Silicon Transistors

	Type No.	Case	Construction (see note 1)	Maximum Ratings at 25°C amb.					Characteristics								SPECIAL FEATURES
									h_{FE}			f_T		$V_{CE(SAT)}$			
				V_{CB} V	V_{CE} V	V_{EB} V	I_C A	P_{tot} W	I_C mA	Min.	Max.	I_C mA	Min. Mc/s	I_C mA	I_B mA	Max. V	
NPN	2N706	TO18	PE	25	20	3	0·20	0·30	10	20	—	10	200	10	1·0	0·6	
Fast Switches	2N706A	TO18	PE	25	20	5	0·20	0·30	10	20	60	10	250	10	1·0	0·6	Sw. time < 115nS at 10 mA
	2N708	TO18	PE	40	15	5	0·20	0·36	10	30	120	10	300	10	1·0	0·4	
	2N743	TO18	PE	20	12	5	0·20	0·30	10	20	60	10	250	10	1·0	0·35	} Total switching time
	2N744	TO18	PE	20	12	5	0·20	0·30	10	40	120	10	250	10	1·0	0·35	} < 40nS at 10 mA
	2N753	TO18	PE	25	20	5	0·20	0·30	10	40	120	10	250	10	1·0	0·6	Total switching time < 115nS at 10 mA
	2N914	TO18	PE	40	15	5	0·20	0·36	10	30	120	20	300	200	20	0·7	Total Switching time < 80nS at 200 mA
	2N2368	TO18	PE	40	15	4·5	0·5	0·36	10	20	60	10	400	10	1·0	0·25	Total switching time < 27nS
	2N2369	TO18	PE	40	15	4·5	0·5	0·36	10	40	120	10	500	10	1·0	0·25	Total switching time
	2N2369A	TO18	PE	40	15	4·5	0·5	0·36	10	40	—	10	500	10	1·0	0·20	< 30nS
	2N3010	TO18	PE	15	11	4	0·05	0·30	10	25	125	10	600	10	1·0	0·25	Total switching time < 6nS
	2N3011	TO18	PE	30	15	5	0·50	0·36	10	30	120	20	400	10	1·0	0·20	Storage time < 13nS
	2S131	TO18	PE	15	12	5	0·2	0·30	10	20	—	10	220	10	1·0	0·40	
	2S512	TO18	PE	25	20	5·0	0·2	0·30	10	50	200	10	250	10	1·0	0·45	
	2S95A	TO18	PE	20	15	5	0·2	0·30	10	50	200	10	300	10	1·0	0·35	Storage time < 25nS
	TIS44	Silect	P	25	20	3	0·05	0·25	10	20	—	10	200	10	1	0·6	t_S 60nS max. (2N706)
	TIS45	Silect	P	40	15	5	0·2	0·25	10	30	120	10	300	10	1	0·4	t_S 25nS max. (2N708)
	TIS46	Silect	P	40	15	5	0·2	0·25	10	30	120	20	300	20	2	0·25	t_S 20nS max. (2N914)
	TIS47	Silect	P	40	15	4·5	0·2	0·25	10	20	60	10	400	10	1	0·25	t_S 13nS max. (2N2368)
	TIS48	Silect	P	40	15	4·5	0·2	0·25	10	40	120	10	500	10	1	0·25	t_S 18nS max. (2N2369)
	TIS49	Silect	PE	40	15	4·5	0·2	0·25	10	40	120	20	500	10	1	0·2	t_S 18nS max. (2N2369A)
	TIS51	Silect	PE	30	12	5	0·2	0·25	10	30	120	20	400	10	1	0·2	t_S 18nS max. (2N3011)
	TIS52	Silect	PE	40	20	5	0·2	0·25	30	30	120	30	350	30	3	0·2	t_S 20nS max. (2N3014)
	TIS55	Silect	PE	40	15	5	0·2	0·25	30	30	120	30	350	30	3	0·2	t_S 18nS max. (2N3646)
																	h_{fe} specified at 1 kc/s
PNP	2S301	TO5	A	−80	−80	−30	0·15	0·3	−10	10	45	−1	0·25	−10	−1·5	−0·15	and I_C = 1 mA
Low Power	2S302	TO5	A	−40	−40	−20	0·15	0·3	−10	15	60	−1	0·35	−10	−1·5	−0·15	1 ωA
General	2S302A	TO5	A	−25	−25	−10	0·15	0·3	−10	15	60	−1	0·35	−10	−1·5	−0·15	100 μA
Purpose	2S303	TO5	A	−25	−25	−20	0·15	0·3	−10	25	85	−1	0·65	−10	−1·5	−0·15	1 mA
	2S304	TO5	A	−15	−15	−15	0·15	0·3	−10	45	150	−1	1·00	−10	−1·5	−0·15	,,
	2S305	TO5	A	−125	−125	−50	0·15	0·3	−10	10	45	−1	0·25	−10	−1·5	−0·15	,,
	2S321	SO2	A	−80	−80	−30	0·10	0·3	−10	10	35	−1	0'25	−10	−1·5	−0·15	,,
	2S322	SO2	A	−40	−40	−20	0·10	0·0	−10	15	40	−1	0·35	−10	−1·5	−0·15	,,
	2S322A	SO2	A	−25	−25	−10	0·15	0·3	−10	15	60	−1	0·35	−10	−1·5	−0·15	,,
	2S323	SO2	A	−25	−25	−20	0·10	0·3	−10	25	80	−1	0·65	−10	−1·5	−0·15	100 μA
	2S324	SO2	A	−15	−15	−15	0·10	0·3	−10	45	150	−1	1·00	−10	−1·5	−0·15	1 mA
	2S325	SO2	A	−125	−125	−50	0·10	0·3	−10	10	35	−1	0·25	−10	−1·5	−0·16	,,
	2S3010	TO5	A	−40	−40	20	0·15	0·3	−10	10	45	−1	0·1	−10	−1·5	−0 15	100 μA
	2S3020	TO5	A	−40	−40	20	0·15	0·3	−10	15	60	−1	0·15	−10	−1·5	−0·15	,,
	2S3021	TO5	A	−15	−15	10	0·15	0·3	−10	15	—	−1	0·15	−10	−1·5	−0·15	,,
	2S3030	TO5	A	−25	−25	10	0·15	0·3	−10	25	85	−1	0·25	−10	−1·5	−0·15	,,
	2S3040	TO5	A	−15	−15	10	0·15	0·3	−10	40	—	−1	0·4	−10	−1·5	−0·15	,,
	2S3210	SO2	A	−40	−40	20	0·15	0·3	−10	10	45	−1	0·1	−10	−1·5	−0·15	,,
	2S3220	SO2	A	−40	−40	20	0·15	0·3	−10	15	60	−1	0·15	−10	−1·5	−0·15	,,
	2S3221	SO2	A	−15	−15	10	0·15	0·3	−10	15	—	−1	0·15	−10	−1·5	−0·15	,,
	2S3230	SO2	A	−25	−25	10	0·15	0·3	−10	25	85	−1	0·25	−10	−1·5	−0·15	,,
	2S3240	SO2	A	−15	−15	10	0·15	0·3	−10	40	—	−1	0·4	−10	−1·5	−0·15	,,

NOTE 1: The following symbols have been used throughout the Product Summary:

Under "Construction":
A — Alloyed
D — Diffused
E — Epitaxial
G — Grown
M — Mesa
P — Planar

Under h_{FE}:
* — h_{fe}

Under f_T:
φ — f_{hfb}
△ — f_{hfe}
‡ — typical

Under Dissipation:
† — dissipation at T_{case} = 25°C