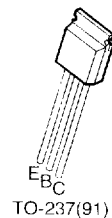
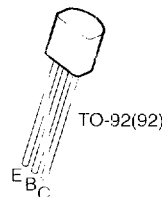
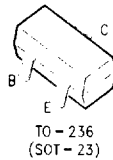
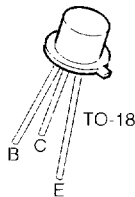
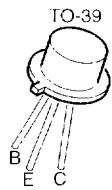


# High Speed Saturated Switching Transistors

V <sub>CE(sat)</sub> (Volts) Min	Devices		t <sub>on</sub> (ns) Max	I <sub>off</sub> @ I <sub>c</sub>		h <sub>FE</sub> @ I <sub>c</sub>		V <sub>CE(sat)</sub> @ I <sub>c</sub> & I <sub>B</sub>			f <sub>T</sub> (MHz) Min	Package	P <sub>D</sub> (Amb) (mW) @25°C
	NPN	PNP		(ns) Max	(mA)	Min	(mA)	(Volts) Max	(mA)	(mA)			
60		2N2904A	45	100	150	40	150	0.4	150	15	200	TO-39	600
		2N2905A	45	100	150	100	150	0.4	150	15	200	TO-39	600
		2N2907A	45	100	150	100	150	0.4	150	15	200	TO-18	400
		MMBT2907A	45	100	150	100	150	0.4	150	15	200	TO-236*	350
		PN2907A	45	100	150	100	150	0.4	150	15	200	TO-92(92)	625
		PN3645	40	100	300	100	150	0.25	50	2.5	200	TO-92(92)	625
		TN2905A	45	100	150	100	150	0.4	150	15	200	TO-237(91)	850
50	2N3725		35	60	500	60	100	0.95	1A	100	300	TO-39	800
	TN3725		35	60	500	60	100	0.95	1A	100	300	TO-237(91)	850
45		PN3644	40	100	300	100	150	0.25	50	2.5	200	TO-92(92)	625
40	2N2219A		35	285	150	100	150	0.3	150	15	300	TO-39	800
	2N2222A		35	285	150	100	150	0.3	150	15	300	TO-18	400
	2N3903		70	225	10	50	10	0.2	10	1.0	250	TO-92(92)	625
	2N3904		70	250	10	100	10	0.2	10	1.0	300	TO-92(92)	625
	2N4400		35	255	150	50	150	0.4	150	15	200	TO-92(92)	625
	2N4401		35	255	150	100	300	0.4	150	15	250	TO-92(92)	625
	BSR17A		70	250	10	100	10	0.2	10	1.0	300	TO-236*	350
	MMBT2222A		35	285	150	100	150	0.3	150	15	300	TO-236*	350
	MMBT3904		70	250	10	100	10	0.2	10	1.0	300	TO-236*	350
	MMBT4401		35	255	150	100	300	0.4	150	15	250	TO-236*	350
	PN2222A		35	285	150	100	150	0.3	150	15	300	TO-92(92)	625

\* TO-236AB is standard for all devices.  
Please refer to Surface Mount section for TO-236 Device Marking.

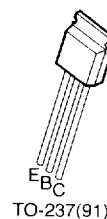
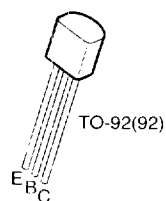
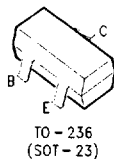
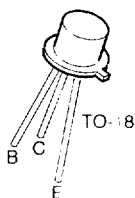
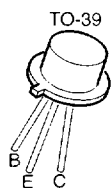


# High Speed Saturated Switching Transistors (continued)

V <sub>CE(sat)</sub> (V <sub>CE</sub> ) Min	Devices		I <sub>CE</sub> (mA) Max	I <sub>CE</sub> @ I <sub>C</sub>		h <sub>FE</sub> @ I <sub>C</sub>		V <sub>CE(sat)</sub> @ I <sub>C</sub> & I <sub>E</sub>			f <sub>T</sub> (MHz) Min	Package	P <sub>D</sub> (Aval) (mW) @25°C
	SPN	PNP		(mA) Min	(mA)	(mA)	(mA)	(Volts) Max	(mA)	(mA)			
40	TN2219A		35	285	150	100	150	0.3	150	15	300	TO-237(91)	850
		2N3467	40	90	500	40	500	0.5	500	50	175	TO-39	1000
		2N3905	70	260	10	50	10	0.25	10	1.0	200	TO-92(92)	625
		2N3906	70	300	10	100	10	0.25	10	1.0	250	TO-92(92)	625
		2N4402	35	255	150	50	150	0.4	150	15	150	TO-92(92)	625
		2N4403	35	255	150	100	150	0.4	150	15	200	TO-92(92)	625
		MMBT3906	70	300	10	100	10	0.25	10	1.0	250	TO-236*	350
		MMBT4403	35	255	150	100	150	0.4	150	15	200	TO-236*	350
		PN2907	45	100	150	100	150	0.4	150	15	200	TO-92(92)	625
		PN4121	40	150	50	70	10	0.3	50	5.0	400	TO-92(92)	625
		PN4122	40	150	50	150	10	0.3	50	5.0	450	TO-92(92)	625
		TN2905	45	100	150	100	150	0.4	150	15	200	TO-237(91)	850
30	2N3724		35	60	500	60	100	0.75	1A	100	300	TO-39	800
		PN4917	40	150	50	150	10	0.3	50	5.0	450	TO-92(92)	625
25		PN3638	75	170	300	30	50	0.25	50	2.5	100	TO-92(92)	625
		PN3638A	75	170	300	100	50	0.25	50	2.5	150	TO-92(92)	625
15	2N2369		12	18	10	40	10	0.25	10	1.0	500	TO-18	360
	2N2369A		12	18	10	40	10	0.2	10	1.0	500	TO-18	360
	2N708		40	70	10	30	10	0.4	10	1.0	300	TO-18	360
	MMBT2369A		12	18	10	40	10	0.2	10	1.0	500	TO-236*	350

\* TO-236AB is standard for all devices.  
Please refer to Surface Mount section for TO-236 Device Marking.

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High Speed Saturated Switching Transistors (continued)

V <sub>CE0(sust)</sub> (Volts) Min	Devices		t <sub>on</sub> (ns) Max	I <sub>on</sub> @ I <sub>C</sub>		h <sub>FE</sub> @ I <sub>C</sub>		V <sub>CE(sat)</sub> @ I <sub>C</sub> & I <sub>B</sub>			f <sub>T</sub> (MHz) Min	Package	P <sub>D</sub> (Amb) (mW) @25°C	
	NPN	PNP		(ns) Max	mA	Min	mA	(Volts) Max	mA	mA				
15	MMBT3646		18	28	300	30	30	0.2	30	3.0	350	TO-236*	350	
	PN2369		12	18	10	40	10	0.25	10	1.0	500	TO-92(92)	625	
	PN2369A		12	18	10	40	10	0.2	10	1.0	500	TO-92(92)	625	
	PN3646		18	28	300	30	30	0.2	30	3.0	350	TO-92(92)	625	
	PN4275		12	12	10	35	10	0.2	10	1.0	400	TO-92(92)	625	
		2N4209		15	20	10	50	10	0.18	10	1.0	850	TO-18	300
		2N5771		15	20	10	50	10	0.18	10	1.0	850	TO-92(92)	625
		MMBT4209		15	20	10	50	10	0.18	10	1.0	850	TO-236*	350
		MMBT5771		15	20	10	50	10	0.18	10	1.0	850	TO-236*	350
12		2N4208		15	20	10	30	10	0.15	10	1.0	700	TO-18	300
		MMBT3640		25	35	50	30	10	0.2	10	1.0	500	TO-236*	350
		MMBT4258		15	20	10	30	50	0.15	10	1.0	700	TO-236*	350
		PN3640		25	35	50	30	10	0.2	10	1.0	500	TO-92(92)	625
		PN4258		15	20	10	30	50	0.15	10	1.0	700	TO-92(92)	625
		BSV52		12	18	10	40	10	0.25	10	1.0	500	TO-236*	350
10	PN5134		18	18	10	20	10	0.25	10	1.0	250	TO-92(92)	625	

\* TO-236AB is standard for all devices  
Please refer to Surface Mount section for TO-236 Device Marking.

