





semitron hot line

TOLL FREE NUMBER 800-777-3960

metal can transistors cont'd  
silicon small signal transistors

Device	Type	Package	Maximum Ratings				Electrical Characteristics @ 25 C												
			P <sub>D</sub> Ambient mW	V <sub>CB</sub> Volts	V <sub>CE</sub> Volts	V <sub>EB</sub> Volts	h <sub>FE</sub> Min/Max	V <sub>CE</sub> (Sat) @ I <sub>C</sub> /I <sub>B</sub>		C <sub>cb</sub> pF Max	C <sub>ob</sub> pF Max	f <sub>t</sub> MHz Min	t <sub>ON</sub> ns Max	t <sub>OFF</sub> ns Max	Power Gain @ f		NF @ f		
								Volts	mA/mA						dB Min	MHz	dB Max	MHz	
2N1613	NPN	TO-5	800	75	50*	7	40/120	1.5	150/15	-	25	60	-	-	-	-	-	-	
2N1613A	NPN	TO-5	1000	75	50*	7	40/120	1	150/15	-	25	60	-	-	-	-	-	-	
2N1613B	NPN	TO-5	1000	120	50	7	40/120	0.2	150/15	-	10	60	-	-	-	-	-	-	
2N1711	NPN	TO-5	800	75	50*	7	100/300	1.5	150/15	-	25	70	-	-	-	-	-	-	
2N1711A	NPN	TO-5	1000	75	50*	7	100/300	1	150/15	-	25	70	-	-	-	-	-	-	
2N1711B	NPN	TO-5	1000	120	50	7	100/300	0.2	150/15	-	10	70	-	-	-	-	-	-	
2N1809	NPN	TO-5	800	100	60	7	40/120	5	150/15	-	15	50	-	-	-	-	-	-	
2N1890	NPN	TO-5	800	100	60	7	100/300	5	150/15	-	15	60	-	-	-	-	-	-	
2N1893	NPN	TO-5	800	120	80	7	40/120	5	150/15	-	15	50	-	-	-	-	-	-	
2N1893A	NPN	TO-5	800	140	80	7	-40/120	2	150/15	-	8	100	-	-	-	-	-	-	
2N1990	NPN	TO-5	600	100		3	20/-	0.5	2/0.2	-	20	40	-	-	-	-	-	-	
2N2102	NPN	TO-5	1000	120	65	7	40/120	0.5	150/15	-	15	60	-	-	-	-	-	-	
2N2102A	NPN	TO-5	1000	120	65	7	40/120	0.3	150/15	-	15	60	-	-	-	-	-	-	
2N2192	NPN	TO-5	800	60	40	5	100/300	0.35	150/15	-	20	50	-	-	-	-	-	-	
2N2192A	NPN	TO-5	800	60	40	5	100/300	0.25	150/15	-	20	50	-	-	-	-	-	-	
2N2192B	NPN	TO-5	800	60	40	5	100/300	0.18	150/15	-	20	50	-	-	-	-	-	-	
2N2193	NPN	TO-5	800	80	50	8	40/120	0.35	150/15	-	20	50	-	-	-	-	-	-	
2N2193A	NPN	TO-5	800	80	50	8	40/120	0.25	150/15	-	20	50	-	-	-	-	-	-	
2N2193B	NPN	TO-5	800	80	50	8	40/120	0.18	150/15	-	20	50	-	-	-	-	-	-	
2N2194	NPN	TO-5	800	60	40	5	20/60	0.35	150/15	-	20	50	-	-	-	-	-	-	
2N2194A	NPN	TO-5	800	60	40	5	20/60	0.25	150/15	-	20	50	-	-	-	-	-	-	
2N2194B	NPN	TO-5	800	60	40	5	20/60	0.18	150/15	-	20	50	-	-	-	-	-	-	
2N2195	NPN	TO-5	800	45	25	5	20/-	0.35	150/15	-	20	50	-	-	-	-	-	-	
2N2195A	NPN	TO-5	800	45	25	5	20/-	0.25	150/15	-	20	50	-	-	-	-	-	-	
2N2195B	NPN	TO-5	800	45	25	5	20/-	0.18	150/15	-	20	50	-	-	-	-	-	-	
2N2205	NPN	TO-18	300	25	12	3	20/-	0.35	50/5	-	6	200	40	75	-	-	-	-	
2N2217	NPN	TO-5	800	60	30	5	20/60	0.4	150/15	-	8	250	35†	285†	-	-	-	-	
2N2218	NPN	TO-5	800	60	30	5	40/120	1.6	500/50	-	8	250	35†	285†	-	-	-	-	
2N2218A	NPN	TO-5	800	75	40	6	40/120	1.6	500/50	-	8	250	35	285	-	-	-	-	
2N2219	NPN	TO-5	800	60	30	5	100/300	1.6	500/50	-	8	250	35†	285†	-	-	-	-	
2N2219A	NPN	TO-5	800	75	40	6	100/300	1.6	500/50	-	8	300	35	285	-	-	-	-	
2N2220	NPN	TO-18	500	60	30	5	20/60	0.4	150/15	-	8	250	35†	285†	-	-	-	-	
2N2221	NPN	TO-18	500	60	30	5	40/120	1.6	500/50	-	8	250	35†	285†	-	-	-	-	
2N2221A	NPN	TO-18	500	75	40	6	40/120	1.6	500/50	-	8	250	35	285	-	-	-	-	
2N2222	NPN	TO-18	500	60	30	5	100/300	1.6	500/50	-	8	250	35†	285†	-	-	-	-	
2N2222A	NPN	TO-18	500	75	40	6	100/300	1.6	500/50	-	8	300	35	285	-	-	-	-	
2N2236	NPN	TO-5	600	40	20	6	15/60	0.25	100/20	-	35	50†	30	600	-	-	-	-	
2N2237	NPN	TO-5	600	40	20	6	40/125	0.25	100/20	-	35	50	25	600	-	-	-	-	
2N2243	NPN	TO-5	800	120	80	7	40/120	0.35	150/15	-	15	50	-	-	-	-	-	-	
2N2243A	NPN	TO-5	800	120	80	7	40/120	0.25	150/15	-	15	50	-	-	-	-	-	-	
2N2270	NPN	TO-5	1000	60	45	7	50/200	0.9	150/15	-	15	100	-	-	-	-	-	-	
2N2297	NPN	TO-5	800	80	35	7	40/120	0.2	150/15	-	12	60	-	-	-	-	-	-	
2N2303	PNP	TO-5	600	50	35	5	75/200	1.5	150/15	-	45	50	-	-	-	-	-	-	
2N2309	NPN	TO-5	600	30	30	5	25/125	-	-	-	25	40†	-	-	-	-	-	-	
2N2310	NPN	TO-46	350	60	60	8	12/36	5	200/40	-	20†	40†	-	-	-	-	-	-	
2N2311	NPN	TO-46	350	100	100	8	12/36	5	200/40	-	20†	40†	-	-	-	-	-	-	
2N2312	NPN	TO-46	350	60	60	8	30/90	5	200/40	-	20†	40†	-	-	-	-	-	-	
2N2313	NPN	TO-46	350	100	100	8	30/90	5	200/40	-	20†	40†	-	-	-	-	-	-	
2N2314	NPN	TO-46	350	60	40*	5	20/60	5	150/15	-	35	40	-	-	-	-	-	-	
2N2315	NPN	TO-46	350	60	40*	5	40/120	1.5	150/15	-	35	50	-	-	-	-	-	-	
2N2316	NPN	TO-46	350	120	80*	5	40/120	5.0	150/15	-	20	50	-	-	-	-	-	-	
2N2317	NPN	TO-46	350	75	50*	7	40/120	1.5	150/15	-	25	60	-	-	-	-	-	-	
2N2350	NPN	TO-46	400	60	40	5	100/300	0.35	150/15	-	20	50	-	-	-	-	-	-	
2N2350A	NPN	TO-46	400	60	40	5	100/300	0.25	150/15	-	20	50	-	-	-	-	-	-	
2N2351	NPN	TO-46	400	80	50	8	40/120	0.35	150/15	-	20	50	-	-	-	-	-	-	



