	30	60	50				77
NSD203	TO-202 (55)	60	45	5	100	60	40	500	5	0.4	1.2	500							77
NSDU51	TO-202 (55)	40	30	5	100	30	50	100	5	0.2	0.9	100	30	60	50				77
NSDU51A	TO-202 (55)	50	40	5	100	40	50	100	5	0.4	1.2	500							77

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MEDIUM POWER (Continued)

Type No.	Case Style	VCBO (V) Min	VCEO (V) Min	VEBO (V) Min	ICES* ICBO (mA) Max	hFE @ IC & VCE		VCE(SAT) (V) & VBE(SAT) (V) Min Max	IC (mA) @ IC (mA) Max	Cob (pF) Max	fT (MHz)		toff (ns) Max	NF (dB) Max	Test Conditions	Process No.
						Min	Max				Min	Max				
NSDU52	TO-202 (55)	60	40	5	100	40	300	0.4	150	20	150	20				77
NSE170	TO-202 (56)		40		100	12	300	0.9	150		50					77
2N6554	TO-202 (55)	60	60	5	100	25	300	1.0	100	18	75	250				78
2N6555	TO-202 (55)	60	60	5	100	25	300	0.5	250	18	75	250				78
2N6556	TO-202 (55)	100	100	5	100	25	300	1.0	100	18	75	250				78
2N6708	TO-237 (90)	60	45	5	100	40	250	1.0	250		50					78
2N6709	TO-237 (90)	80	60	5	100	40	250	0.5	500		50					78
2N6710	TO-237 (90)	100	80	5	100	40	250	0.5	500		50					78
92PE77A	TO-237 (90)		45		100	25	250	0.5	500	30	50					78
92PE77B	TO-237 (90)		60		100	25	250	0.5	500	30	50					78
92PE77C	TO-232 (90)		80		100	25	250	0.5	500	30	50					78

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TEST CONDITIONS: (1) IC = 50 mA, VCC = 100V, IB¹ = IB² = 5 mA. (2) IC = 500 mA, VCE = 10V, f = 1 kHz. (3) IC = 500 mA, VCC = 30V, IB¹ = IB² = 50 mA. (4) IC = 150 mA, VCC = 30V, IB¹ = IB² = 15 mA. (5) IC = 100 mA, VCC = 10V, f = 1 kHz. (6) IC = 500 mA, VCC = 30V, IB¹ = IB² = 50 mA.

PNP Transistors

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Type No.	Case Style	V _{CE0} (V) Min	V _{BE0} (V) Min	I _{CE0} (mA) Max	V _{CB} (V)	h _{FE} @ I _C & V _{CE}		V _{CE(SAT)} & V _{BE(SAT)} (V)		I _C (mA) @	C _{ob} (pF) Max	f _T (MHz) Min	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
						Min	Max	Min	Max							
D41D1	TO-202 (55)	30		100*	45	10	1A	2	0.5	1.5	500					78
D41D2	TO-202 (55)	30		100*	45	20	1A	2	0.5	1.5	500					78
D41D4	TO-202 (55)	45		100*	60	10	1A	2	0.5	1.5	500					78
D41D5	TO-202 (55)	45		100*	60	20	1A	2	0.5	1.5	500					78
D41D7	TO-202 (55)	60		100*	75	10	1A	2	1.0	1.5	500					78
D41D8	TO-202 (55)	60		100*	75	20	1A	2	1.0	1.5	500					78
D41D10	TO-202 (55)	75		100*	90	10	1A	2	1.0	1.5	500					78
D41D11	TO-202 (55)	75		100*	90	20	1A	2	1.0	1.5	500					78
D41D13	TO-202 (55)	75		100*	90	50	150	100	2	1.0	1.5	500				78
D41D14	TO-202 (55)	75		100*	90	120	360	100	2	1.0	1.5	500				78
D41E1	TO-202 (55)	30		100*	40	10	1A	2	1.0	1.3	1A					78
D41E5	TO-202 (55)	60		100*	70	10	1A	2	1.0	1.3	1A					78
D41E7	TO-202 (55)	80		100*	90	10	1A	2	1.0	1.3	1A					78
D43C7	TO-202 (55)	60		1 μA*	60	10	1A	1	0.5	1.3	1A	30				78
D43C8	TO-202 (55)	60		1 μA*	60	20	1A	1	0.5	1.3	1A	30				78
D43C9	TO-202 (55)	60		1 μA*	60	20	2A	1	0.5	1.3	1A	30				78
D43C10	TO-202 (55)	80		10 μA*	90	10	1A	1	0.5	1.3	1A	100				78
D43C11	TO-202 (55)	80		10 μA*	90	20	1A	1	0.5	1.3	1A	100				78
D43C12	TO-202 (55)	80		10 μA*	90	20	2A	1	0.5	1.3	1A	100				78

MEDIUM POWER (Continued)



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28C 35458

D



MEDIUM POWER (Continued)

Type No.	Case Style	V _{CE0} (V) Min	V _{BE0} (V) Min	ICES* I _{CB0} @ V _{CB} (mA) (V) Max	h _{FE} @ I _C & V _{CE} Min Max (mA) (V)	V _{CE(SAT)} V _{BE(SAT)} (V) (V) Max Min	I _C (mA) Max	C _{ob} (pF) Max	f _T (MHz) Min Max	I _C (mA) Max	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
NSD6180	TO-202 (65)	75		500 80	10 40 250 500 2 2 30 50 2	0.5 1.2	500	30	50	50				78
NSD6181	TO-202 (65)	50		500 60	10 40 250 500 2 2 30 50 2	0.5 1.2	500	30	50	50				78
NSDU55	TO-202 (65)	60	4	100 60	20 50 250 1 1 80 50 1	0.35	250	30	50	200				78
NSE171	TO-202 (66)	60		100 80	12 30 500 1 1 50 250 100 1 1	0.9 1.5	1.5A		50	100				78
TN4234	TO-237 (91)	40		0.1 mA 40	40 30 150 250 1 1 20 500 1 1 10 1A 1 1	0.3 1.5	500	100						78
TN4235	TO-237 (91)	60		0.1 mA 60	40 30 150 250 1 1 20 500 1 1 10 1A 1 1	1.5 1A	1A	100						78
TN4236	TO-237 (91)	80		0.1 mA 80	40 30 150 250 1 1 20 500 1 1 10 1A 1 1	1.5 1A	1A	100						78
2N6728	TO-237 (91)	60	5	100 40	80 50 250 250 1 1 20 500 1 1	0.35	250		50	50				79
2N6729	TO-237 (91)	80	5	100 60	80 50 250 250 1 1 20 500 1 1	0.35	250		50	50				79
2N6730	TO-237 (91)	100	5	100 80	80 50 250 250 1 1 20 500 1 1	0.35	250		50	50				79
2N6732	TO-237 (91)	100	5	100 80	100 100 300 350 2 2	0.35	350		50	50				79

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TEST CONDITIONS:
 (1) I_C = 50 mA, V_{CC} = 100V, I_B¹ = I_B² = 5 mA, V_{CE} = 10V, f = 1 kHz. (2) I_C = 500 μA, V_{CE} = 10V, f = 1 kHz. (3) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 15 mA. (4) I_C = 150 mA, V_{CC} = 30V, I_B¹ = I_B² = 15 mA. (5) I_C = 100 μA, V_{CC} = 10V, f = 1 kHz. (6) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 50 mA.

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6501130 NATL SEMICOND, (DISCRETE)

Type No.	Case Style	VCBO (V) Min	VCEO (V) Min	VEBO (V) Min	ICES* ICBO (mA) Max	VCB (V)		hFE @ IC & VCE (V)		VBE(SAT) (V) & VCE(SAT) (V) Max		IC (mA) @ IC (mA) Max	C _{ob} (pF) Max	f _T (MHz) Min Max	I _C (mA) Max	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
						Min	Max	Min	Max	Min	Max								
92PU55	TO-237 (91)		60		100	40	500	1	20	0.35	250	200	30	50					79
92PU56	TO-237 (91)		80		100	60	500	1	20	0.35	250	200	30	50					79
92PU57	TO-237 (91)		100		100	80	500	1	20	0.35	250	200	30	50					79
92PU200	TO-237 (91)	100	80		100	80	350	2	100	0.35	350	100	20	500					79
NSD204	TO-202 (55)	100	80	7	100	100	1A	5	10	0.2	100	50	30	60					79
NSD205	TO-202 (55)	100	80	7	100	100	1A	5	120	0.2	100	50	30	60					79
NSD206	TO-202 (55)	140	100	7	100	140	100	5	20	0.5	500	50	30	60					79
NSDU56	TO-202 (55)	80	80	4	100	80	500	1	20	0.35	250	200	30	50					79
NSDU57	TO-202 (55)	100	100	4	100	100	500	1	20	0.35	250	200	30	50					79

TEST CONDITIONS:
 (1) I_C = 50 mA, V_{CC} = 100V, I_B¹ = I_B² = 5 mA. (2) I_C = 500 μA, V_{CE} = 10V, f = 1 kHz. (3) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 50 mA. (4) I_C = 150 mA, V_{CC} = 30V, I_B¹ = I_B² = 15 mA. (5) I_C = 100 μA, V_{CC} = 10V, f = 1 kHz. (6) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 50 mA.

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