

PNP Transistors

6501130 NATL SEMICOND, (DISCRETE)

28C 35437
T-37-01 D



SATURATED SWITCHES

Type No.	Case Style	V _{CB0} (V) Min	V _{CE0} (V) Min	V _{EB0} (V) Min	I _{CS} * I _{CB0} (mA) Max	V _{CB} (V)	h _{FE}		I _C & V _{CE}		V _{BE(SAT)} (V) & V _{CE(SAT)} (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			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	0.78	10	6	400	10	80			1	64
2N995	TO-52	20		4	5	15	35	140	20	1	0.2	0.85	1.2	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	12	4	10*	6	25	100	1	1	0.15	0.78	0.98	6	400	30	90			2	64
2N2894A	TO-52	12	12	4.5	50*	10	30	100	1	1	0.13	0.78	0.92	4.5	800	30	25			3	64
2N3012	TO-52	12	12	4	80*	6	20	100	1	1	0.15	0.78	0.98	6	400	30	75			2	64
2N3209	TO-52	20	20	4	80*	10	15	100	1	1	0.15	0.78	0.98	5	400	30	90			2	64
2N3248	TO-52	15	12	5			20	10	3	1	0.6	1.7	100	8	250	20	100			5	64
2N3249	TO-52	15	12	5			25	100	1	1	0.125	0.6	0.9	8	300	20	100			5	64
2N3545	TO-52	20	20	5	10	10	30	100	1	1	0.2	0.6	0.85	8	250	10	90			8	64

6501130 NATL SEMICOND, (DISCRETE)

28C 35438



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 & V (V)	VCE(SAT) (V) & V (V)		IC (mA)		Cob (pF) Max	ft (MHz)		Ic (mA)	toff (ns) Max	NF (dB) Max	Test Conditions	Process No.
						Min	Max		Max	Min	Max	Min		Max	Min					
2N3546	TO-52	15	12	4.5	10	15	100	1	0.15	0.7	0.9	10	6	700		10	30		9	64
2N3576	TO-52	20	15	5	10	40	120	1	0.15	0.75	0.95	10	4.5	400		10	50		5	64
2N5056	TO-52	15	15	4.5	50*	30	100	1	0.13	0.72	0.92	10	4.5	600		30	35		3	64
2N5057	TO-52	15	15	4.5	50*	30	100	1	0.13	0.72	0.92	10	4.5	800		30	35		3	64
2N3304	TO-52	6	6	4	10*	30	50	1	0.15	0.7	0.8	1	3.5	500		10	60		7	65
2N3451	TO-52	6	6	4	10*	30	120	0.3	0.16	0.8	1.0	10	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	0.95	10	3	700		10	20		5	65
2N4209	TO-52	15	15	4.5	10*	40	50	1	0.15	0.8	0.95	10	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																		

T-37-01

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.

PNP Transistors

2

PNP Transistors

6501130 NATL SEMICOND, (DISCRETE)

28C 35439
T-37-01 D

SATURATED SWITCHES (Continued)



Type No.	Case Style	V _{CB0} (V) Min	V _{CEO} (V) Min	V _{EB0} (V) Min	I _{CS0} * (mA) Max	V _{CB} (V) Max	I _{CE} (mA) Min	I _{CE} (mA) Max	V _{CE} (V) Min	V _{CE} (V) Max	V _{BE(SAT)} (V) Min	V _{BE(SAT)} (V) Max	I _C (mA) Min	I _C (mA) Max	C _{ob} (pF) Max	f _T (MHz) Min	f _T (MHz) Max	I _C (mA) Min	I _C (mA) Max	t _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
2N5771	TO-92 (92)	15	15	4.5	10	8	40	50	1.0	0.3	0.15	0.8	1	10	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*	3	20	50	1.0	0.3	0.16	0.8	10	10	3.5	300	10	60		7		65	
PN3640	TO-92 (92)	12	12	4	10*	6	20	50	1.0	0.3	0.2	0.8	10	10	3.5	300	10	75		7		65	
PN4258	TO-92 (92)	12	12	4.5	10*	6	30	50	1	0.3	0.15	0.7	0.95	10	3	700	10	20		6		65	
PN4258A	TO-92 (92)	12	12	4.5	10*	6	30	50	1	0.5	0.5	1.5	50	10	3	700	10	18		6		65	
PN5140	TO-92 (92)	5	5	4	50*	3	20	40	1	0.5	0.2	1.2	10	50	5	400	10	20		6		65	
PN5910	TO-92 (92)	20	20	4.5	10*	10	30	50	1	0.3	0.15	0.75	0.95	10	3	700	10	20		6		65	
ST5771-1	TO-92 (92)	15	15	4.5	10	8	30	150	10	0.3	0.15	0.8	1	10		700	10					65	
ST5771-2	TO-92 (92)	15	15	4.5	10	8	35	50	1	0.5	0.18	0.8	0.95	10		700	10					65	
2N3244	TO-39	40	40	5	50	30	25	750	5	0.3	0.3	1.1	150	25	175	50	185		4			70	
2N3245	TO-39	50	50	5	50	50	20	1A	5	0.35	0.35	1.1	150	25	150	50	165		4			70	
2N3467	TO-39	40	40	5	100	30	40	120	500	1	0.3	1.0	150	25	175	50	90		4			70	

6501130 NATL SEMICOND, (DISCRETE)

28C 35440

D



SATURATED SWITCHES (Continued)

Type No.	Case Style	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		C _{ob} (pF) Max	f _T (MHz) @ I _C		τ _{off} (ns) Max	NF (dB) Max	Test Conditions	Process No.
					Min	Max	I _C (mA)	V _{CE} (V)	Max	Min		Max	Min				
2N3468	TO-39	50	5	100	20	75	1	5	0.35	1.0	25	150	50	90		4	70
NS3762	TO-39	40	5		30	120	1.5A	5	0.9	1.4	18	180	50	115		10	70
NS3763	TO-39	60	5		20	80	1.5A	5	0.9	1.4	18	180	50	115		10	70
2N5022	TO-39	50	5	100*	25	100	1A	5	0.2	1.0	25	170	50	90		4	70
2N5023	TO-39	30	5	100*	40	100	1A	5	0.17	1.0	25	200	50	90		4	70
DH3467CD	Ceramic DIP (40)	40	5	100	40	120	1A	5	1.0	1.6	25	175	50	90		4	70
DH3467CN	Molded DIP (39)	40	5	100	40	120	1A	5	1.0	1.6	25	175	50	90		4	70
DH3468CD	Ceramic DIP (40)	50	5	100	20	75	1A	5	0.3	1.0	25	150	50	90		4	70
DH3468CN	Molded DIP (39)	50	5	100	20	75	1A	5	0.3	1.0	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.

2

PNP Transistors