

PNP Transistors

6501130 NATL SEMICOND, (DISCRETE)

28C 35437
T-37-01 D



SATURATED SWITCHES

Type No.	Case Style	V _{CB0} (V) Min	V _{CEO} (V) Min	V _{EB0} (V) Min	I _{CB0} @ (mA) Max	V _{CB} (V)	h _{FE}		I _C & V _{CE} (mA) & (V)	V _{BE(SAT)} (V) & (V)		I _C (mA)	C _{ob} (pF) Max	f _T (MHz)		I _C (mA)	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
							Min	Max		Min	Max			Min	Max					
2N869	TO-52	25		5	10	15	20	120	10	5	1.0	1.0	10	9	100	10				64
2N869A	TO-52	25	18	5	10	15	25	100	1	1	0.15	0.98	10	6	400	10	80		1	64
2N995	TO-52	20		4	5	15	35	140	20	1	0.2	0.95	20	10	100	10				64
2N995A	TO-52	20	15	4	5	15	25	100	1	1	0.2	0.95	20	6	100	10	90		2	64
2N2894	TO-52	12		4	10*	6	25	100	1	1	0.15	0.78	10	6	400	30	90		2	64
2N2894A	TO-52	12		4.5	50*	10	30	100	1	1	0.13	0.78	10	4.5	800	30	25		3	64
2N3012	TO-52	12		4	80*	6	20	100	1	1	0.15	0.78	10	6	400	30	75		2	64
2N3209	TO-52	20		4	80*	10	15	100	1	1	0.15	0.78	10	5	400	30	90		2	64
2N3248	TO-52	15		5			20	100	1	3	0.6	1.7	100	8	250	20	100		5	64
2N3249	TO-52	15		5			35	100	1	1	0.125	0.6	10	8	300	20	100		5	64
2N3545	TO-52	20		5	10	10	30	100	1	1	0.2	0.6	10	8	250	10	90		8	64

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SATURATED SWITCHES (Continued)

Type No.	Case Style	VCBO (V) Min	VCEO (V) Min	VEBO (V) Min	ICES* ICBO @ VCB (mA) Max	hFE @ IC (mA)		VCE & VCE (V)	VCE(SAT) (V) & VBE(SAT) (V) @ IC (mA)		Cob (pF) Max	ft (MHz)		Ic (mA)	toff (ns) Max	NF (dB) Max	Test Conditions	Process No.	
						Min	Max		Min	Max		Min	Max						Min
2N3546	TO-52	15	12	4.5	10	15	100	1	0.15	0.7	6	700	10	30			9	64	
2N3576	TO-52	20	15	5	10	40	120	1	0.25	0.8		400	10	50			5	64	
2N5056	TO-52	15	15	4.5	50*	30	100	0.5	0.13	0.72	4.5	600	30	35			3	64	
2N5057	TO-52	15	15	4.5	50*	20	100	0.3	0.19	0.8	4.5	800	30	35			3	64	
2N3304	TO-52	6	6	4	10*	30	50	1	0.15	0.7	3.5	500	10	60			7	65	
2N3451	TO-52	6	6	4	10*	15	120	0.3	0.16	0.8	5.5	500	10	60			7	65	
2N3639	TO-92 (92)	Same as PN3639, see page 2-4 for explanation																	
2N3640	TO-92 (92)	Same as PN3640, see page 2-4 for explanation																	
2N4208	TO-52	12	12	4.5	10*	30	50	1	0.13	0.8	3	700	10	20			5	65	
2N4209	TO-52	15	15	4.5	10*	40	50	1	0.15	0.8	3	850	10	20			5	65	
2N4258	TO-92 (92)	Same as PN4258, see page 2-4 for explanation																	
2N4258A	TO-92 (92)	Same as PN4258A, see page 2-4 for explanation																	
2N5140	TO-92 (92)	Same as PN5140, see page 2-4 for explanation																	

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TEST CONDITIONS:
 (1) IC = 30 mA, VCC = 3V, IB¹ = 3 mA, IB² = 1.5 mA. (2) IC = 30 mA, VCC = 3V, IB¹ = IB² = 1.5 mA. (3) IC = 30 mA, VCC = 3V, IB¹ = IB² = 3 mA. (4) IC = 500 mA, VCC = 30V, IB¹ = IB² = 50 mA
 (5) IC = 10 mA, VCC = 3V, IB¹ = IB² = 1 mA. (6) IC = 10 mA, VCC = 1.5V, IB¹ = IB² = 1 mA. (7) IC = 10 mA, VCC = 1.5V, IB¹ = IB² = 500 μA. (8) IC = 10 mA, VCC = 2V, IB¹ = IB² = 1 mA. (9) IC = 50 mA
 VCC = 3V, IB¹ = IB² = 5 mA. (10) IC = 1A, VCC = 30V, IB¹ = IB² = 100 mA.

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SATURATED SWITCHES (Continued)



Type No.	Case Style	V _{CB0} (V) Min	V _{CEO} (V) Min	V _{EB0} (V) Min	I _{CS0} @ V _{CB} (mA) Max	h _{FE} @ I _C & V _{CE} Min Max	V _{CE(SAT)} (V) & V _{BE(SAT)} (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.
2N5771	TO-92 (92)	15	15	4.5	10	40 50 35	0.15 0.18 0.6	1 10 50	3	850	10	20		6	65
2N5910	TO-92 (92)	Same as PN5910, see below for explanation													
MPS3639	TO-92 (92)	Same as PN3639, see below for explanation													
MPS3640	TO-92 (92)	Same as PN3640, see below for explanation													
PN3639	TO-92 (92)	6	6	4	10*	20 30	0.16 0.5	10 50	3.5	300	10	60		7	65
PN3640	TO-92 (92)	12	12	4	10*	20 30	0.2 0.6	10 50	3.5	300	10	75		7	65
PN4258	TO-92 (92)	12	12	4.5	10*	30 15	0.15 0.5	10 50	3	700	10	20		6	65
PN4258A	TO-92 (92)	12	12	4.5	10*	30 15	0.15 0.5	10 50	3	700	10	18		6	65
PN5140	TO-92 (92)	5	5	4	50*	20	0.2 0.75	10 50	5	400	10	20		6	65
PN5910	TO-92 (92)	20	20	4.5	10*	30 15	0.15 0.5	10 50	3	700	10	20		6	65
ST5771-1	TO-92 (92)	15	15	4.5	10	30 20	0.15 0.18	10 50		700	10				65
ST5771-2	TO-92 (92)	15	15	4.5	10	35 30	0.15 0.6	10 50		700	10				65
2N3244	TO-39	40	40	5	50	25 60	0.3 0.5	150 500	25	175	50	185		4	70
2N3245	TO-39	50	50	5	50	20 35	0.35 1.2	150 500	25	150	50	165		4	70
2N3467	TO-39	40	40	5	100	40 40	0.3 0.5	150 500	25	175	50	90		4	70

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D



SATURATED SWITCHES (Continued)

Type No.	Case Style	V _{CE0} (V) Min	V _{BE0} (V) Min	V _{CE0} (V) Min	V _{BE0} (V) Min	I _{CS} * I _{CS0} @ V _{CB} (mA) Max	h _{FE}		I _C & V _{CE}		V _{CE(SAT)} V _{BE(SAT)} @ I _C (mA)		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	I _C	V _{CE}	Max	Min							
2N3468	TO-39	50	5	50	5	100	20	75	1	5	0.35	1.0	25	150	50	90		4	70
NS3762	TO-39	40	5	40	5		30	120	1.5A	5	0.9	1.4	18	180	50	115		10	70
NS3763	TO-39	60	5	60	5		20	80	1.5A	5	0.9	1.4	18	180	50	115		10	70
2N5022	TO-39	50	5	50	5	100*	25	100	1	5	0.2	1.0	25	170	50	90		4	70
2N5023	TO-39	30	5	30	5	100*	40	100	1	5	0.17	1.0	25	200	50	90		4	70
DH3467CD	Ceramic DIP (40)	40	5	40	5	100	40	120	1	5	1.0	1.6	25	175	50	90		4	70
DH3467CN	Molded DIP (39)	40	5	40	5	100	40	120	1	5	1.0	1.6	25	175	50	90		4	70
DH3468CD	Ceramic DIP (40)	50	5	50	5	100	20	75	1	5	1.2	1.6	25	150	50	90		4	70
DH3468CN	Molded DIP (39)	50	5	50	5	100	20	75	1	5	1.2	1.6	25	150	50	90		4	70

T-37-01

TEST CONDITIONS:
 (1) I_C = 30 mA, V_{CC} = 3V, I_B¹ = 3 mA, I_B² = 1.5 mA. (2) I_C = 30 mA, V_{CC} = 3V, I_B¹ = I_B² = 1.5 mA. (3) I_C = 30 mA, V_{CC} = 3V, I_B¹ = I_B² = 3 mA. (4) I_C = 500 mA, V_{CC} = 30V, I_B¹ = I_B² = 50 mA.
 (5) I_C = 10 mA, V_{CC} = 3V, I_B¹ = I_B² = 1 mA. (6) I_C = 10 mA, V_{CC} = 1.5V, I_B¹ = I_B² = 1 mA. (7) I_C = 10 mA, V_{CC} = 1.5V, I_B¹ = I_B² = 500 μA. (8) I_C = 10 mA, V_{CC} = 2V, I_B¹ = I_B² = 1 mA. (9) I_C = 50 mA, V_{CC} = 3V, I_B¹ = I_B² = 5 mA. (10) I_C = 1A, V_{CC} = 30V, I_B¹ = I_B² = 100 mA.

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