

2514096 CRIMSON SEMICONDUCTOR INC

99D 00293 D T-29-01

DEVICE	TYPE	PACKAGE	BVCBO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(V) MIN	(V) MIN	(V) MIN				(V) MIN
2N1507	NPN	TO-5	30	60	5	500	30	100-300	10	150	35	50
2N1566	NPN	TO-5	60	80	5	500	40	60-200	5	5	10	60
2N1613	NPN	TO-5	50	75	7	10	60	40-120	10	150	25	60
2N1711	NPN	TO-5	50	75	7	10	60	100-300	10	150	25	70
2N1889	NPN	TO-5	60	100	7	10	75	40-120	10	150	15	50
2N1890	NPN	TO-5	60	100	7	10	75	100-300	10	150	15	60
2N1893	NPN	TO-5	80	120	7	10	90	40-120	10	150	15	50
2N1973	NPN	TO-5	60	100	7	25	75	75-	10	10	15	60
2N1974	NPN	TO-5	60	100	7	25	75	35-	10	10	15	50
2N1975	NPN	TO-5	60	100	7	25	75	15-	10	10	15	40
2N1983	NPN	TO-5	25	50	5	500	30	70-210	5	1	45	40
2N1984	NPN	TO-5	25	50	5	500	30	35-100	5	1	45	40
2N1985	NPN	TO-5	25	50	5	500	30	15-45	5	1	45	40
2N1986	NPN	TO-5	25	50	5	500	30	60-240	10	150	35	40
2N1987	NPN	TO-5	25	50	5	500	30	20-80	10	150	35	40
2N1988	NPN	TO-5	45	100	5	500	50	35-120	10	30	20	40
2N1989	NPN	TO-5	45	100	5	500	50	20-60	10	30	20	40
2N1990	NPN	TO-5	60	100	3	500	75	20-	10	30	20	40
2N1991	PNP	TO-5	20	30	5	500	10	15-	10	150	45	40
2N2008	NPN	TO-5	110	175	8	50	100	40-120	10	50	15	40
2N2017	NPN	TO-39	60	60	8	500	30	50-200	10	200	15	60
2N2049	NPN	TO-5	40	75	7	10	60	100-300	10	150	25	50
2N2102	NPN	TO-39	65	120	7	2	60	40-120	10	150	15	60
2N2192	NPN	TO-39	40	60	5	10	30	100-300	10	150	20	50
2N2193	NPN	TO-39	50	80	8	10	60	40-120	10	150	20	50
2N2195	NPN	TO-39	25	45	5	100	30	20-	10	150	20	50
2N2205	NPN	TO-18	12	25	3	25	15	20-	1	10	6	200
2N2218	NPN	TO-5	30	60	5	10	50	40-120	10	150	8	250
2N2218A	NPN	TO-5	40	75	6	10	60	40-120	10	150	8	250
2N2219	NPN	TO-5	30	60	5	10	50	100-300	10	150	8	250
2N2219A	NPN	TO-5	40	75	6	10	60	100-300	10	150	8	300
2N2221	NPN	TO-18	30	60	5	10	50	40-120	10	150	8	250
2N2221A	NPN	TO-18	40	75	6	10	60	40-120	10	150	8	250
2N2222	NPN	TO-18	30	60	5	10	50	100-300	10	150	8	250
2N2222A	NPN	TO-18	40	75	6	10	60	100-300	10	150	8	300
2N2224	NPN	TO-5	40	65	5	10	50	40-120	1	150	8	250
2N2242	NPN	TO-18	15	40	5	100	20	40-120	1	10	6	250
2N2243	NPN	TO-39	80	120	7	10	60	40-120	10	150	15	50
2N2270	NPN	TO-39	45	60	7	50	60	50-200	10	150	15	100
2N2297	NPN	TO-5	35	80	7	10	60	40-120	10	150	12	60
2N2303	NPN	TO-5	35	50	5	500	30	75-200	10	150	45	60
2N2368	NPN	TO-18	15	40	4.5	400	20	20-60	1	10	4	400
2N2369	NPN	TO-18	15	40	4.5	400	20	40-120	1	10	4	500
2N2369A	NPN	TO-18	15	40	4.5	400	20	40-120	3.5	10	4	500
2N2405	NPN	TO-39	90	120	7	10	90	60-200	10	150	15	50

2514096 CRIMSON SEMICONDUCTOR INC

99D 00294 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE @	VC & IC	COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V)	MIN - MAX	(V)				(mA)
2N2475	NPN	TO-18	6	15	4	50	5	30-150	.4	20	3	600	
2N2476	NPN	TO-5	20	60	5	200	30	20-	.4	150	10	250	
2N2477	NPN	TO-5	20	60	5	200	30	40-	.4	150	10	250	
2N2481	NPN	TO-18	15	40	5	50	20	40-120	1	10	5	300	
2N2483	NPN	TO-18	60	60	6	10	45	40-120	5	.01	6	60	4
2N2484	NPN	TO-18	60	60	6	10	45	100-500	5	.01	6	60	3
2N2501	NPN	TO-18	20	40	6	25	20	50-150	1	10	4	350	
2N2509	NPN	TO-18	80	125	7	5	100	40-	5	10	6	45	
2N2510	NPN	TO-18	65	100	7	5	80	150-500	5	10	6	45	
2N2511	NPN	TO-18	50	80	7	5	60	240-750	5	10	6	45	
2N2539	NPN	TO-18	30	60	5	250	40	50-150	10	150	8	250	
2N2540	NPN	TO-18	30	60	5	250	40	100-300	10	150	8	250	
2N2586	NPN	TO-18	45	60	6	2	45	120-360	5	.01	7	45	
2N2616	NPN	TO-18	15	30	3	10	15	20-	1	3	3	600	
2N2645	NPN	TO-18	40	75	7	10	60	100-300	10	150	25	50	
2N2696	PNP	TO-18	25	25	4	25	10	30-130	1	50	20	100	
2N2710	NPN	TO-18	20	40	5	30	20	40-	1	10	4	500	
2N2714	NPN	TO-92 (74)	18	18	5	500	18	75-225	4.5	2	12	80	
2N2801	PNP	TO-39	35	50	5	100	25	75-225	10	150	25	120	
2N2845	NPN	TO-18	30	60	5	200	30	30-120	10	150	8	250	
2N2846	NPN	TO-5	30	60	5	200	30	30-120	10	150	8	250	
2N2847	NPN	TO-18	20	60	5	200	30	40-140	10	150	8	250	
2N2848	NPN	TO-5	20	60	5	200	30	40-140	10	150	8	250	
2N2857	NPN	TO-72	15	30	2.5	10	15	30-150	1	3	1	1000	
2N2868	NPN	TO-5	40	60	7	10	30	40-120	10	150	20	50	
2N2894	PNP	TO-18	12	12	4	80	6	40-150	.5	30	6	400	
2N2895	NPN	TO-18	65	120	.7	2	60	40-120	10	150	15	120	
2N2896	NPN	TO-18	90	140	7	10	90	60-200	10	150	15	120	
2N2897	NPN	TO-18	45	60	7	50	60	50-200	10	150	15	100	
2N2904	PNP	TO-5	40	60	5	20	50	40-120	10	150	8	200	
2N2904A	PNP	TO-5	60	60	5	10	50	40-120	10	150	8	200	
2N2905	PNP	TO-5	40	60	5	20	50	100-300	10	150	8	200	
2N2905A	PNP	TO-5	60	60	5	10	50	100-300	10	150	8	200	
2N2906	PNP	TO-18	40	60	5	20	50	40-120	10	150	8	200	
2N2906A	PNP	TO-18	60	60	5	10	50	40-120	10	150	8	200	
2N2907	PNP	TO-18	40	60	5	20	50	100-300	10	150	8	200	
2N2907A	PNP	TO-18	60	60	5	10	50	100-300	10	150	8	200	
2N2923	NPN	TO-92 (74)	25	25	5	100	25	90-180	10	2	10		
2N2924	NPN	TO-92 (74)	25	25	5	100	25	150-300	10	2	10		
2N2925	NPN	TO-92 (74)	25	25	5	100	25	235-470	10	2	10		
2N2926	NPN	TO-92 (74)	18	18	5	500	18	35-470	10	2	10		
2N3010	NPN	TO-18	6	15	4	100	5	25-125	.4	10	3	600	
2N3011	NPN	TO-18	12	30	5	400	20	30-120	.35	10	4	400	
2N3012	PNP	TO-18	12	12	4	80	6	30-120	.5	30	6	400	
2N3015	NPN	TO-5	30	60	5	200	30	30-120	10	150	8	250	

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00295

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T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V)	MIN - MAX				(V)
2N3019	NPN	TO-5	80	140	7	10	90	100-300	10	150	12	100
2N3020	NPN	TO-5	80	140	7	10	90	40-120	10	150	12	100
2N3053	NPN	TO-39	40	60	5	250	30	50-250	10	150	15	100
2N3053A	NPN	TO-39	60	80	5	250	60	50-250	10	150	15	100
2N3072	PNP	TO-5	60	60	4	10	30	30-130	1	50	10	130
2N3073	PNP	TO-18	60	60	4	10	30	30-130	1	50	10	130
2N3107	NPN	TO-5	60	100	7	10	60	100-300	1	150	20	70
2N3108	NPN	TO-5	60	100	7	10	60	40-120	1	150	20	60
2N3109	NPN	TO-5	40	80	7	10	60	100-300	1	150	25	70
2N3110	NPN	TO-5	40	80	7	10	60	40-120	1	150	25	60
2N3114	NPN	TO-5	150	150	5	10	100	30-120	10	30	9	40
2N3115	NPN	TO-18	20	60	5	25	50	40-120	10	150	8	250
2N3116	NPN	TO-18	20	60	5	25	50	100-300	10	150	8	250
2N3117	NPN	TO-18	60	60	6	10	45	250-500	5	.01	4.5	60
2N3120	PNP	TO-5	45	45	4	10	30	30-130	1	50	10	130
2N3121	PNP	TO-18	45	45	4	10	30	30-130	1	50	10	130
2N3133	PNP	TO-5	35	50	4	50	30	40-120	10	150	10	200
2N3134	PNP	TO-5	35	50	4	50	30	100-300	10	150	10	200
2N3135	PNP	TO-18	35	50	4	50	30	40-120	10	150	10	200
2N3136	PNP	TO-18	35	50	4	50	30	100-300	10	150	10	200
2N3209	PNP	TO-18	20	20	4	80	10	30-120	.5	30	5	400
2N3210	NPN	TO-18	15	40	5	10	20	30-120	1	10	6	300
2N3211	NPN	TO-18	15	40	5	25	20	50-150	1	10	4	350
2N3227	NPN	TO-18	20	40	6	200	20	100-300	1	10	4	500
2N3244	PNP	TO-39	40	40	5	50	30	50-150	1	500	25	175
2N3245	PNP	TO-39	50	50	5	50	50	30-90	1	500	25	150
2N3246	NPN	TO-18	40	60	8	5	40	200-600	5	.01	5	60
2N3250	PNP	TO-18	40	50	5	20	40	50-150	1	10	6	250
2N3250A	PNP	TO-18	60	60	5	20	40	50-150	1	10	6	250
2N3251	PNP	TO-18	40	50	5	20	40	100-300	1	10	6	300
2N3251A	PNP	TO-18	60	60	5	20	40	100-300	1	10	6	300
2N3252	NPN	TO-5	30	60	5	500	40	30-90	1	500	12	200
2N3253	NPN	TO-5	40	75	5	500	60	25-75	1	375	12	175
2N3299	NPN	TO-5	30	60	5	10	50	40-120	10	150	8	250
2N3300	NPN	TO-5	30	60	5	10	50	100-300	10	150	8	250
2N3301	NPN	TO-18	30	60	5	10	50	40-120	10	150	8	250
2N3302	NPN	TO-18	30	60	5	10	50	100-300	10	150	8	250
2N3304	PNP	TO-92 (72)	6	6	4	10	3	30-120	.3	10	3.5	500
2N3326	NPN	TO-39	45	60	5	10	50	40-120	10	150	8	250
2N3390	NPN	TO-92 (74)	25	25	5	100	18	400-800	4.5	2	10	
2N3391	NPN	TO-92 (74)	25	25	5	100	18	250-500	4.5	2	10	
2N3391A	NPN	TO-92 (74)	25	25	5	100	18	250-500	4.5	2	10	
2N3392	NPN	TO-92 (74)	25	25	5	100	18	150-300	4.5	2	10	
2N3393	NPN	TO-92 (74)	25	25	5	100	18	90-180	4.5	2	10	
2N3394	NPN	TO-92 (74)	25	25	5	100	18	55-110	4.5	2	10	

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00296 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @		VC & IC		COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	MAX	(V) MIN	(mA) MAX			
2N3395	NPN	TO-92 (74)	25	25	5	100	18	150-500	4.5	2	10		
2N3396	NPN	TO-92 (74)	25	25	5	100	18	90-500	4.5	2	10		
2N3397	NPN	TO-92 (74)	25	25	5	100	18	55-500	4.5	2	10		
2N3398	NPN	TO-92 (74)	25	25	5	100	18	55-800	4.5	2	10		
2N3414	NPN	TO-92 (74)	25	25	5	100	25	75-225	4.5	2	10		
2N3415	NPN	TO-92 (74)	25	25	5	100	25	180-540	4.5	2	10		
2N3416	NPN	TO-92 (74)	50	50	5	100	25	75-225	4.5	2	10		
2N3417	NPN	TO-92 (74)	50	50	5	100	25	180-540	4.5	2	10		
2N3439	NPN	TO-5	350	450	7	20	360	40-160	10	20	10	15	
2N3440	NPN	TO-5	250	300	7	20	250	40-160	10	20	10	15	
2N3444	NPN	TO-39	50	80	5	500	60	20-60	1	500	12	150	
2N3467	PNP	TO-39	40	40	5	100	30	40-120	1	500	25	175	
2N3468	PNP	TO-39	50	50	5	100	30	25-75	1	500	25	150	
2N3478	NPN	TO-72	15	30	2	20	1	25-120	8	2	1	750	
2N3494	PNP	TO-39	80	80	4.5	100	50	40-	10	50	7	200	
2N3495	PNP	TO-39	120	120	4.5	100	90	40-	10	50	6	150	
2N3496	PNP	TO-18	80	80	4.5	100	50	40-	10	50	7	200	
2N3497	PNP	TO-18	120	120	4.5	100	90	40-	10	50	6	150	
2N3498	NPN	TO-39	100	100	6	50	50	40-120	10	150	10	150	
2N3499	NPN	TO-39	100	100	6	50	50	100-300	10	150	10	150	
2N3500	NPN	TO-39	150	150	6	50	75	40-120	10	150	8	150	
2N3501	NPN	TO-39	150	150	6	50	75	100-300	10	150	8	150	
2N3502	PNP	TO-5	45	45	5	10	30	100-300	10	150	8	200	
2N3503	PNP	TO-5	60	60	5	10	30	100-300	10	150	8	200	
2N3504	PNP	TO-18	45	45	5	10	30	100-300	10	150	8	200	
2N3505	PNP	TO-18	60	60	5	10	30	100-300	10	150	8	200	
2N3547	PNP	TO-18	60	60	6	10	45	100-500	5	1	10		
2N3548	PNP	TO-18	45	60	6	10	45	150-600	5	1	10		
2N3549	PNP	TO-18	60	60	6	10	45	200-800	5	1	10		
2N3550	PNP	TO-18	45	60	6	10	45	300-800	5	1	10		
2N3600	NPN	TO-72	15	30	3	10	15	20-150	1	3	1	850	
2N3634	PNP	TO-39	140	140	5	100	100	50-150	10	50	10	150	
2N3635	PNP	TO-39	140	140	5	100	100	100-300	10	50	10	200	
2N3636	PNP	TO-39	175	175	5	100	100	50-150	10	50	10	150	
2N3637	PNP	TO-39	175	175	5	100	100	100-300	10	50	10	200	
2N3662	NPN	TO-92 (74)	12	18	3	500	15	20-	8	10	1.7	700	
2N3663	NPN	TO-92 (74)	12	30	3	500	15	20-	8	10	1.7	700	
2N3665	NPN	TO-39	80	120	10	50	60	40-120	10	150	12	60	
2N3666	NPN	TO-39	80	120	10	50	60	100-300	10	150	12	60	
2N3671	PNP	TO-5	50	60	5	10	50	75-225	10	150	9	200	
2N3672	PNP	TO-18	50	60	5	10	50	75-225	10	150	9	200	
2N3678	NPN	TO-5	55	75	6	10	60	40-120	10	150	8	250	
2N3700	NPN	TO-18	80	140	7	10	90	100-300	10	150	12	100	
2N3701	NPN	TO-18	80	140	7	10	90	40-120	10	150	12	80	
2N3702	PNP	TO-92 (74)	25	40	5	100	20	60-300	5	50	12	100	

2514096 CRIMSON SEMICONDUCTOR INC

99D 00297 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB		HFE @ VC & IC		COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	(mA) MAX	(V) MIN			
2N3703	PNP	TO-92 (74)	30	50	5	100	20	30-150	5	50	12	100
2N3704	NPN	TO-92 (74)	30	50	5	100	20	100-300	2	50	12	100
2N3705	NPN	TO-92 (74)	30	50	5	100	20	50-150	2	50	12	100
2N3706	NPN	TO-92 (74)	20	40	5	100	20	30-600	2	50	12	100
2N3707	NPN	TO-92 (74)	30	30	6	100	20	100-400	5	1		
2N3708	NPN	TO-92 (74)	30	30	6	100	20	45-660	5	1		
2N3709	NPN	TO-92 (74)	30	30	6	100	20	45-165	5	1		
2N3710	NPN	TO-92 (74)	30	30	6	100	20	90-330	5	1		
2N3711	NPN	TO-92 (74)	30	30	6	100	20	180-660	5	1		
2N3721	NPN	TO-92 (74)	18	18	5	500	18	60-660	10	2		
2N3722	NPN	TO-5	60	80	6	500	40	40-150	1	100	10	
2N3723	NPN	TO-5	80	100	6	500	50	40-150	1	100	9	
2N3724	NPN	TO-39	30	50	6	1.7UA	40	60-150	1	100	12	300
2N3724A	NPN	TO-39	30	50	6	500	40	60-150	1	100	12	300
2N3725	NPN	TO-39	50	80	6	1.7UA	60	60-150	1	100	10	300
2N3725A	NPN	TO-39	50	80	6	500	60	60-150	1	100	10	300
2N3742	NPN	TO-39	300	300	7	200	200	20-200	10	30	6	60
2N3794	NPN	TO-92 (74)	20	40	5	500	15	100-600	10	10	10	100
2N3799	PNP	TO-18	60	60	5	10	50	300-900	5	.5		
2N3825	NPN	TO-92 (74)	15	30	4	100	15	20-	10	2	3.5	200
2N3826	NPN	TO-92 (74)	45	60	4	100	30	40-160	10	10	3.5	200
2N3827	NPN	TO-92 (74)	45	60	4	100	30	100-400	10	10	3.5	200
2N3839	NPN	TO-72	15	30	2.5	10	15	30-150	1	3	1	1000
2N3858	NPN	TO-92 (74)	30	30	4	500	18	60-120	4.5	2	4	90
2N3858A	NPN	TO-92 (74)	60	60	6	500	18	60-120	1	10	4	90
2N3859	NPN	TO-92 (74)	30	30	4	500	18	100-200	4.5	2	4	90
2N3859A	NPN	TO-92 (74)	60	60	6	500	18	100-200	1	10	4	90
2N3860	NPN	TO-92 (74)	30	30	4	500	18	150-300	4.5	2	4	90
2N3877	NPN	TO-92 (74)	70	70	4	500	70	20-250	4.5	2		5
2N3877A	NPN	TO-92 (74)	85	85	4	500	70	20-250	4.5	2		5
2N3900	NPN	TO-92 (74)	18	18	5	100	18	250-500	4.5	2		5
2N3901	NPN	TO-92 (74)	18	18	5	100	15	350-700	4.5	2		5
2N3903	NPN	TO-92 (72)	40	60	6	50	30	50-150	1	10	4	250
2N3904	NPN	TO-92 (72)	40	60	6	50	30	100-300	1	10	4	300
2N3905	PNP	TO-92 (72)	40	40	5	50	30	50-150	1	10	4.5	200
2N3906	PNP	TO-92 (72)	40	40	5	50	30	100-300	1	10	4.5	250
2N3932	NPN	TO-72	20	30	2.5	10	15	40-150	8	2	.55	750
2N3933	NPN	TO-72	30	40	2.5	10	15	60-200	8	2	.55	750
2N3945	NPN	TO-39	50	70	8	40	60	40-250	10	150	12	60
2N3946	NPN	TO-18	40	60	6	10	40	50-150	1	10	4	250
2N3947	NPN	TO-18	40	60	6	10	40	100-300	1	10	4	300
2N3962	PNP	TO-18	60	60	6	10	50	100-450	5	1	6	40
2N3963	PNP	TO-18	80	80	6	10	70	100-450	5	1	6	40
2N3964	PNP	TO-18	45	45	6	10	40	250-600	5	1	6	50
2N3965	PNP	TO-18	60	60	6	10	50	250-600	5	1	6	50

2514096 CRIMSON SEMICONDUCTOR INC

99D 00298

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T.29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE	VC & IC		COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN - MAX	(V)	(mA)	(pI) MAX	(MHz)	(dB) MAX	
2N4013	NPN	TO-18	30	50	6	1.7 $\mu$ A	40	60-150	1	100	12	300	
2N4014	NPN	TO-18	50	80	6	1.7 $\mu$ A	60	60-150	1	100	10	300	
2N4026	PNP	TO-18	60	60	5	50	50	40-120	5	100	20	100	
2N4027	PNP	TO-18	80	80	5	50	60	40-120	5	100	20	100	
2N4028	PNP	TO-18	60	60	5	50	50	100-300	5	100	20	150	
2N4029	PNP	TO-18	80	80	5	50	60	100-300	5	100	20	150	
2N4030	PNP	TO-5	60	60	5	50	50	40-120	5	100	20	100	
2N4031	PNP	TO-5	80	80	5	50	60	40-120	5	100	20	100	
2N4032	PNP	TO-5	60	60	5	50	50	100-300	5	100	20	150	
2N4033	PNP	TO-5	80	80	5	50	60	100-300	5	100	20	150	
2N4034	PNP	TO-18	40	40	5	15	30	70-200	1	10	3.5	400	
2N4035	PNP	TO-18	40	40	5	15	30	150-300	1	10	3.5	450	
2N4036	PNP	TO-39	65	90	7	20	60	40-140	10	150	30	60	
2N4037	PNP	TO-39	40	60	7	250	60	50-250	10	150	30	60	
2N4046	NPN	TO-5	30	50	6	1.7 $\mu$ A	40	40-150	1	100	12	500	
2N4047	NPN	TO-5	50	80	6	1.7 $\mu$ A	60	40-150	1	100	10	500	
2N4058	PNP	TO-92 (74)	30	30	6	100	20	100-400	5	0.1	10		5
2N4059	PNP	TO-92 (74)	30	30	6	100	20	45-660	5	1	10		5
2N4060	PNP	TO-92 (74)	30	30	6	100	20	45-165	5	1	10		5
2N4061	PNP	TO-92 (74)	30	30	6	100	20	90-330	5	1	10		5
2N4062	PNP	TO-92 (74)	30	30	6	100	20	180-660	5	1	10		5
2N4123	NPN	TO-92 (72)	30	40	5	50	20	50-150	1	2	4	250	
2N4124	NPN	TO-92 (72)	25	30	5	50	20	120-360	1	2	4	300	
2N4125	PNP	TO-92 (72)	30	30	4	50	20	50-150	1	2	4.5	200	
2N4126	PNP	TO-92 (72)	25	25	4	50	20	120-360	1	2	4.5	250	
2N4207	PNP	TO-18	6	6	4.5	10	3	50-120	.3	10	3	650	
2N4208	PNP	TO-18	12	12	4.5	10	6	30-120	.3	10	3	700	
2N4209	PNP	TO-18	15	15	4.5	10	8	50-120	.3	10	3	850	
2N4234	PNP	TO-5	40	40	7	100	40	30-150	1	250			
2N4235	PNP	TO-5	60	60	7	100	60	30-150	1	250			
2N4236	PNP	TO-5	80	80	7	100	80	30-150	1	250			
2N4237	NPN	TO-5	40	50	6	100	50	30-150	1	250			
2N4238	NPN	TO-5	60	80	6	100	80	30-150	1	250			
2N4239	NPN	TO-5	80	100	6	100	100	30-150	1	250			
2N4259	NPN	TO-72	30	40	2.5	10	15	60-250	8	2	.55	750	
2N4286	NPN	TO-92 (74)	25	30	6	50	25	150-600	5	1	6	40	5
2N4287	NPN	TO-92 (74)	45	45	7	10	30	150-600	5	1	6	40	5
2N4288	PNP	TO-92 (74)	25	30	6	50	25	150-600	5	1	8	40	4
2N4289	PNP	TO-92 (74)	45	60	7	10	45	150-600	5	1	8	40	4
2N4290	PNP	TO-92 (74)	20	30	5	500	20	50-300	10	100	10	100	
2N4291	PNP	TO-92 (74)	30	40	6	200	30	100-300	10	100	10	100	
2N4292	NPN	TO-92 (74)	15	30	3	500	15	20-	1	3	3.5	600	
2N4293	NPN	TO-92 (74)	15	30	3	500	15	20-	1	3	3.5	600	
2N4294	NPN	TO-92 (74)	12	30	4.5	400	20	30-120	1	10	5	400	
2N4295	NPN	TO-92 (74)	15	40	5	100	20	40-120	1	10	4	500	

2514096 CRIMSON SEMICONDUCTOR INC

99D 00299

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T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX (V)	MIN.-MAX. (V)	(mA) - (pI) MAX	(MHz)	(db) MAX
2N4314	PNP	TO-39	65	90	7	250	60 50-250	10 150	30	60
2N4384	NPN	TO-18	30	40	5	10	30 100-500	5 .01	8	30
2N4386	NPN	TO-18	30	40	5	10	30 40-500	5 .01	8	30
2N4400	NPN	TO-92 (72)	40	60	6	100	35 50-150	1 150	6.5	200
2N4401	NPN	TO-92 (72)	40	60	6	100	35 100-300	1 150	6.5	250
2N4402	PNP	TO-92 (72)	40	40	5	100	35 50-150	2 150	8.5	150
2N4403	PNP	TO-92 (72)	40	40	5	100	35 100-300	2 150	8.5	200
2N4404	PNP	TO-39	80	80	5	25	60 40-120	1 150	10	200
2N4405	PNP	TO-39	80	80	5	25	60 100-300	1 150	10	200
2N4409	NPN	TO-92 (72)	50	80	5	10	60 60-400	1 10	12	60
2N4410	NPN	TO-92 (72)	80	120	5	10	100 60-400	1 10	12	60
2N4424	NPN	TO-92 (74)	40	40	5	100	25 180-540	4.5 2		
2N4924	NPN	TO-39	100	100	5	100	50 40-120	10 150	10	10
2N4951	NPN	TO-92 (74)	30	60	5	50	40 60-200	10 150	8	250
2N4952	NPN	TO-92 (74)	30	60	5	50	40 100-300	10 150	8	250
2N4953	NPN	TO-92 (74)	30	60	5	50	40 200-600	10 150	8	250
2N4954	NPN	TO-92 (74)	30	40	5	50	30 60-600	10 150	8	250
2N4960	NPN	TO-39	60	60	6.5	10	50 100-300	10 150	15	250
2N4961	NPN	TO-39	80	80	6.5	10	50 100-300	10 150	15	250
2N4962	NPN	TO-18	60	60	6.5	10	50 100-300	10 150	15	250
2N4963	NPN	TO-18	80	80	6.5	10	50 100-300	10 150	15	250
2N4966	NPN	TO-92 (72)	40	50	6	25	25 40-200	5 .01	6	40
2N4967	NPN	TO-92 (72)	40	50	6	25	25 100-600	5 .01	6	40
2N4968	NPN	TO-92 (72)	25	30	6	50	25 40-200	5 .01	6	40
2N5086	PNP	TO-92 (72)	50	50	3	50	35 150-500	5 .1	4	40
2N5087	PNP	TO-92 (72)	50	50	3	50	35 250-800	5 .1	4	40
2N5088	NPN	TO-92 (72)	30	35	4.5	50	20 300-900	5 .1	4	50
2N5089	NPN	TO-92 (72)	25	30	4.5	50	15 400-1200	5 .1	4	50
2N5172	NPN	TO-92 (74)	25	25	5	100	25 100-500	10 10	10	
2N5179	NPN	TO-72	12	20	2.5	20	15 25-250	1 3	1	900
2N5180	NPN	TO-72	15	30	2	500	8 20-200	8 2	1	650
2N5189	NPN	TO-39	35	60	5	500	30 35-	1 500	12	250
2N5209	NPN	TO-92 (72)	50	50	4.5	50	35 100-300	5 .1	4	30
2N5210	NPN	TO-92 (72)	50	50	4.5	50	35 200-600	5 .1	4	30
2N5219	NPN	TO-92 (72)	15	20	3	100	10 35-500	10 2	4	150
2N5220	NPN	TO-92 (72)	15	15	3	100	10 30-600	10 50	10	100
2N5221	PNP	TO-92 (72)	15	15	3	100	10 30-600	10 50	15	100
2N5222	NPN	TO-92 (72)	15	20	2	100	10 20-1500	10 4	1.3	450
2N5223	NPN	TO-92 (72)	20	25	3	100	10 50-800	10 2	4	150
2N5224	NPN	TO-92 (72)	12	25	5	500	15 40-400	1 10	4	250
2N5225	NPN	TO-92 (72)	25	25	4	300	15 30-600	10 50	20	50
2N5226	PNP	TO-92 (72)	25	25	4	300	15 50-600	10 50	20	50
2N5227	PNP	TO-92 (72)	30	30	3	100	10 50-700	10 2	5	100
2N5228	PNP	TO-92 (72)	5	5	3	100	4 30-	.3 10	5	300
2N5354	PNP	TO-92 (74)	25	25	4	100	25 40-120	1 50	8	

2514096 CRIMSON SEMICONDUCTOR INC

99D 00300 D

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DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	V <sub>CB</sub>	HFE	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN-MAX	(V) (-A)	(pF) MAX	(MHz)	(db) MAX	
2N5355	PNP	TO-92 (74)	25	25	4	100	25	100-300	1 50	8		
2N5365	PNP	TO-92 (74)	40	40	4	100	40	40-120	1 50	8		
2N5366	PNP	TO-92 (74)	40	40	4	100	40	100-300	1 50	8		
2N5400	PNP	TO-92 (72)	120	130	5	100	100	40-180	5 10	6	100	
2N5401	PNP	TO-92 (72)	150	160	5	50	120	60-240	5 10	6	100	
2N5447	PNP	TO-92 (77)	25	40	5	100	20	60-300	5 50	12	100	
2N5448	PNP	TO-92 (77)	30	50	5	100	20	30-150	5 50	12	100	
2N5449	NPN	TO-92 (77)	30	50	5	100	20	100-300	2 50	12	100	
2N5450	NPN	TO-92 (77)	30	50	5	100	20	50-150	2 50	12	100	
2N5451	NPN	TO-92 (77)	20	40	5	100	20	30-600	2 50	12	100	
2N5550	NPN	TO-92 (72)	140	160	6	100	100	60-250	5 10	6	100	
2N5551	NPN	TO-92 (72)	160	180	6	50	120	80-250	5 10	6	100	
2N5769	NPN	TO-92 (72)	15	40	4.5	400	20	40-120	35 10	4	500	
2N5770	NPN	TO-92 (72)	15	30	4.5	10	15	50-200	10 8	1 1	900	
2N5771	PNP	TO-92 (72)	15	15	4.5	10	8	50-120	3 10	3	850	
2N5772	NPN	TO-92 (72)	15	40	5	500	20	30-120	4 30	5	350	
2N5845	NPN	TO-92 (72)	40	50	6	500	40	25-150	1 500	9	200	
2N5845A	NPN	TO-92 (72)	40	50	6	500	40	35-150	1 500	9	250	
2N6067	PNP	TO-92 (72)	40	50	5	500	30	50-200	1 100	16	150	
MPQ2222	NPN	TO-116 (39)	40	60	5	50	50	100-	10 150	8	200	
MPQ2907	PNP	TO-116 (39)	40	60	5	50	50	100-	10 150	8	200	
MPQ3467	PNP	TO-116 (39)	40	40	5	200	30	20-	1 500	25	125	
MPQ3725	NPN	TO-116 (39)	40	60	5	500	40	35-200	1 100	10	250	
MPQ3904	NPN	TO-116 (39)	40	60	6	50	40	75-	1 10	4	250	
MPQ3906	PNP	TO-116 (39)	40	40	5	50	30	75-	1 10	4.5	200	
MPS2714	NPN	TO-92 (72)	18	18	5	500	18	75-225	4.5 2	12	80	
MPS2923	NPN	TO-92 (72)	25	25	5	100	25	90-180	10 2	10		
MPS2924	NPN	TO-92 (72)	25	25	5	100	25	150-300	10 2	10		
MPS2925	NPN	TO-92 (72)	25	25	5	100	25	235-470	10 2	10		
MPS2926	NPN	TO-92 (72)	18	18	5	500	18	35-470	10 2	10		
MPS3390	NPN	TO-92 (72)	25	25	5	100	18	400-800	4.5 2	10		
MPS3391	NPN	TO-92 (72)	25	25	5	100	18	250-500	4.5 2	10		
MPS3392	NPN	TO-92 (72)	25	25	5	100	18	150-300	4.5 2	10		
MPS3393	NPN	TO-92 (72)	25	25	5	100	18	90-180	4.5 2	10		
MPS3394	NPN	TO-92 (72)	25	25	5	100	18	55-110	4.5 2	10		
MPS3395	NPN	TO-92 (72)	25	25	5	100	18	150-500	4.5 2	10		
MPS3396	NPN	TO-92 (72)	25	25	5	100	18	90-500	4.5 2	10		
MPS3397	NPN	TO-92 (72)	25	25	5	100	18	55-500	4.5 2	10		
MPS3398	NPN	TO-92 (72)	25	25	5	100	18	55-800	4.5 2	10		
MPS3414	NPN	TO-92 (72)	25	25	5	100	25	75-225	4.5 2	10		
MPS3415	NPN	TO-92 (72)	25	25	5	100	25	180-540	4.5 2	10		
MPS3416	NPN	TO-92 (72)	50	50	5	100	25	75-225	4.5 2	10		
MPS3417	NPN	TO-92 (72)	50	50	5	100	25	180-540	4.5 2	10		
MPS3662	NPN	TO-92 (72)	12	18	3	500	15	20-	8 10	1 7	700	
MPS3663	NPN	TO-92 (72)	12	30	3	500	15	20-	8 10	1 7	700	

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00301

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T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX	(V) (mA)	(pF) MAX	(MHz)
MPS3702	PNP TO-92 (72)	25	40	5	100	20 60-300	5 50	12	100
MPS3703	PNP TO-92 (72)	30	50	5	100	20 30-150	5 50	12	100
MPS3704	NPN TO-92 (72)	30	50	5	100	20 100-300	2 50	12	100
MPS3705	NPN TO-92 (72)	30	50	5	100	20 50-150	2 50	12	100
MPS3706	NPN TO-92 (72)	20	40	5	100	20 30-600	2 50	12	100
MPS3707	NPN TO-92 (72)	30	30	6	100	20 100-400	5 1		
MPS3708	NPN TO-92 (72)	30	30	6	100	20 45-660	5 1		
MPS3709	NPN TO-92 (72)	30	30	6	100	20 45-165	5 1		
MPS3710	NPN TO-92 (72)	30	30	6	100	20 90-330	5 1		
MPS3711	NPN TO-92 (72)	30	30	6	100	20 180-660	5 1		
MPS3721	NPN TO-92 (72)	18	18	5	500	18 60-660	10 2		
MPS3794	NPN TO-92 (72)	20	40	5	500	15 100-600	10 10	10	100
MPS3825	NPN TO-92 (72)	15	30	4	100	15 20-	10 2	3.5	200
MPS3826	NPN TO-92 (72)	45	60	4	100	30 40-160	10 10	3.5	200
MPS3827	NPN TO-92 (72)	45	60	4	100	30 100-400	10 10	3.5	200
MPS3858	NPN TO-92 (72)	30	30	4	500	18 60-120	4.5 2	4	90
MPS3858A	NPN TO-92 (72)	60	60	6	500	18 60-120	1 10	4	90
MPS3859	NPN TO-92 (72)	30	30	4	500	18 100-200	4.5 2	4	90
MPS3859A	NPN TO-92 (72)	60	60	6	500	18 100-200	1 10	4	90
MPS3860	NPN TO-92 (72)	30	30	4	500	18 150-300	4.5 2	4	90
MPS3877	NPN TO-92 (72)	70	70	4	500	70 20-250	4.5 2		5
MPS3877A	NPN TO-92 (72)	85	85	4	500	70 20-250	4.5 2		5
MPS3900	NPN TO-92 (72)	18	18	5	100	18 250-500	4.5 2		5
MPS3901	NPN TO-92 (72)	18	18	5	100	15 350-700	4.5 2		5
MPS4058	PNP TO-92 (72)	30	30	6	100	20 100-400	5 .1	10	5
MPS4059	PNP TO-92 (72)	30	30	6	100	20 45-660	5 1	10	5
MPS4060	PNP TO-92 (72)	30	30	6	100	20 45-165	5 1	10	5
MPS4061	PNP TO-92 (72)	30	30	6	100	20 90-330	5 1	10	5
MPS4062	PNP TO-92 (72)	30	30	6	100	20 180-660	5 1	10	5
MPS4286	NPN TO-92 (72)	25	30	6	50	25 150-600	5 1	6	40 5
MPS4287	NPN TO-92 (72)	45	45	7	10	30 150-600	5 1	6	40 5
MPS4288	PNP TO-92 (72)	25	30	6	50	25 150-600	5 1	8	40 4
MPS4289	PNP TO-92 (72)	45	60	7	10	45 150-600	5 1	8	40 4
MPS4290	PNP TO-92 (72)	20	30	5	500	20 50-300	10 100	10	100
MPS4291	PNP TO-92 (72)	30	40	6	200	30 100-300	10 100	10	100
MPS4292	NPN TO-92 (72)	15	30	3	500	15 20-	1 3	3.5	600
MPS4293	NPN TO-92 (72)	15	30	3	500	15 20-	1 3	3.5	600
MPS4294	NPN TO-92 (72)	12	30	4.5	400	20 30-120	1 10	5	400
MPS4295	NPN TO-92 (72)	15	40	5	100	20 40-120	1 10	4	500
MPS4424	NPN TO-92 (72)	40	40	5	100	25 180-540	4.5 2		
MPS4951	NPN TO-92 (72)	30	60	5	50	40 60-200	10 150	8	250
MPS4952	NPN TO-92 (72)	30	60	5	50	40 100-300	10 150	8	250
MPS4953	NPN TO-92 (72)	30	60	5	50	40 200-600	10 150	8	250
MPS4954	NPN TO-92 (72)	30	40	5	50	30 60-600	10 150	8	250
MPS5172	NPN TO-92 (72)	25	25	5	100	25 100-500	10 10	10	

2514096 CRIMSON SEMICONDUCTOR INC

99D 00302 D T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB		FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN - MAX	(V) (mA)	(p) MAX	(MHz)	(dB) MAX
MPS5354	PNP TO-92 (72)	25	25	4	100	25 40-120	1	50	8	
MPS5355	PNP TO-92 (72)	25	25	4	100	25 100-300	1	50	8	
MPS5365	PNP TO-92 (72)	40	40	4	100	40 40-120	1	50	8	
MPS5366	PNP TO-92 (72)	40	40	4	100	40 100-300	1	50	8	
MPS6507	NPN TO-92 (72)	20	20	3	50	15 25-	10	2	2.5	700
MPS6511	NPN TO-92 (72)	20	30	3	50	15 25-	10	10	2.5	
MPS6512	NPN TO-92 (72)	30	40	4	50	30 50-100	10	2	3.5	250
MPS6513	NPN TO-92 (72)	30	40	4	50	30 90-180	10	2	3.5	250
MPS6514	NPN TO-92 (72)	25	40	4	50	30 150-300	10	2	3.5	390
MPS6515	NPN TO-92 (72)	25	40	4	50	30 250-500	10	2	3.5	390
MPS6516	PNP TO-92 (72)	40	40	4	50	30 50-100	10	2	4	200
MPS6517	PNP TO-92 (72)	40	40	4	50	30 90-180	10	2	4	200
MPS6518	PNP TO-92 (72)	40	40	4	50	30 150-300	10	2	4	340
MPS6519	PNP TO-92 (72)	25	25	4	50	20 250-500	10	2	4	340
MPS6520	NPN TO-92 (72)	25	40	4	50	30 200-400	10	2	3.5	390
MPS6521	NPN TO-92 (72)	25	40	4	50	30 300-600	10	2	3.5	390
MPS6522	PNP TO-92 (72)	25	25	4	50	20 200-400	10	2	3.5	340
MPS6523	PNP TO-92 (72)	25	25	4	50	20 300-600	10	2	3.5	340
MPS6530	NPN TO-92 (72)	40	60	5	50	40 40-120	1	100	5	390
MPS6531	NPN TO-92 (72)	40	60	5	50	40 90-270	1	100	5	390
MPS6532	NPN TO-92 (72)	30	50	5	100	30 30-	1	100	5	390
MPS6533	PNP TO-92 (72)	40	40	4	50	30 40-120	1	100	6	260
MPS6534	PNP TO-92 (72)	40	40	4	50	30 90-270	1	100	6	260
MPS6535	PNP TO-92 (72)	30	30	4	100	20 30-	1	100	6	260
MPS6539	NPN TO-92 (72)	20	20	3	50	15 20-	10	4	7	500
MPS6541	NPN TO-92 (72)	20	30	4	50	15 25-	10	4	1.7	600
MPS6548	NPN TO-92 (72)	25	30	3	100	25 25-	10	4	7	650
MPS6560	NPN TO-92 (72)	25	25	5	100	20 50-200	1	500	30	60
MPS6561	NPN TO-92 (72)	20	25	5	100	20 50-200	1	350	30	60
MPS6562	PNP TO-92 (72)	25	25	5	100	20 50-200	1	500	30	60
MPS6563	PNP TO-92 (72)	20	25	5	100	20 50-200	1	350	30	60
MPS6564	NPN TO-92 (72)	45	80	5	500	40 25-	5	10	4	200
MPS6565	NPN TO-92 (72)	45	60	4	100	30 40-160	10	10	3.5	200
MPS6566	NPN TO-92 (72)	45	60	4	100	30 100-400	10	10	3.5	200
MPS6571	NPN TO-92 (72)	20	20	3	50	20 250-1000	5	1	4.5	50
MPS6573	NPN TO-92 (72)	35	35	4	100	35 200-500	5	10	12	100
MPS6574	NPN TO-92 (72)	35	35	4	100	35 100-300	5	1	12	100
MPS6575	NPN TO-92 (72)	45	45	4	100	45 200-500	5	10	12	100
MPS6576	NPN TO-92 (72)	45	45	4	100	45 100-300	5	1	12	100
MPS8097	NPN TO-92 (72)	40	60	6	30	40 250-700	5	1	4	200
MPS9410AH	NPN TO-92 (72)	12	20	4	50	10 80-160	1	50		
MPS9410AI	NPN TO-92 (72)	12	20	4	50	10 110-220	1	50		
MPS9410AJ	NPN TO-92 (72)	12	20	4	50	10 150-300	1	50		
MPS9410AK	NPN TO-92 (72)	12	20	4	50	10 200-400	1	50		
MPS9411AH	NPN TO-92 (72)	18	25	4	50	15 80-160	1	50		

2514096 CRIMSON SEMICONDUCTOR INC

99D 00303

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T-29-01

DEVICE	TYPE	PACKAGE	V <sub>CEO</sub> (V) MIN.	V <sub>CB0</sub> (V) MIN.	V <sub>EB0</sub> (V) MIN.	I <sub>CB0</sub> (mA) MAX.	V <sub>CB</sub> (V) MIN.-MAX.	HFE @ (V) MIN.-MAX.	VC & IC (V) (mA)	COB (pF) MAX.	FT (MHz)	NF (dB) MAX.
MPS9411AI	NPN	TO-92 (72)	18	25	4	50	15	110-220	1 50			
MPS9411AJ	NPN	TO-92 (72)	18	25	4	50	15	150-300	1 50			
MPS9411AK	NPN	TO-92 (72)	18	25	4	50	15	200-400	1 50			
MPS9412AH	NPN	TO-92 (72)	25	25	4	50	15	80-160	1 50			
MPS9412AI	NPN	TO-92 (72)	25	25	4	50	15	110-220	1 50			
MPS9412AJ	NPN	TO-92 (72)	25	25	4	50	15	150-300	1 50			
MPS9412AK	NPN	TO-92 (72)	25	25	4	50	15	200-400	1 50			
MPS9416AS	NPN	TO-92 (72)	18	18	4	50	15	50-150	1 350			
MPS9416AT	NPN	TO-92 (72)	18	18	4	50	15	100-300	1 350			
MPS9417AS	NPN	TO-92 (72)	25	25	4	50	15	50-150	1 350			
MPS9417AT	NPN	TO-92 (72)	25	25	4	50	15	100-300	1 350			
MPS9426A	NPN	TO-92 (72)	18	25	4	100	15	25- 50	6 1.5			400
MPS9426B	NPN	TO-92 (72)	18	25	4	100	15	45- 90	6 1.5			400
MPS9426C	NPN	TO-92 (72)	18	25	4	100	15	80-160	6 1.5			400
MPS9427A	NPN	TO-92 (72)	18	25	4	100	15	25- 50	6 1.5			550
MPS9427B	NPN	TO-92 (72)	18	25	4	100	15	45- 90	6 1.5			550
MPS9427C	NPN	TO-92 (72)	18	25	4	100	15	80-160	6 1.5			550
MPS9433G	NPN	TO-92 (72)	30	40	4	50	15	60-120	1 50			
MPS9433H	NPN	TO-92 (72)	30	40	4	50	15	60-160	1 50			
MPS9433I	NPN	TO-92 (72)	30	40	4	50	15	110-220	1 50			
MPS9433J	NPN	TO-92 (72)	30	40	4	50	15	150-300	1 50			
MPS9433S	NPN	TO-92 (72)	30	40	4	50	15	60-180	1 50			
MPS9433T	NPN	TO-92 (72)	30	40	4	50	15	100-300	1 50			
MPS9434F	NPN	TO-92 (72)	50	50	4	100	40	45- 90	1 50			
MPS9434G	NPN	TO-92 (72)	50	50	4	100	40	60-120	1 50			
MPS9434H	NPN	TO-92 (72)	50	50	4	100	40	80-160	1 50			
MPS9434I	NPN	TO-92 (72)	50	50	4	100	40	110-220	1 50			
MPS9434J	NPN	TO-92 (72)	50	50	4	100	40	150-300	1 50			
MPS9434K	NPN	TO-92 (72)	50	50	4	100	40	200-400	1 50			
MPS9434L	NPN	TO-92 (72)	50	50	4	100	40	300-600	1 50			
MPS9434S	NPN	TO-92 (72)	50	50	4	100	40	50-150	1 50			
MPS9434T	NPN	TO-92 (72)	50	50	4	100	40	100-300	1 50			
MPS9434U	NPN	TO-92 (72)	50	50	4	100	40	200-600	1 50			
MPS9460AH	PNP	TO-92 (72)	12	20	4	50	10	80-160	1 50			
MPS9460AI	PNP	TO-92 (72)	12	20	4	50	10	110-220	1 50			
MPS9460AJ	PNP	TO-92 (72)	12	20	4	50	10	150-300	1 50			
MPS9460AK	PNP	TO-92 (72)	12	20	4	50	10	200-400	1 50			
MPS9461AH	PNP	TO-92 (72)	18	25	4	50	15	80-160	1 50			
MPS9461AI	PNP	TO-92 (72)	18	25	4	50	15	110-220	1 50			
MPS9461AJ	PNP	TO-92 (72)	18	25	4	50	15	150-300	1 50			
MPS9461AK	PNP	TO-92 (72)	18	25	4	50	15	200-400	1 50			
MPS9462AH	PNP	TO-92 (72)	25	25	4	50	15	80-160	1 50			
MPS9462AI	PNP	TO-92 (72)	25	25	4	50	15	110-220	1 50			
MPS9462AJ	PNP	TO-92 (72)	25	25	4	50	15	150-300	1 50			
MPS9462AK	PNP	TO-92 (72)	25	25	4	50	15	200-400	1 50			

2514096 CRIMSON SEMICONDUCTOR INC

99D 00304

D T-29-01

DEVICE	TYPE PACKAGE	BVCEO (V) MIN	BVCEO (V) MIN	BVEBO (V) MIN	ICBO (mA) MAX	VCB (V) MIN	HFE @ (V) MIN	VC & IC (mA) MAX	COB (pF) MAX	FT (MHz)	NF (dB) MAX
MPS9466AS	PNP TO-92 (72)	18	18	4	50	15	50-150	1	350		
MPS9466AT	PNP TO-92 (72)	18	18	4	50	15	100-300	1	350		
MPS9467AS	PNP TO-92 (72)	25	25	4	50	15	50-150	1	350		
MPS9467AT	PNP TO-92 (72)	25	25	4	50	15	100-300	1	350		
MPS9483G	PNP TO-92 (72)	30	40	4	50	15	60-120	1	50		
MPS9483H	PNP TO-92 (72)	30	40	4	50	15	80-160	1	50		
MPS9483I	PNP TO-92 (72)	30	40	4	50	15	110-220	1	50		
MPS9483J	PNP TO-92 (72)	30	40	4	50	15	150-300	1	50		
MPS9483S	PNP TO-92 (72)	30	40	4	50	15	60-180	1	50		
MPS9483T	PNP TO-92 (72)	30	40	4	50	15	100-300	1	50		
MPS9484F	PNP TO-92 (72)	50	50	4	100	40	45-90	1	50		
MPS9484G	PNP TO-92 (72)	50	50	4	100	40	60-120	1	50		
MPS9484H	PNP TO-92 (72)	50	50	4	100	40	80-160	1	50		
MPS9484I	PNP TO-92 (72)	50	50	4	100	40	110-220	1	50		
MPS9484J	PNP TO-92 (72)	50	50	4	100	40	150-300	1	50		
MPS9484K	PNP TO-92 (72)	50	50	4	100	40	200-400	1	50		
MPS9484L	PNP TO-92 (72)	50	50	4	100	40	300-600	1	50		
MPS9484S	PNP TO-92 (72)	50	50	4	100	40	50-150	1	50		
MPS9484T	PNP TO-92 (72)	50	50	4	100	40	100-300	1	50		
MPS9484U	PNP TO-92 (72)	50	50	4	100	40	200-600	1	50		
MPS9600D	NPN TO-92 (72)	12	20	4	50	10	25-50	5	1	4	50
MPS9600E	NPN TO-92 (72)	12	20	4	50	10	35-70	5	1	4	50
MPS9600F	NPN TO-92 (72)	12	20	4	50	10	45-90	5	1	4	50
MPS9600G	NPN TO-92 (72)	12	20	4	50	10	60-120	5	1	4	50
MPS9600H	NPN TO-92 (72)	12	20	4	50	10	80-160	5	1	4	50
MPS9600I	NPN TO-92 (72)	12	20	4	50	10	110-220	5	1	4	50
MPS9600J	NPN TO-92 (72)	12	20	4	50	10	150-300	5	1	4	50
MPS9600R	NPN TO-92 (72)	12	20	4	50	10	25-75	5	1	4	50
MPS9600S	NPN TO-92 (72)	12	20	4	50	10	50-150	5	1	4	50
MPS9600T	NPN TO-92 (72)	12	20	4	50	10	100-300	5	1	4	50
MPS9601D	NPN TO-92 (72)	18	25	4	50	15	25-50	5	1	4	50
MPS9601E	NPN TO-92 (72)	18	25	4	50	15	35-70	5	1	4	50
MPS9601F	NPN TO-92 (72)	18	25	4	50	15	45-90	5	1	4	50
MPS9601G	NPN TO-92 (72)	18	25	4	50	15	60-120	5	1	4	50
MPS9601H	NPN TO-92 (72)	18	25	4	50	15	80-160	5	1	4	50
MPS9601I	NPN TO-92 (72)	18	25	4	50	15	110-220	5	1	4	50
MPS9601J	NPN TO-92 (72)	18	25	4	50	15	150-300	5	1	4	50
MPS9601R	NPN TO-92 (72)	18	25	4	50	15	25-75	5	1	4	50
MPS9601S	NPN TO-92 (72)	18	25	4	50	15	50-150	5	1	4	50
MPS9601T	NPN TO-92 (72)	18	25	4	50	15	100-300	5	1	4	50
MPS9602D	NPN TO-92 (72)	30	30	4	50	15	25-50	5	1	4	50
MPS9602E	NPN TO-92 (72)	30	30	4	50	15	35-70	5	1	4	50
MPS9602F	NPN TO-92 (72)	30	30	4	50	15	45-90	5	1	4	50
MPS9602G	NPN TO-92 (72)	30	30	4	50	15	60-120	5	1	4	50
MPS9602H	NPN TO-92 (72)	30	30	4	50	15	80-160	5	1	4	50

2514096 CRIMSON SEMICONDUCTOR INC

99D 00305 D

T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN MAX	(V) (mA) (pI) MAX	(MHz)	(db) MAX
MPS9602I	NPN TO-92 (72)	30	30	4	50	15 110-220	5 1 4	50	
MPS9602J	NPN TO-92 (72)	30	30	4	50	15 150-300	5 1 4	50	
MPS9602R	NPN TO-92 (72)	30	30	4	50	15 25- 75	5 1 4	50	
MPS9602S	NPN TO-92 (72)	30	30	4	50	15 50-150	5 1 4	50	
MPS9602T	NPN TO-92 (72)	30	30	4	50	15 100-300	5 1 4	50	
MPS9604D	NPN TO-92 (72)	18	25	4	50	15 25- 50	5 1 3	80	
MPS9604E	NPN TO-92 (72)	18	25	4	50	15 35- 70	5 1 3	80	
MPS9604F	NPN TO-92 (72)	18	25	4	50	15 45- 90	5 1 3	80	
MPS9604G	NPN TO-92 (72)	18	25	4	50	15 60-120	5 1 3	80	
MPS9604H	NPN TO-92 (72)	18	25	4	50	15 80-160	5 1 3	80	
MPS9604I	NPN TO-92 (72)	18	25	4	50	15 110-220	5 1 3	80	
MPS9604R	NPN TO-92 (72)	18	25	4	50	15 25- 75	5 1 3	80	
MPS9604S	NPN TO-92 (72)	18	25	4	50	15 50-150	5 1 3	80	
MPS9605D	NPN TO-92 (72)	30	30	4	50	15 25- 50	5 1 3	80	
MPS9605E	NPN TO-92 (72)	30	30	4	50	15 35- 70	5 1 3	80	
MPS9605F	NPN TO-92 (72)	30	30	4	50	15 45- 90	5 1 3	80	
MPS9605G	NPN TO-92 (72)	30	30	4	50	15 60-120	5 1 3	80	
MPS9605H	NPN TO-92 (72)	30	30	4	50	15 80-160	5 1 3	80	
MPS9605I	NPN TO-92 (72)	30	30	4	50	15 110-220	5 1 3	80	
MPS9605R	NPN TO-92 (72)	30	30	4	50	15 25- 75	5 1 3	80	
MPS9605S	NPN TO-92 (72)	30	30	4	50	15 50-150	5 1 3	80	
MPS9610I	NPN TO-237	25	30	6	100	15 100-200	1 50		80
MPS9610J	NPN TO-237	25	30	6	100	15 150-300	1 50		80
MPS9625D	NPN TO-92 (72)	12	20	4	50	10 25- 50	5 1 1.8	250	
MPS9625E	NPN TO-92 (72)	12	20	4	50	10 35- 70	5 1 1.8	250	
MPS9625F	NPN TO-92 (72)	12	20	4	50	10 45- 90	5 1 1.8	250	
MPS9625G	NPN TO-92 (72)	12	20	4	50	10 60-120	5 1 1.8	250	
MPS9625H	NPN TO-92 (72)	12	20	4	50	10 80-160	5 1 1.8	250	
MPS9625I	NPN TO-92 (72)	12	20	4	50	10 110-220	5 1 1.8	250	
MPS9625J	NPN TO-92 (72)	12	20	4	50	10 150-300	5 1 1.8	250	
MPS9625R	NPN TO-92 (72)	12	20	4	50	10 25- 75	5 1 1.8	250	
MPS9625S	NPN TO-92 (72)	12	20	4	50	10 50-150	5 1 1.8	250	
MPS9625T	NPN TO-92 (72)	12	20	4	50	10 100-300	5 1 1.8	250	
MPS9626D	NPN TO-92 (72)	30	30	4	50	15 25- 50	5 1 1.4	250	
MPS9626E	NPN TO-92 (72)	30	30	4	50	15 35- 70	5 1 1.4	250	
MPS9626F	NPN TO-92 (72)	30	30	4	50	15 45- 90	5 1 1.4	250	
MPS9626G	NPN TO-92 (72)	30	30	4	50	15 60-120	5 1 1.4	250	
MPS9626H	NPN TO-92 (72)	30	30	4	50	15 80-160	5 1 1.4	250	
MPS9626I	NPN TO-92 (72)	30	30	4	50	15 110-220	5 1 1.4	250	
MPS9630F	NPN TO-92 (72)	12	20	4	50	10 45- 90	5 1		
MPS9630G	NPN TO-92 (72)	12	20	4	50	10 60-120	5 1		
MPS9630H	NPN TO-92 (72)	12	20	4	50	10 80-160	5 1		
MPS9630I	NPN TO-92 (72)	12	20	4	50	10 110-220	5 1		
MPS9630J	NPN TO-92 (72)	12	20	4	50	10 150-300	5 1		
MPS9630K	NPN TO-92 (72)	12	20	4	50	10 200-400	5 1		

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99D 00306 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	@ VCB	HFE	@ VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	(V) MIN	(mA) (pI) MAX	(MHz)	(db) MAX	
MPS9630L	NPN	TO-92 (72)	12	20	4	50	10	300-600	5	1		
MPS9630S	NPN	TO-92 (72)	12	20	4	50	10	50-150	5	1		
MPS9630T	NPN	TO-92 (72)	12	20	4	50	10	100-300	5	1		
MPS9630U	NPN	TO-92 (72)	12	20	4	50	10	200-600	5	1		
MPS9631F	NPN	TO-92 (72)	18	25	4	50	15	45-90	5	1		
MPS9631G	NPN	TO-92 (72)	18	25	4	50	15	60-120	5	1		
MPS9631H	NPN	TO-92 (72)	18	25	4	50	15	80-160	5	1		
MPS9631I	NPN	TO-92 (72)	18	25	4	50	15	110-220	5	1		
MPS9631J	NPN	TO-92 (72)	18	25	4	50	15	150-300	5	1		
MPS9631K	NPN	TO-92 (72)	18	25	4	50	15	200-400	5	1		
MPS9631L	NPN	TO-92 (72)	18	25	4	50	15	300-600	5	1		
MPS9631S	NPN	TO-92 (72)	18	25	4	50	15	50-150	5	1		
MPS9631T	NPN	TO-92 (72)	18	25	4	50	15	100-300	5	1		
MPS9631U	NPN	TO-92 (72)	18	25	4	50	15	200-600	5	1		
MPS9632F	NPN	TO-92 (72)	30	30	4	50	15	45-90	5	1		
MPS9632G	NPN	TO-92 (72)	30	30	4	50	15	60-120	5	1		
MPS9632H	NPN	TO-92 (72)	30	30	4	50	15	80-160	5	1		
MPS9632I	NPN	TO-92 (72)	30	30	4	50	15	110-220	5	1		
MPS9632J	NPN	TO-92 (72)	30	30	4	50	15	150-300	5	1		
MPS9632K	NPN	TO-92 (72)	30	30	4	50	15	200-400	5	1		
MPS9632L	NPN	TO-92 (72)	30	30	4	50	15	300-600	5	1		
MPS9632S	NPN	TO-92 (72)	30	30	4	50	15	50-150	5	1		
MPS9632T	NPN	TO-92 (72)	30	30	4	50	15	100-300	5	1		
MPS9632U	NPN	TO-92 (72)	30	30	4	50	15	200-600	5	1		
MPS9633A	NPN	TO-92 (72)	30	30	5	100	18	250-500	5	2	3.5	150 2.5
MPS9633B	NPN	TO-92 (72)	30	30	5	100	18	350-700	5	2	3.5	150 2.5
MPS9633C	NPN	TO-92 (72)	30	30	5	100	18	600-1200	5	2	3.5	150 2.5
MPS9633D	NPN	TO-92 (72)	30	30	5	100	18	900-1800	5	2	3.5	150 2.5
MPS9634A	NPN	TO-92 (72)	30	30	5	100	18	250-500	5	2	3.5	150 6
MPS9634B	NPN	TO-92 (72)	30	30	5	100	18	350-700	5	2	3.5	150 6
MPS9634C	NPN	TO-92 (72)	30	30	5	100	18	600-1200	5	2	3.5	150 6
MPS9634D	NPN	TO-92 (72)	30	30	5	100	18	900-1800	5	2	3.5	150 6
MPS9635B	NPN	TO-92 (72)	50	50	5	50	50	350-700	5	2	3	150 1
MPS9635C	NPN	TO-92 (72)	50	50	5	50	50	600-1200	5	2	3	150 1
MPS9660IP	PNP	TO-237	25	30	6	100	15	100-200	1	50		
MPS9660JP	PNP	TO-237	25	30	6	100	15	150-300	1	50		
MPS9680F	PNP	TO-92 (72)	12	20	4	50	10	45-90	5	1		
MPS9680G	PNP	TO-92 (72)	12	20	4	50	10	60-120	5	1		
MPS9680H	PNP	TO-92 (72)	12	20	4	50	10	80-160	5	1		
MPS9680I	PNP	TO-92 (72)	12	20	4	50	10	110-220	5	1		
MPS9680J	PNP	TO-92 (72)	12	20	4	50	10	150-300	5	1		
MPS9680K	PNP	TO-92 (72)	12	20	4	50	10	200-400	5	1		
MPS9680L	PNP	TO-92 (72)	12	20	4	50	10	300-600	5	1		
MPS9680S	PNP	TO-92 (72)	12	20	4	50	10	50-150	5	1		
MPS9680T	PNP	TO-92 (72)	12	20	4	50	10	100-300	5	1		

2514096 CRIMSON SEMICONDUCTOR INC

99D 00307 D

T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX	(V) (mA) (μI) MAX	(MHz)	(db) MAX
MPS9680U	PNP TO-92 (72)	12	20	4	50	10 200- 600	5	1	
MPS9681F	PNP TO-92 (72)	18	25	4	50	15 45- 90	5	1	
MPS9681G	PNP TO-92 (72)	18	25	4	50	15 60- 120	5	1	
MPS9681H	PNP TO-92 (72)	18	25	4	50	15 80- 160	5	1	
MPS9681I	PNP TO-92 (72)	18	25	4	50	15 110- 220	5	1	
MPS9681J	PNP TO-92 (72)	18	25	4	50	15 150-300	5	1	
MPS9681K	PNP TO-92 (72)	18	25	4	50	15 200- 400	5	1	
MPS9681L	PNP TO-92 (72)	18	25	4	50	15 300- 600	5	1	
MPS9681S	PNP TO-92 (72)	18	25	4	50	15 50- 150	5	1	
MPS9681T	PNP TO-92 (72)	18	25	4	50	15 100- 300	5	1	
MPS9681U	PNP TO-92 (72)	18	25	4	50	15 200- 600	5	1	
MPS9682F	PNP TO-92 (72)	30	30	4	50	15 45- 90	5	1	
MPS9682G	PNP TO-92 (72)	30	30	4	50	15 60- 120	5	1	
MPS9682H	PNP TO-92 (72)	30	30	4	50	15 80- 160	5	1	
MPS9682I	PNP TO-92 (72)	30	30	4	50	15 110- 220	5	1	
MPS9682J	PNP TO-92 (72)	30	30	4	50	15 150- 300	5	1	
MPS9682K	PNP TO-92 (72)	30	30	4	50	15 200- 400	5	1	
MPS9682L	PNP TO-92 (72)	30	30	4	50	15 300- 600	5	1	
MPS9682S	PNP TO-92 (72)	30	30	4	50	15 50- 150	5	1	
MPS9682T	PNP TO-92 (72)	30	30	4	50	15 100- 300	5	1	
MPS9682U	PNP TO-92 (72)	30	30	4	50	15 200- 600	5	1	
MPSA05	NPN TO-92 (72)	60	60	4	100	60 50-	1 100		100
MPSA06	NPN TO-92 (72)	80	80	4	100	80 50-	1 100		100
MPSA09	NPN TO-92 (72)	50	50	3	100	25 100- 600	5 1	5	30 2
MPSA10	NPN TO-92 (72)	40	40	4	100	30 40- 400	10 5	4	50
MPSA12	NPN TO-92 (72)	20*	20	10	100	15 20K-	5 10	8	125
MPSA13	NPN TO-92 (72)	30*	30	10	100	30 5K-	5 10	8	125
MPSA14	NPN TO-92 (72)	30*	30	10	100	30 10K-	5 10	8	125
MPSA18	NPN TO-92 (72)	45	45	6.5	50	30 500-1500	5 10	3	100 1.5
MPSA20	NPN TO-92 (72)	40	40	4	100	30 40- 400	10 5	4	120
MPSA42	NPN TO-92 (72)	300	300	6	100	200 40-	10 30	3	50
MPSA43	NPN TO-92 (72)	200	200	6	100	160 50- 200	10 30	4	50
MPSA55	PNP TO-92 (72)	60	60	4	100	60 50-	1 100		100
MPSA56	PNP TO-92 (72)	80	80	4	100	80 50-	1 100		100
MPSA62	PNP TO-92 (72)	20*	20	8	100	20 20K-	5 10		100
MPSA63	PNP TO-92 (72)	30*	30	8	100	30 5K-	5 10		100
MPSA64	PNP TO-92 (72)	30*	30	8	100	30 10K-	5 10		100
MPSA65	PNP TO-92 (72)	30*	30	8	100	30 50K-	5 10		100
MPSA66	PNP TO-92 (72)	30*	30	8	100	30 75K-	5 10		100
MPSA70	PNP TO-92 (72)	40	40	4	100	30 40- 400	10 5	4	125
MPSA92	PNP TO-92 (72)	300	300	5	250	200 25-	10 30	6	50
MPSA93	PNP TO-92 (72)	200	200	5	250	160 30- 150	10 30	8	50
MPSL01	NPN TO-92 (72)	120	140	5	1μA	75 50- 300	5 10	8	60
MPSL51	PNP TO-92 (72)	100	100	4	1μA	50 40- 250	5 50	8	60

2514096 CRIMSON SEMICONDUCTOR INC

99D 00308 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @	VCB	HFE @	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN - MAX	(V) (mA) (pF) MAX	(MHz) (db) MAX			
PN656	NPN	TO-92 (72)	60	60	8	500	30	30- 90	10 200	13	70	
PN697	NPN	TO-92 (72)	40	60	5	500	30	40-120	10 150	17	80	
PN699	NPN	TO-92 (72)	80	120	5	500	60	40-120	10 150	12	80	
PN703	NPN	TO-92 (72)	25	25	5	500	10	40-100	5 10	6	70	
PN706	NPN	TO-92 (72)	20	25	3	50	15	20-	1 10	6	400	
PN708	NPN	TO-92 (72)	15	40	5	25	20	30-120	1 10	6	300	
PN709	NPN	TO-92 (72)	6	15	4	50	5	20-120	5 10	3	800	
PN718	NPN	TO-92 (72)	40	60	5	500	30	40-120	10 150	17	80	
PN720	NPN	TO-92 (72)	80	120	5	500	60	40-120	10 150	12	80	
PN722	PNP	TO-92 (72)	35	50	5	500	30	30- 90	10 150	45	60	
PN727	PNP	TO-92 (72)	20	25	5	500	20	30-120	1 10	5	140	
PN731	NPN	TO-92 (72)	40	60	5	500	30	40-120	10 150	35	50	
PN743	NPN	TO-92 (72)	12	20	5	500	20	20- 60	.35 10	5	900	
PN744	NPN	TO-92 (72)	12	20	5	500	20	40-120	.35 10	5	900	
PN753	NPN	TO-92 (72)	15	25	5	500	15	40-120	1 10	5	200	
PN760	NPN	TO-92 (72)	45	45	8	200	30	76-300	5 1	8	50	
PN760A	NPN	TO-92 (72)	60	60	8	100	30	76-333	5 1	8	50	
PN783	NPN	TO-92 (72)	20	40	5	250	25	20- 60	1 10	4	200	
PN784	NPN	TO-92 (72)	15	30	5	250	20	20-	1 10	4	200	
PN834	NPN	TO-92 (72)	20	40	5	500	20	25-	1 10	4	350	
PN835	NPN	TO-92 (72)	20	25	3	500	20	20-	1 10	4	300	
PN869	PNP	TO-92 (72)	18	25	5	10	15	20-120	5 10	9	100	
PN869A	PNP	TO-92 (72)	18	25	5	10	15	40-120	5 10	6	400	
PN870	NPN	TO-92 (72)	60	100	7	10	75	40-120	10 150	15	50	
PN871	NPN	TO-92 (72)	60	100	7	10	75	100-300	10 150	15	60	
PN910	NPN	TO-92 (72)	60	100	7	25	75	75-	10 10	15	60	
PN911	NPN	TO-92 (72)	60	100	7	25	75	35-	10 10	15	50	
PN912	NPN	TO-92 (72)	60	100	7	25	75	15-	10 10	15	40	
PN914	NPN	TO-92 (72)	15	40	5	25	20	30-120	1 10	6	300	
PN915	NPN	TO-92 (72)	50	70	5	10	60	50-200	5 10	4	250	
PN916	NPN	TO-92 (72)	25	45	5	10	30	50-200	1 10	6	300	
PN917	NPN	TO-92 (72)	15	30	3	1	15	20-200	1 3	3	500	
PN918	NPN	TO-92 (72)	15	30	3	10	15	20-200	1 3	3	600	
PN929	NPN	TO-92 (72)	45	45	5	10	45	40-120	5 .01	8	30	4
PN929A	NPN	TO-92 (72)	45	60	6	2	45	40-120	5 .01	6	45	4
PN930	NPN	TO-92 (72)	45	45	5	10	45	100-300	5 .01	8	30	3
PN930A	NPN	TO-92 (72)	45	60	6	2	45	100-300	5 .01	6	45	3
PN956	NPN	TO-92 (72)	35	75	7	10	60	100-300	10 150	25	70	8
PN981	NPN	TO-92 (72)	80	80	8	1	30	36-300	5 1	5	50	
PN995	PNP	TO-92 (72)	15	20	4	5	15	35-140	1 20	10	100	
PN995A	PNP	TO-92 (72)	15	20	4	5	15	35-140	1 1	6	100	
PN996	PNP	TO-92 (72)	12	15	4	5	10	35-	1 20	10	100	6
PN1132	PNP	TO-92(72)	35	50	5	500	30	30- 90	10 150	45	60	
PN1253	NPN	TO-92(72)	20	30	5	500	20	30- 90	10 150	45	50	
PN1420	NPN	TO-92(72)	30	60	5	500	30	100-300	10 150	35	50	

\* AVAILA:LE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00309 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @	VCB	HFE @	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX	(V) (mA)	(pI) MAX	(MHz)	(db) MAX	
* PN1507	NPN	TO-92 (72)	30	60	5	500	30	100-300	10 150	35	50	
* PN1566	NPN	TO-92 (72)	60	80	5	500	40	60-200	5 5	10	60	
* PN1613	NPN	TO-92 (72)	50	75	7	10	60	40-120	10 150	25	60	12
* PN1708	NPN	TO-92 (72)	12	25	3	25	15	20-	1 10	6	200	
* PN1711	NPN	TO-92 (72)	50	75	7	10	60	100-300	10 150	25	70	8
* PN1889	NPN	TO-92 (72)	60	100	7	10	75	40-120	10 150	15	50	
* PN1890	NPN	TO-92 (72)	60	100	7	10	75	100-300	10 150	15	60	
* PN1893	NPN	TO-92 (72)	80	120	7	10	90	40-120	10 150	15	50	
* PN1973	NPN	TO-92 (72)	60	100	7	25	75	75-	10 10	15	60	
* PN1974	NPN	TO-92 (72)	60	100	7	25	75	35-	10 10	15	50	
* PN1975	NPN	TO-92 (72)	60	100	7	25	75	15-	10 10	15	40	
* PN1983	NPN	TO-92 (72)	25	50	5	500	30	70-210	5 1	45	40	
* PN1984	NPN	TO-92 (72)	25	50	5	500	30	35-100	5 1	45	40	
* PN1985	NPN	TO-92 (72)	25	50	5	500	30	15- 45	5 1	45	40	
* PN1986	NPN	TO-92 (72)	25	50	5	500	30	60-240	10 150	35	40	
* PN1987	NPN	TO-92 (72)	25	50	5	500	30	20- 80	10 150	35	40	
* PN1988	NPN	TO-92 (72)	45	100	5	500	50	35-120	10 30	20	40	
* PN1989	NPN	TO-92 (72)	45	100	5	500	50	20- 60	10 30	20	40	
* PN1990	NPN	TO-92 (72)	60	100	3	500	75	20-	10 30	20	40	
* PN1991	PNP	TO-92 (72)	20	30	5	500	10	15-	10 150	45	40	
* PN2008	NPN	TO-92 (72)	110	175	8	50	100	40-120	10 50	15	40	
* PN2017	NPN	TO-92 (72)	60	60	8	500	30	50-200	10 200	15	60	
* PN2049	NPN	TO-92 (72)	40	75	7	10	60	100-300	10 150	25	50	
* PN2102	NPN	TO-92 (72)	65	120	7	2	60	40-120	10 150	15	60	
* PN2192	NPN	TO-92 (72)	40	60	5	10	30	100-300	10 150	20	50	
* PN2193	NPN	TO-92 (72)	50	80	8	10	60	40-120	10 150	20	50	
* PN2195	NPN	TO-92 (72)	25	45	5	100	30	20-	10 150	20	50	
* PN2205	NPN	TO-92 (72)	12	25	3	25	15	20-	1 10	6	200	
* PN2206	NPN	TO-92 (72)	12	25	3	25	15	40-120	1 10	6	200	
* PN2218	NPN	TO-92 (72)	30	60	5	10	50	40-120	10 150	8	250	
* PN2218A	NPN	TO-92 (72)	40	75	6	10	60	40-120	10 150	8	250	
* PN2219	NPN	TO-92 (72)	30	60	5	10	50	100-300	10 150	8	250	
* PN2219A	NPN	TO-92 (72)	40	75	6	10	60	100-300	10 150	8	300	
* PN2221	NPN	TO-92 (72)	30	60	5	10	50	40-120	10 150	8	250	
* PN2221A	NPN	TO-92 (72)	40	75	6	10	60	40-120	10 150	8	250	
* PN2222	NPN	TO-92 (72)	30	60	5	10	50	100-300	10 150	8	250	
* PN2222A	NPN	TO-92 (72)	40	75	6	10	60	100-300	10 150	8	300	
* PN2224	NPN	TO-92 (72)	40	65	5	10	50	40-120	1 150	8	250	
* PN2242	NPN	TO-92 (72)	15	40	5	100	20	20-120	1 10	6	250	
* PN2243	NPN	TO-92 (72)	80	120	7	10	60	40-120	10 150	15	50	
* PN2270	NPN	TO-92 (72)	45	60	7	50	60	50-200	10 150	15	100	
* PN2297	NPN	TO-92 (72)	35	80	7	10	60	40-120	10 150	12	60	
* PN2303	NPN	TO-92 (72)	35	50	5	500	30	75-200	10 150	45	60	
* PN2351	NPN	TO-92 (72)	50	80	8	10	60	40-120	10 150	20	50	
* PN2352	NPN	TO-92 (72)	40	60	5	10	50	20- 60	10 150	20	50	

\* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00310

D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB		FT		NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	MAX	(V) MIN	(mA) MAX	(MHz)	(dB) MAX	(dB) MAX
PN2353	NPN	TO-92 (72)	25	45	5	10	30	20-	10	150	20	50	
PN2368	NPN	TO-92 (72)	15	40	4.5	400	20	20- 60	1	10	4	400	
PN2369	NPN	TO-92 (72)	15	40	4.5	400	20	40-120	1	10	4	500	
PN2369A	NPN	TO-92 (72)	15	40	4.5	400	20	40-120	3.5	10	4	500	
PN2405	NPN	TO-92 (72)	90	120	7	10	90	60-200	10	150	15	50	
PN2475	NPN	TO-92 (72)	6	15	4	50	5	30-150	.4	20	3	600	
PN2476	NPN	TO-92 (72)	20	60	5	200	30	20-	.4	150	10	250	
PN2477	NPN	TO-92 (72)	20	60	5	200	30	40-	.4	150	10	250	
PN2481	NPN	TO-92 (72)	15	40	5	50	20	40-120	1	10	5	300	
PN2483	NPN	TO-92 (72)	60	60	6	10	45	40-120	5	.01	6	60	4
PN2484	NPN	TO-92 (72)	60	60	6	10	45	100-500	5	.01	6	60	3
PN2501	NPN	TO-92 (72)	20	40	6	25	20	50-150	1	10	4	350	
PN2509	NPN	TO-92 (72)	80	125	7	5	100	40-	5	10	6	45	4
PN2510	NPN	TO-92 (72)	65	100	7	5	80	150-500	5	10	6	45	4
PN2511	NPN	TO-92 (72)	50	80	7	5	60	240-750	5	10	6	45	4
PN2539	NPN	TO-92 (72)	30	60	5	250	40	50-150	10	150	8	250	
PN2540	NPN	TO-92 (72)	30	60	5	250	40	100-300	10	150	8	250	
PN2586	NPN	TO-92 (72)	45	60	6	2	45	120-360	5	.01	7	45	3
PN2604	PNP	TO-92 (72)	45	60	6	10	45	40-120	5	.01	10	6	3
PN2605	PNP	TO-92 (72)	45	60	6	10	45	100-300	5	.01	10	6	3
PN2616	NPN	TO-92 (72)	15	30	3	10	15	20-	1	3	3	600	
PN2645	NPN	TO-92 (72)	40	75	7	10	60	100-300	10	150	25	50	
PN2696	PNP	TO-92 (72)	25	25	4	25	10	30-130	1	50	20	100	
PN2710	NPN	TO-92 (72)	20	40	5	30	20	40-	1	10	4	500	
PN2801	PNP	TO-92 (72)	35	50	5	100	25	75-225	10	150	25	120	
PN2845	NPN	TO-92 (72)	30	60	5	200	30	30-120	10	150	8	250	
PN2846	NPN	TO-92 (72)	30	60	5	200	30	30-120	10	150	8	250	
PN2847	NPN	TO-92 (72)	20	60	5	200	30	40-140	10	150	8	250	
PN2848	NPN	TO-92 (72)	20	60	5	200	30	40-140	10	150	8	250	
PN2857	NPN	TO-92 (72)	15	30	2.5	10	15	30-150	1	3	1	1000	
PN2868	NPN	TO-92 (72)	40	60	7	10	30	40-120	10	150	20	50	
PN2894	PNP	TO-92 (72)	12	12	4	80	6	40-150	.5	30	6	400	
PN2895	NPN	TO-92 (72)	65	120	7	2	60	40-120	10	150	15	120	
PN2896	NPN	TO-92 (72)	90	140	7	10	90	60-200	10	150	15	120	
PN2897	NPN	TO-92 (72)	45	60	7	50	60	50-200	10	150	15	100	
PN2904	PNP	TO-92 (72)	40	60	5	20	50	40-120	10	150	8	200	
PN2904A	PNP	TO-92 (72)	60	60	5	10	50	40-120	10	150	8	200	
PN2905	PNP	TO-92 (72)	40	60	5	20	50	100-300	10	150	8	200	
PN2905A	PNP	TO-92 (72)	60	60	5	10	50	100-300	10	150	8	200	
PN2906	PNP	TO-92 (72)	40	60	5	20	50	40-120	10	150	8	200	
PN2906A	PNP	TO-92 (72)	60	60	5	10	50	40-120	10	150	8	200	
PN2907	PNP	TO-92 (72)	40	60	5	20	50	100-300	10	150	8	200	
PN2907A	PNP	TO-92 (72)	60	60	5	10	50	100-300	10	150	8	200	
PN3009	NPN	TO-92 (72)	15	40	5	500	20	30-120	.4	30	5	350	
PN3010	NPN	TO-92 (72)	6	15	4	100	5	25-125	.4	10	3	600	

\* AVAILABLE ALSO IN TO-237 PACKAGE

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00311

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T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB	FT	NF	
			(VI MIN)	(V MIN)	(VI MIN)	(mA) MAX	(VI MIN)	MAX				(VI (mA)
PN3011	NPN	TO-92 (72)	12	30	5	400	20	30-120	.35	10	4	400
PN3012	PNP	TO-92 (72)	12	12	4	80	6	30-120	.5	30	6	400
PN3013	NPN	TO-92 (72)	15	40	5	300	20	30-120	.4	30	5	350
PN3014	NPN	TO-92 (72)	20	40	5	300	20	30-120	.4	30	5	350
PN3015	NPN	TO-92 (72)	30	60	5	200	30	30-120	10	150	8	250
PN3019	NPN	TO-92 (72)	80	140	7	10	90	100-300	10	150	12	100
PN3020	NPN	TO-92 (72)	80	140	7	10	90	40-120	10	150	12	100
PN3053	NPN	TO-92 (72)	40	60	5	250	30	50-250	10	150	15	100
PN3053A	NPN	TO-92 (72)	60	80	5	250	60	50-250	10	150	15	100
PN3056	NPN	TO-92 (72)	60	100	7	10	60	40-120	10	150	12	80
PN3056A	NPN	TO-92 (72)	80	140	7	10	90	40-120	10	150	12	80
PN3057	NPN	TO-92 (72)	60	100	7	10	60	100-300	10	150	12	100
PN3057A	NPN	TO-92 (72)	80	140	7	10	90	100-300	10	150	12	100
PN3072	PNP	TO-92 (72)	60	60	4	10	30	30-130	1	50	10	130
PN3073	PNP	TO-92 (72)	60	60	4	10	30	30-130	1	50	10	130
PN3107	NPN	TO-92 (72)	60	100	7	10	60	100-300	1	150	20	70
PN3108	NPN	TO-92 (72)	60	100	7	10	60	40-120	1	150	20	60
PN3109	NPN	TO-92 (72)	40	80	7	10	60	100-300	1	150	25	70
PN3110	NPN	TO-92 (72)	40	80	7	10	60	40-120	1	150	25	60
PN3114	NPN	TO-92 (72)	150	150	5	10	100	30-120	10	30	9	40
PN3115	NPN	TO-92 (72)	20	60	5	25	50	40-120	10	150	8	250
PN3116	NPN	TO-92 (72)	20	60	5	25	50	100-300	10	150	8	250
PN3117	NPN	TO-92 (72)	60	60	6	10	45	250-500	5	.01	4.5	60
PN3120	PNP	TO-92 (72)	45	45	4	10	30	30-130	1	50	10	130
PN3121	PNP	TO-92 (72)	45	45	4	10	30	30-130	1	50	10	130
PN3133	PNP	TO-92 (72)	35	50	4	50	30	40-120	10	150	10	200
PN3134	PNP	TO-92 (72)	35	50	4	50	30	100-300	10	150	10	200
PN3135	PNP	TO-92 (72)	35	50	4	50	30	40-120	10	150	10	200
PN3136	PNP	TO-92 (72)	35	50	4	50	30	100-300	10	150	10	200
PN3209	PNP	TO-92 (72)	20	20	4	80	10	30-120	.5	30	5	400
PN3210	NPN	TO-92 (72)	15	40	5	10	20	30-120	1	10	6	300
PN3211	NPN	TO-92 (72)	15	40	5	25	20	50-150	1	10	4	350
PN3227	NPN	TO-92 (72)	20	40	6	200	20	100-300	1	10	4	500
PN3244	PNP	TO-92 (72)	40	40	5	50	30	50-150	1	500	25	175
PN3245	PNP	TO-92 (72)	50	50	5	50	50	30-90	1	500	25	150
PN3246	NPN	TO-92 (72)	40	60	8	5	40	200-600	5	.01	5	60
PN3250	PNP	TO-92 (72)	40	50	5	20	40	50-150	1	10	6	250
PN3250A	PNP	TO-92 (72)	60	60	5	20	40	50-150	1	10	6	250
PN3251	PNP	TO-92 (72)	40	50	5	20	40	100-300	1	10	6	300
PN3251A	PNP	TO-92 (72)	60	60	5	20	40	100-300	1	10	6	300
PN3252	NPN	TO-92 (72)	30	60	5	500	40	30-90	1	500	12	200
PN3253	NPN	TO-92 (72)	40	75	5	500	60	25-75	1	375	12	175
PN3299	NPN	TO-92 (72)	30	60	5	10	50	40-120	10	150	8	250
PN3300	NPN	TO-92 (72)	30	60	5	10	50	100-300	10	150	8	250
PN3301	NPN	TO-92 (72)	30	60	5	10	50	40-120	10	150	8	250

\* AVAILABLE ALSO IN TO-237 PACKAGE

20

2514096 CRIMSON SEMICONDUCTOR INC

99D 00312 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB		FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX	(V) (mA)	(pI) MAX	(MHz)	(dB) MAX	
PN3302	NPN	TO-92 (72)	30	60	5	10	50	100-300	10	150	8	250
* PN3326	NPN	TO-92 (72)	45	60	5	10	50	40-120	10	150	8	250
* PN3439	NPN	TO-92 (72)	350	450	7	20	360	40-160	10	20	10	15
* PN3440	NPN	TO-92 (72)	250	300	7	20	250	40-160	10	20	10	15
* PN3444	NPN	TO-92 (72)	50	80	5	500	60	20- 60	1	500	12	150
PN3457	PNP	TO-92 (72)	6	6	4	10	3	30-120	3	10	5.5	500
* PN3467	PNP	TO-92 (72)	40	40	5	100	30	40-120	1	500	25	175
* PN3468	PNP	TO-92 (72)	50	50	5	100	30	25- 75	1	500	25	150
PN3478	NPN	TO-92 (72)	15	30	2	20	1	25-120	8	2	1	750
* PN3494	PNP	TO-92 (72)	80	80	4.5	100	50	40-	10	50	7	200
* PN3495	PNP	TO-92 (72)	120	120	4.5	100	90	40-	10	50	6	150
PN3496	PNP	TO-92 (72)	80	80	4.5	100	50	40-	10	50	7	200
PN3497	PNP	TO-92 (72)	120	120	4.5	100	90	40-	10	50	6	150
* PN3498	NPN	TO-92 (72)	100	100	6	50	50	40-120	10	150	10	150
* PN3499	NPN	TO-92 (72)	100	100	6	50	50	100-300	10	150	10	150
* PN3500	NPN	TO-92 (72)	150	150	6	50	75	40-120	10	150	8	150
* PN3501	NPN	TO-92 (72)	150	150	6	50	75	100-300	10	150	8	150
* PN3502	PNP	TO-92 (72)	45	45	5	10	30	100-300	10	150	8	200
* PN3503	PNP	TO-92 (72)	60	60	5	10	30	100-300	10	150	8	200
PN3504	PNP	TO-92 (72)	45	45	5	10	30	100-300	10	150	8	200
PN3505	PNP	TO-92 (72)	60	60	5	10	30	100-300	10	150	8	200
PN3547	PNP	TO-92 (72)	60	60	6	10	45	100-500	5	1	10	
PN3548	PNP	TO-92 (72)	45	60	6	10	45	150-600	5	1	10	
PN3549	PNP	TO-92 (72)	60	60	6	10	45	200-800	5	1	10	
PN3550	PNP	TO-92 (72)	45	60	6	10	45	300-800	5	1	10	
PN3563	NPN	TO-92 (72)	15	30	2	50	15	20-200	10	8	1.7	600
PN3564	NPN	TO-92 (72)	15	30	4	50	15	20-500	10	15	3.5	400
PN3565	NPN	TO-92 (72)	25	30	6	50	25	150-600	10	1	4	40
PN3566	NPN	TO-92 (72)	30	40	5	50	20	150-600	10	10	25	40
PN3567	NPN	TO-92 (72)	40	80	5	50	40	40-120	1	150	20	60
PN3568	NPN	TO-92 (72)	60	80	5	50	40	40-120	1	150	20	60
PN3569	NPN	TO-92 (72)	40	80	5	50	40	100-300	1	150	20	60
PN3576	PNP	TO-92 (72)	15	20	5	10	15	40-120	.5	10	4.5	400
PN3600	NPN	TO-92 (72)	15	30	3	10	15	20-150	1	3	1	850
* PN3634	PNP	TO-92 (72)	140	140	5	100	100	50-150	10	50	10	150
* PN3635	PNP	TO-92 (72)	140	140	5	100	100	100-300	10	50	10	200
* PN3636	PNP	TO-92 (72)	175	175	5	100	100	50-150	10	50	10	150
* PN3637	PNP	TO-92 (72)	175	175	5	100	100	100-300	10	50	10	200
PN3638	PNP	TO-92 (72)	25	25	4	35	15	30-	1	50	20	100
PN3638A	PNP	TO-92 (72)	25	25	4	35	15	100-	1	50	10	150
PN3639	PNP	TO-92 (72)	6	6	4	10	3	30-120	.3	10	3.5	300
PN3640	PNP	TO-92 (72)	12	12	4	10	6	30-120	.3	10	3.5	300
PN3641	NPN	TO-92 (72)	30	60	5	50	50	40-120	10	150	8	250
PN3642	NPN	TO-92 (72)	45	60	5	50	50	40-120	10	150	8	250

\* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00313 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE	VC & IC		COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX.	(V)	MIN.-MAX	(V)	(mA)	(pI) MAX	(MHz)	(db) MAX
PN3643	NPN	TO-92 (72)	30	60	5	50	50	100-300	10	150	8	250	
PN3644	PNP	TO-92 (72)	45	45	5	35	30	100-300	10	150	8	200	
PN3645	PNP	TO-92 (72)	60	60	5	35	50	100-300	10	150	8	200	
PN3646	NPN	TO-92 (72)	15	40	5	500	20	30-120	.4	30	5	350	
PN3665	NPN	TO-92 (72)	80	120	10	50	60	40-120	10	150	12	60	
PN3666	NPN	TO-92 (72)	80	120	10	50	60	100-300	10	150	12	60	
PN3673	PNP	TO-92 (72)	50	60	5	10	50	75-225	10	150	9	200	
PN3678	NPN	TO-92 (72)	55	75	6	10	60	40-120	10	150	8	250	
PN3691	NPN	TO-92 (72)	20	35	4	50	15	40-160	1	10	3.5	200	
PN3692	NPN	TO-92 (72)	20	35	4	50	15	100-400	1	10	3.5	200	
PN3693	NPN	TO-92 (72)	45	45	4	50	35	40-160	10	10	3.5	200	
PN3694	NPN	TO-92 (72)	45	45	4	50	35	100-400	10	10	3.5	200	
PN3700	NPN	TO-92 (72)	80	140	7	10	90	100-300	10	150	12	100	
PN3701	NPN	TO-92 (72)	80	140	7	10	90	40-120	10	150	12	80	
PN3722	NPN	TO-92 (72)	60	80	6	500	40	40-150	1	100	10		
PN3723	NPN	TO-92 (72)	80	100	6	500	50	40-150	1	100	9		
PN3724	NPN	TO-92 (72)	30	50	6	1.7uA	40	60-150	1	100	12	300	
PN3724A	NPN	TO-92 (72)	30	50	6	500	40	60-150	1	100	12	300	
PN3725	NPN	TO-92 (72)	50	80	6	1.7uA	60	60-150	1	100	10	300	
PN3725A	NPN	TO-92 (72)	50	80	6	500	60	60-150	1	100	10	300	
PN3742	NPN	TO-92 (72)	300	300	7	200	200	20-200	10	30	6	60	
PN3799	PNP	TO-92 (72)	60	60	5	10	50	300-900	5	.5			
PN3839	NPN	TO-92 (72)	15	30	2.5	10	15	30-150	1	3	1	1000	
PN3932	NPN	TO-92 (72)	20	30	2.5	10	15	40-150	8	2	.55	750	
PN3933	NPN	TO-92 (72)	30	40	2.5	10	15	60-200	8	2	.55	750	
PN3945	NPN	TO-92 (72)	50	70	8	40	60	40-250	10	150	12	60	
PN3946	NPN	TO-92 (72)	40	60	6	10	40	50-150	1	10	4	250	
PN3947	NPN	TO-92 (72)	40	60	6	10	40	100-300	1	10	4	300	
PN3962	PNP	TO-92 (72)	60	60	6	10	50	100-450	5	1	6	40	
PN3963	PNP	TO-92 (72)	80	80	6	10	70	100-450	5	1	6	40	
PN3964	PNP	TO-92 (72)	45	45	6	10	40	250-600	5	1	6	50	
PN3965	PNP	TO-92 (72)	60	60	6	10	50	250-600	5	1	6	50	
PN4013	NPN	TO-92 (72)	30	50	6	1.7uA	40	60-150	1	100	12	300	
PN4014	NPN	TO-92 (72)	50	80	6	1.7uA	60	60-150	1	100	10	300	
PN4026	PNP	TO-92 (72)	60	60	5	50	50	40-120	5	100	20	100	
PN4027	PNP	TO-92 (72)	80	80	5	50	60	40-120	5	100	20	150	
PN4028	PNP	TO-92 (72)	60	60	5	50	50	100-300	5	100	20	150	
PN4029	PNP	TO-92 (72)	80	80	5	50	60	100-300	5	100	20	150	
PN4030	PNP	TO-92 (72)	60	60	5	50	50	40-120	5	100	20	100	
PN4031	PNP	TO-92 (72)	80	80	5	50	60	40-120	5	100	20	100	
PN4032	PNP	TO-92 (72)	60	60	5	50	50	100-300	5	100	20	150	
PN4033	PNP	TO-92 (72)	80	80	5	50	60	100-300	5	100	20	150	
PN4034	PNP	TO-92 (72)	40	40	5	15	30	70-200	1	10	3.5	400	
PN4035	PNP	TO-92 (72)	40	40	5	15	30	150-300	1	10	3.5	400	
PN4036	PNP	TO-92 (72)	65	90	7	20	60	40-140	10	150	30	60	

\* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00314

D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	MIN -MAX	(V) (mA)	(pI) MAX	(MHz)	(db) MAX
* PN4037	PNP	TO-92 (72)	40	60	7	250	60	50-250	10 150	30	60	
* PN4046	NPN	TO-92 (72)	30	50	6	1.7uA	40	40-150	1 100	12	500	
* PN4047	NPN	TO-92 (72)	50	80	6	1.7uA	60	40-150	1 100	10	500	
PN4121	PNP	TO-92 (72)	40	40	5	25	30	70-200	1 10	4.5	400	
PN4122	PNP	TO-92 (72)	40	40	5	25	30	150-300	1 10	4.5	450	
PN4140	NPN	TO-92 (72)	30	60	5	100	35	40-120	10 150	8	250	
PN4141	NPN	TO-92 (72)	30	60	5	100	35	100-300	10 150	8	250	
PN4142	PNP	TO-92 (72)	40	60	5	100	35	40-120	10 150	8	200	
PN4143	PNP	TO-92 (72)	40	60	5	100	35	100-300	10 150	8	200	
PN4207	PNP	TO-92 (72)	6	6	4.5	10	3	50-120	.3 10	3	650	
PN4208	PNP	TO-92 (72)	12	12	4.5	10	6	30-120	.3 10	3	700	
PN4209	PNP	TO-92 (72)	15	15	1.5	10	8	50-120	.3 10	3	850	
* PN4234	PNP	TO-92 (72)	40	40	7	100	40	30-150	1 250			
* PN4235	PNP	TO-92 (72)	60	60	7	100	60	30-150	1 250			
* PN4236	PNP	TO-92 (72)	80	80	7	100	80	30-150	1 250			
* PN4237	NPN	TO-92 (72)	40	50	6	100	50	30-150	1 250			
* PN4238	NPN	TO-92 (72)	60	80	6	100	80	30-150	1 250			
* PN4239	NPN	TO-92 (72)	80	100	6	100	100	30-150	1 250			
PN4248	PNP	TO-92 (72)	40	40	5	10	40	50-	5 .1	6	40	3
PN4249	PNP	TO-92 (72)	60	60	5	10	40	100-300	5 .1	6	40	3
PN4250	PNP	TO-92 (72)	40	40	5	10	40	250-700	5 .1	6	50	2
PN4250A	PNP	TO-92 (72)	60	60	5	10	50	250-700	5 .1	6	50	3
PN4257	PNP	TO-92 (72)	6	6	4.5	10	3	30-120	.3 10	3	500	
PN4258	PNP	TO-92 (72)	12	12	4.5	10	6	30-120	.3 10	3	700	
PN4259	NPN	TO-92 (72)	30	40	2.5	10	15	60-250	8 2	.55	750	
PN4274	NPN	TO-92 (72)	12	30	4.5	400	20	35-120	1 10	4	400	
PN4275	NPN	TO-92 (72)	15	40	4.5	400	20	35-120	1 10	4	400	
PN4313	PNP	TO-92 (72)	12	12	4.5	50	10	30-120	.5 30	4.5	700	
* PN4314	PNP	TO-92 (72)	65	90	7	250	60	50-250	10 150	30	60	
PN4354	PNP	TO-92 (72)	60	60	5	50	50	50-500	10 10	30	100	
PN4355	PNP	TO-92 (72)	60	60	5	50	50	100-400	10 10	30	100	
PN4356	PNP	TO-92 (72)	80	80	5	50	50	50-250	10 10	30	100	
PN4384	NPN	TO-92 (72)	40	30	5	10	30	100-500	5 .01	8	30	
PN4386	NPN	TO-92 (72)	40	30	5	10	30	40-500	5 .01	8	30	
* PN4404	PNP	TO-92 (72)	80	80	5	25	60	40-120	1 150	10	200	
* PN4405	PNP	TO-92 (72)	80	80	5	25	60	100-300	1 150	10	200	
PN4888	PNP	TO-92 (72)	150	150	6	50	100	40-400	10 10	4	30	
PN4889	PNP	TO-92 (72)	150	150	6	10	100	80-300	10 10	4	40	
PN4916	PNP	TO-92 (72)	30	30	5	25	15	70-200	1 10	4.5	400	
PN4917	PNP	TO-92 (72)	30	30	5	25	15	150-300	1 10	4.5	450	
PN4944	NPN	TO-92 (72)	40	80	5	50	40	40-120	1 150	25	60	
PN4945	NPN	TO-92 (72)	60	80	5	50	40	40-120	1 150	25	60	
PN4946	NPN	TO-92 (72)	40	80	5	50	40	100-300	1 150	25	60	
* PN4960	NPN	TO-92 (72)	60	60	6.5	10	50	100-300	10 150	15	250	
* PN4961	NPN	TO-92 (72)	80	80	6.5	10	50	100-300	10 150	15	250	

\* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00315 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	MAX				(V) (mA)
PN4962	NPN	TO-92 (72)	60	60	6.5	10	50	100-300	10	150	15	250
PN4963	NPN	TO-92 (72)	80	80	6.5	10	50	100-300	10	150	15	250
PN5126	NPN	TO-92 (72)	20	20	3	50	10	20-350	10	4	1.6	300
PN5127	NPN	TO-92 (72)	12	20	3	50	10	15-300	10	2	3.5	150
PN5128	NPN	TO-92 (72)	12	15	3	50	10	35-350	10	50	10	200
PN5129	NPN	TO-92 (72)	12	15	3	50	10	35-350	10	50	10	200
PN5130	NPN	TO-92 (72)	12	30	1	50	10	15-250	10	8	1.7	450
PN5131	NPN	TO-92 (72)	15	20	3	50	10	30-500	1	10	6	100
PN5132	NPN	TO-92 (72)	20	20	3	50	10	30-400	10	10	3.5	200
PN5133	NPN	TO-92 (72)	18	20	3	50	15	60-1000	5	1	5	40
PN5134	NPN	TO-92 (72)	10	20	3.5	400	15	20-150	1	10	4	250
PN5135	NPN	TO-92 (72)	25	30	4	300	15	50-600	10	10	25	40
PN5136	NPN	TO-92 (72)	20	30	3	100	20	20-400	1	150	35	40
PN5137	NPN	TO-92 (72)	20	30	3	100	20	20-400	1	150	35	40
PN5138	PNP	TO-92 (72)	30	30	5	10	20	50-800	10	1	7	30
PN5139	PNP	TO-92 (72)	20	20	5	50	15	40-	1	10	5	300
PN5140	PNP	TO-92 (72)	5	5	4	50	3	20-140	1	10	5	400
PN5141	PNP	TO-92 (72)	6	6	4	100	4	25-	2	10	7	300
PN5142	PNP	TO-92 (72)	20	20	4	35	12	30-	1	50	10	100
PN5143	PNP	TO-92 (72)	20	20	4	35	12	30-	1	50	10	100
PN5179	NPN	TO 92 (72)	12	20	2.5	20	15	25-250	1	3	1	900
PN5180	NPN	TO 92 (72)	15	30	2	500	8	20-200	8	2	1	650
PN5189	NPN	TO-92 (72)	35	60	5	500	30	35-	1	500	12	250

\* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00316 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE @	VC & IC	COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V)	MIN -MAX	(V)	(mA)	(pf) MAX	(MHz)	(dB) MAX
BC107	NPN	TO-18	45	50	6	15	50	120-460	5	2	4.5	150	10
BC107A	NPN	TO-18	45	50	6	15	50	120-220	5	2	4.5	150	10
BC107B	NPN	TO-18	45	50	6	15	50	180-460	5	2	4.5	150	10
BC108	NPN	TO-18	20	30	5	15	30	120-800	5	2	4.5	150	10
BC108A	NPN	TO-18	20	30	5	15	30	120-220	5	2	4.5	150	10
BC108B	NPN	TO-18	20	30	5	15	30	180-460	5	2	4.5	150	10
BC108C	NPN	TO-18	20	30	5	15	30	380-800	5	2	4.5	150	10
BC109	NPN	TO-18	20	30	5	15	30	180-800	5	2	4.5	150	4
BC109B	NPN	TO-18	20	30	5	15	30	180-460	5	2	4.5	150	4
BC109C	NPN	TO-18	20	30	5	15	30	380-800	5	2	4.5	150	4
BC140	NPN	TO-39	40	80	7	100	60	40-400	1	100	25	50	
BC140-6	NPN	TO-39	40	80	7	100	60	40-100	1	100	25	50	
BC140-10	NPN	TO-39	40	80	7	100	60	63-160	1	100	25	50	
BC140-16	NPN	TO-39	40	80	7	100	60	100-250	1	100	25	50	
BC140-25	NPN	TO-39	40	80	7	100	60	160-400	1	100	25	50	
BC141	NPN	TO-39	60	100	7	100	60	40-400	1	100	25	50	
BC141-6	NPN	TO-39	60	100	7	100	60	40-100	1	100	25	50	
BC141-10	NPN	TO-39	60	100	7	100	60	63-160	1	100	25	50	
BC141-16	NPN	TO-39	60	100	7	100	60	100-250	1	100	25	50	
BC141-25	NPN	TO-39	60	100	7	100	60	160-400	1	100	25	50	
BC160	PNP	TO-39	40	40	5	100	40	40-400	1	100	30	50	
BC160-6	PNP	TO-39	40	40	5	100	40	40-100	1	100	30	50	
BC160-10	PNP	TO-39	40	40	5	100	40	63-160	1	100	30	50	
BC160-16	PNP	TO-39	40	40	5	100	40	100-250	1	100	30	50	
BC160-25	PNP	TO-39	40	40	5	100	40	160-400	1	100	30	50	
BC161	PNP	TO-39	60	60	5	100	60	40-400	1	100	30	50	
BC161-6	PNP	TO-39	60	60	5	100	60	40-100	1	100	30	50	
BC161-10	PNP	TO-39	60	60	5	100	60	63-160	1	100	30	50	
BC161-16	PNP	TO-39	60	60	5	100	60	100-250	1	100	30	50	
BC161-25	PNP	TO-39	60	60	5	100	60	160-400	1	100	30	50	
BC167	NPN	TO-92 (74)	45	50	6	15	50	120-460	5	2	4.5	150	10
BC167A	NPN	TO-92 (74)	45	50	6	15	50	120-220	5	2	4.5	150	10
BC167B	NPN	TO-92 (74)	45	50	6	15	50	180-460	5	2	4.5	150	10
BC168	NPN	TO-92 (74)	20	30	5	15	30	120-800	5	2	4.5	150	10
BC168A	NPN	TO-92 (74)	20	30	5	15	30	120-220	5	2	4.5	150	10
BC168B	NPN	TO-92 (74)	20	30	5	15	30	180-460	5	2	4.5	150	10
BC168C	NPN	TO-92 (74)	20	30	5	15	30	380-800	5	2	4.5	150	10
BC169	NPN	TO-92 (74)	20	30	5	15	30	180-800	5	2	4.5	150	4
BC169B	NPN	TO-92 (74)	20	30	5	15	30	180-460	5	2	4.5	150	4
BC169C	NPN	TO-92 (74)	20	30	5	15	30	380-800	5	2	4.5	150	4
BC177	PNP	TO-18	45	50	5	15	50	120-460	5	2	4.5	150	10
BC177A	PNP	TO-18	45	50	5	15	50	120-220	5	2	4.5	150	10
BC177B	PNP	TO-18	45	50	5	15	50	180-460	5	2	4.5	150	10
BC178	PNP	TO-18	20	30	5	15	30	120-800	5	2	4.5	150	10
BC178A	PNP	TO-18	20	30	5	15	30	120-220	5	2	4.5	150	10

2514096 CRIMSON SEMICONDUCTOR INC

99D 00317 D

T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE @		VC & IC		COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V)	MIN	MAX	(V)	(mA)	(pI) MAX	(MHz)	(db) MAX
BC178B	PNP	TO-18	25	30	5	15	30	180-460	5	2	4.5	150	10	
BC178C	PNP	TO-18	25	30	5	15	30	380-800	5	2	4.5	150	10	
BC179	PNP	TO-18	20	25	5	15	25	180-800	5	2	4.5	150	4	
BC179B	PNP	TO-18	20	25	5	15	25	180-460	5	2	4.5	150	4	
BC178C	PNP	TO-18	20	25	5	15	25	380-800	5	2	4.5	150	4	
BC182K	NPN	TO-92 (77)	50	60	5	15	50	120-460	5	2	4.5	150	10	
BC182KA	NPN	TO-92 (77)	50	60	5	15	50	120-220	5	2	4.5	150	10	
BC182KB	NPN	TO-92 (77)	50	60	5	15	50	180-460	5	2	4.5	150	10	
BC183K	NPN	TO-92 (77)	30	45	5	15	30	120-800	5	2	4.5	150	10	
BC183KA	NPN	TO-92 (77)	30	45	5	15	30	120 220	5	2	4.5	150	10	
BC183KB	NPN	TO-92 (77)	30	45	5	15	30	180-460	5	2	4.5	150	10	
BC183KC	NPN	TO-92 (77)	30	45	5	15	30	380-800	5	2	4.5	150	10	
BC184K	NPN	TO-92 (77)	30	45	5	15	30	180 800	5	2	4.5	150	4	
BC184KB	NPN	TO-92 (77)	30	45	5	15	30	180 460	5	2	4.5	150	4	
BC184KC	NPN	TO-92 (77)	30	45	5	15	30	380 800	5	2	4.5	150	4	
BC182L	NPN	TO-92 (74)	50	60	5	15	50	120-460	5	2	4.5	150	10	
BC182LA	NPN	TO-92 (74)	50	60	5	15	50	120 220	5	2	4.5	150	10	
BC182LB	NPN	TO-92 (74)	50	60	5	15	50	180 460	5	2	4.5	150	10	
BC183L	NPN	TO-92 (74)	30	45	5	15	30	120-800	5	2	4.5	150	10	
BC183LA	NPN	TO-92 (74)	30	45	5	15	30	120-220	5	2	4.5	150	10	
BC183LB	NPN	TO 92 (74)	30	45	5	15	30	180 460	5	2	4.5	150	10	
BC183LC	NPN	TO 92 (74)	30	45	5	15	30	380-800	5	2	4.5	150	10	
BC184I	NPN	TO 92 (74)	30	45	5	15	30	180-800	5	2	4.5	150	4	
BC184IB	NPN	TO 92 (74)	30	45	5	15	30	180 460	5	2	4.5	150	4	
BC184IC	NPN	TO 92 (74)	30	45	5	15	30	380 800	5	2	4.5	150	4	
BC212K	PNP	TO 92 (77)	50	60	5	15	50	120 460	5	2	4.5	150	10	
BC212KA	PNP	TO 92 (77)	50	60	5	15	50	120 220	5	2	4.5	150	10	
BC212KB	PNP	TO 92 (77)	50	60	5	15	50	180-460	5	2	4.5	150	10	
BC213K	PNP	TO 92 (77)	30	45	5	15	30	120-800	5	2	4.5	150	10	
BC213KA	PNP	TO 92 (77)	30	45	5	15	30	120-220	5	2	4.5	150	10	
BC213KB	PNP	TO 92 (77)	30	45	5	15	30	180-460	5	2	4.5	150	10	
BC213KC	PNP	TO 92 (77)	30	45	5	15	30	380-800	5	2	4.5	150	10	
BC214K	PNP	TO 92 (77)	30	45	5	15	30	180-800	5	2	4.5	150	4	
BC214KB	PNP	TO 92 (77)	30	45	5	15	30	180-460	5	2	4.5	150	4	
BC214KC	PNP	TO-92 (77)	30	45	5	15	30	380-800	5	2	4.5	150	4	
BC212L	PNP	TO-92 (74)	50	60	5	15	50	120-460	5	2	4.5	150	10	
BC212LA	PNP	TO-92 (74)	50	60	5	15	50	120-220	5	2	4.5	150	10	
BC212LB	PNP	TO-92 (74)	50	60	5	15	50	180-460	5	2	4.5	150	10	
BC213L	PNP	TO-92 (74)	30	45	5	15	30	120-800	5	2	4.5	150	10	
BC213LA	PNP	TO-92 (74)	30	45	5	15	30	120-220	5	2	4.5	150	10	
BC213LB	PNP	TO-92 (74)	30	45	5	15	30	180-460	5	2	4.5	150	10	
BC213LC	PNP	TO-92 (74)	30	45	5	15	30	380-800	5	2	4.5	150	10	
BC214L	PNP	TO-92 (74)	30	45	5	15	30	180-800	5	2	4.5	150	4	
BC214LB	PNP	TO-92 (74)	30	45	5	15	30	180-460	5	2	4.5	150	4	
BC214LC	PNP	TO-92 (74)	30	45	5	15	30	380-800	5	2	4.5	150	4	

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99D 00318 D T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE	VC & IC	COB	FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	(V) MIN - MAX	(V) (mA)	(pI) MAX	(MHz)	(dB) MAX
BC237	NPN TO-92 (77)	45	50	6	15	50	110-450	5 2	4.5	150	10
BC237A	NPN TO-92 (77)	45	50	6	15	50	110-220	5 2	4.5	150	10
BC237B	NPN TO-92 (77)	45	50	6	15	50	200-450	5 2	4.5	150	10
BC238	NPN TO-92 (77)	20	30	5	15	30	110-800	5 2	4.5	150	10
BC238A	NPN TO-92 (77)	20	30	5	15	30	110-220	5 2	4.5	150	10
BC238B	NPN TO-92 (77)	20	30	5	15	30	200-450	5 2	4.5	150	10
BC238C	NPN TO-92 (77)	20	30	5	15	30	420-800	5 2	4.5	150	10
BC239	NPN TO-92 (77)	20	30	5	15	30	200-800	5 2	4.5	150	4
BC239B	NPN TO-92 (77)	20	30	5	15	30	200-450	5 2	4.5	150	4
BC239C	NPN TO-92 (77)	20	30	5	15	30	420-800	5 2	4.5	150	4
BC257	PNP TO-92 (74)	45	50	5	15	50	120-460	5 2	6	130	10
BC257A	PNP TO-92 (74)	45	50	5	15	50	120-220	5 2	6	130	10
BC257B	PNP TO-92 (74)	45	50	5	15	50	180-460	5 2	6	130	10
BC258	PNP TO-92 (74)	25	30	5	15	30	120-800	5 2	6	130	10
BC258A	PNP TO-92 (74)	25	30	5	15	30	120-220	5 2	6	130	10
BC258B	PNP TO-92 (74)	25	30	5	15	30	180-460	5 2	6	130	10
BC258C	PNP TO-92 (74)	25	30	5	15	30	380-800	5 2	6	130	10
BC259	PNP TO-92 (74)	20	25	5	15	25	180-800	5 2	6	130	4
BC259B	PNP TO-92 (74)	20	25	5	15	25	180-460	5 2	6	130	4
BC259C	PNP TO-92 (74)	20	25	5	15	25	380-800	5 2	6	130	4
BC286	NPN TO-5	60	70	5	20	30	20-180	2 500	12	100	
BC287	PNP TO-5	60	60	5	50	30	20-200	2 500	13	200	
BC307	PNP TO-92 (77)	45	50	5	15	50	110-450	5 2	6	130	10
BC307A	PNP TO-92 (77)	45	50	5	15	50	110-220	5 2	6	130	10
BC307B	PNP TO-92 (77)	45	60	5	15	50	200-450	5 2	6	130	10
BC308	PNP TO-92 (77)	25	30	5	15	30	110-800	5 2	6	130	10
BC308A	PNP TO-92 (77)	25	30	5	15	30	110-220	5 2	6	130	10
BC308B	PNP TO-92 (77)	25	30	5	15	30	200-450	5 2	6	130	10
BC308C	PNP TO-92 (77)	25	30	5	15	30	420-800	5 2	6	130	10
BC309	PNP TO-92 (77)	20	25	5	15	25	200-800	5 2	6	130	4
BC309B	PNP TO-92 (77)	20	25	5	15	25	200-450	5 2	6	130	4
BC309C	PNP TO-92 (77)	20	25	5	15	25	420-800	5 2	6	130	4
BC317	NPN TO-92 (72)	45	50	6	30	20	110-450	5 2	4	100	6
BC317A	NPN TO-92 (72)	45	50	6	30	20	110-220	5 2	4	100	6
BC317B	NPN TO-92 (72)	45	50	6	30	20	200-450	5 2	4	100	6
BC318	NPN TO-92 (72)	30	40	5	30	20	110-800	5 2	4	100	6
BC318A	NPN TO-92 (72)	30	40	5	30	20	110-220	5 2	4	100	6
BC318B	NPN TO-92 (72)	30	40	5	30	20	200-450	5 2	4	100	6
BC318C	NPN TO-92 (72)	30	40	5	30	20	420-800	5 2	4	100	6
BC319	NPN TO-92 (72)	20	30	5	30	20	200-800	5 2	4	100	4
BC319B	NPN TO-92 (72)	20	30	5	30	20	200-450	5 2	4	100	4
BC319C	NPN TO-92 (72)	20	30	5	30	20	420-800	5 2	4	100	4
BC320	PNP TO-92 (72)	45	50	6	30	20	110-450	5 2	4	100	6
BC320A	PNP TO-92 (72)	45	50	6	30	20	110-220	5 2	4	100	6
BC320B	PNP TO-92 (72)	45	50	6	30	20	200-450	5 2	4	100	6

2514096 CRIMSON SEMICONDUCTOR INC

99D 00319

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T-29-01

DEVICE	TYPE	PACKAGE	BVCEO (V) MIN	BVCBO (V) MIN	BVEBO (V) MIN	ICBO (mA) MAX	VCB (V) MIN - MAX	HFE @ VC & IC (V) (mA)	COB (pI) MAX	FT (MHz)	NF (dB) MAX
BC321	PNP	TO-92 (72)	30	40	5	30	20 110-800	5 2	4	100	6
BC321A	PNP	TO-92 (72)	30	40	5	30	20 110-220	5 2	4	100	6
BC321B	PNP	TO-92 (72)	30	40	5	30	20 200-450	5 2	4	100	6
BC321C	PNP	TO-92 (72)	30	40	5	30	20 420-800	5 2	4	100	6
BC322	PNP	TO-92 (72)	20	30	5	30	20 200-800	5 2	4	100	4
BC322B	PNP	TO-92 (72)	20	30	5	30	20 200-450	5 2	4	100	4
BC322C	PNP	TO-92 (72)	20	30	5	30	20 420-800	5 2	4	100	4
BC327	PNP	TO-92 (77)	45	50	5	100	45 100-630	1 100	12	100	
BC327-16	PNP	TO-92 (77)	45	50	5	100	45 100-250	1 100	12	100	
BC327-25	PNP	TO-92 (77)	45	50	5	100	45 160-400	1 100	12	100	
BC327-40	PNP	TO-92 (77)	45	50	5	100	45 250-630	1 100	12	100	
BC328	PNP	TO-92 (77)	25	30	5	100	25 100-630	1 100	12	100	
BC328-16	PNP	TO-92 (77)	25	30	5	100	25 100-250	1 100	12	100	
BC328-25	PNP	TO-92 (77)	25	30	5	100	25 160-400	1 100	12	100	
BC328-40	PNP	TO-92 (77)	25	30	5	100	25 250-630	1 100	12	100	
BC337	NPN	TO-92 (77)	45	50	5	100	45 100-630	1 100	12	100	
BC337-16	NPN	TO-92 (77)	45	50	5	100	45 100-250	1 100	12	100	
BC337-25	NPN	TO-92 (77)	45	50	5	100	45 160-400	1 100	12	100	
BC337-40	NPN	TO-92 (77)	45	50	5	100	45 250-630	1 100	12	100	
BC338	NPN	TO-92 (77)	25	30	5	100	25 100-630	1 100	12	100	
BC338-16	NPN	TO-92 (77)	25	30	5	100	25 100-250	1 100	12	100	
BC338-25	NPN	TO-92 (77)	25	30	5	100	25 160-400	1 100	12	100	
BC338-40	NPN	TO-92 (77)	25	30	5	100	25 250-630	1 100	12	100	
BC413	NPN	TO-92 (77)	30	45	5	15	30 180-800	5 2	4	150	4
BC413B	NPN	TO-92 (77)	30	45	5	15	30 180-460	5 2	4	150	4
BC413C	NPN	TO-92 (77)	30	45	5	15	30 380-800	5 2	4	150	4
BC414	NPN	TO-92 (77)	45	50	5	15	30 180-800	5 2	4	150	4
BC414B	NPN	TO-92 (77)	45	50	5	15	30 180-460	5 2	4	150	4
BC414C	NPN	TO-92 (77)	45	50	5	15	30 380-800	5 2	4	150	4
BC415	PNP	TO-92 (77)	35	45	5	15	30 120-800	5 2	4.5	150	4
BC415A	PNP	TO-92 (77)	35	45	5	15	30 120-220	5 2	4.5	150	4
BC415B	PNP	TO-92 (77)	35	45	5	15	30 180-460	5 2	4.5	150	4
BC415C	PNP	TO-92 (77)	35	45	5	15	30 380-800	5 2	4.5	150	4
BC416	PNP	TO-92 (77)	45	50	5	15	30 120-800	5 2	4.5	150	4
BC416A	PNP	TO-92 (77)	45	50	5	15	30 120-220	5 2	4.5	150	4
BC416B	PNP	TO-92 (77)	45	50	5	15	30 180-460	5 2	4.5	150	4
BC416C	PNP	TO-92 (77)	45	50	5	15	30 380-800	5 2	4.5	150	4
BC485	NPN	TO-92 (77)	45	45	5	100	30 60-400	2 100	7	100	
BC485A	NPN	TO-92 (77)	45	45	5	100	30 100-250	2 100	7	100	
BC485B	NPN	TO-92 (77)	45	45	5	100	30 160-400	2 100	7	100	
BC485L	NPN	TO-92 (77)	45	45	5	100	30 60-150	2 100	7	100	
BC486	PNP	TO-92 (77)	45	45	5	100	30 60-400	2 100	7	100	
BC486A	PNP	TO-92 (77)	45	45	5	100	30 100-250	2 100	7	100	
BC486B	PNP	TO-92 (77)	45	45	5	100	30 160-400	2 100	7	100	
BC486L	PNP	TO-92 (77)	45	45	5	100	30 60-150	2 100	7	100	

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00320 D T-29-61

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE @	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	(V) MIN - MAX	(V) (mA) (pI) MAX	(MHz)	(db) MAX	
BC527	PNP	TO-92 (72)	60	60	6	100	40	40-400	1 100	15	100	
BC527-6	PNP	TO-92 (72)	60	60	6	100	40	40-100	1 100	15	100	
BC527-10	PNP	TO-92 (72)	60	60	6	100	40	63-160	1 100	15	100	
BC527-16	PNP	TO-92 (72)	60	60	6	100	40	100-250	1 100	15	100	
BC527-25	PNP	TO-92 (72)	60	60	6	100	40	160-400	1 100	15	100	
BC528	PNP	TO-92 (72)	80	80	6	10	60	40-400	1 100	15	100	
BC528-6	PNP	TO-92 (72)	80	80	6	10	60	40-100	1 100	15	100	
BC528-10	PNP	TO-92 (72)	80	80	6	10	60	63-160	1 100	15	100	
BC528-16	PNP	TO-92 (72)	80	80	6	10	60	100-250	1 100	15	100	
BC528-25	PNP	TO-92 (72)	80	80	6	10	60	160-400	1 100	15	100	
BC529	PNP	TO-92 (72)	30	50	6	100	30	60-300	5 50	12	100	
BC530	PNP	TO-92 (72)	120	130	6	100	100	40-180	5 10	6	50	
BC531	PNP	TO-92 (72)	150	160	6	50	120	60-240	5 10	6	50	
BC532	NPN	TO-92 (72)	140	160	6	100	100	60-250	5 10	6	50	
BC533	NPN	TO-92 (72)	160	180	6	50	120	80-250	5 10	6	50	
BC537	NPN	TO-92 (72)	60	60	6	100	40	40-400	1 100	15	100	
BC537-6	NPN	TO-92 (72)	60	60	6	100	40	40-100	1 100	15	100	
BC537-10	NPN	TO-92 (72)	60	60	6	100	40	63-160	1 100	15	100	
BC537-16	NPN	TO-92 (72)	60	60	6	100	40	100-250	1 100	15	100	
BC537-25	NPN	TO-92 (72)	60	60	6	100	40	160-400	1 100	15	100	
BC538	NPN	TO-92 (72)	80	80	6	10	60	40-400	1 100	15	100	
BC538-6	NPN	TO-92 (72)	80	80	6	10	60	40-100	1 100	15	100	
BC538-10	NPN	TO-92 (72)	80	80	6	10	60	63-160	1 100	15	100	
BC538-16	NPN	TO-92 (72)	80	80	6	10	60	100-250	1 100	15	100	
BC538-25	NPN	TO-92 (72)	80	80	6	10	60	160-400	1 100	15	100	
BC546	NPN	TO-92 (77)	65	80	6	15	30	110-450	5 2	4.5	200	10
BC546A	NPN	TO-92 (77)	65	80	6	15	30	110-220	5 2	4.5	200	10
BC546B	NPN	TO-92 (77)	65	80	6	15	30	200-450	5 2	4.5	200	10
BC547	NPN	TO-92 (77)	45	50	6	15	30	110-800	5 2	4.5	200	10
BC547A	NPN	TO-92 (77)	45	50	6	15	30	110-220	5 2	4.5	200	10
BC547B	NPN	TO-92 (77)	45	50	6	15	30	200-450	5 2	4.5	200	10
BC547C	NPN	TO-92 (77)	45	50	6	15	30	420-800	5 2	4.5	200	10
BC548	NPN	TO-92 (77)	30	30	5	15	30	110-800	5 2	4.5	200	10
BC548A	NPN	TO-92 (77)	30	30	5	15	30	110-220	5 2	4.5	200	10
BC548B	NPN	TO-92 (77)	30	30	5	15	30	200-450	5 2	4.5	200	10
BC548C	NPN	TO-92 (77)	30	30	5	15	30	420-800	5 2	4.5	200	10
BC549	NPN	TO-92 (77)	30	30	5	15	30	200-800	5 2	4.5	200	4
BC549B	NPN	TO-92 (77)	30	30	5	15	30	200-450	5 2	4.5	200	4
BC549C	NPN	TO-92 (77)	30	30	5	15	30	420-800	5 2	4.5	200	4
BC550	NPN	TO-92 (77)	45	50	5	15	30	200-800	5 2	4.5	200	4
BC550B	NPN	TO-92 (77)	45	50	5	15	30	200-450	5 2	4.5	200	4
BC550C	NPN	TO-92 (77)	45	50	5	15	30	420-800	5 2	4.5	200	4
BC556	PNP	TO-92 (77)	65	80	5	15	30	110-450	5 2	4.5	150	10
BC556A	PNP	TO-92 (77)	65	80	5	15	30	110-220	5 2	4.5	150	10
BC556B	PNP	TO-92 (77)	65	80	5	15	30	200-450	5 2	4.5	150	10

2514096 CRIMSON SEMICONDUCTOR INC

99D 00321 D

T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC		COB	FT	NF		
						(V) MIN	(V) MIN				(V) MIN	(mA) MAX
BC557	PNP TO-92 (77)	45	50	5	15	30	110-450	5	2	4.5	150	10
BC557A	PNP TO-92 (77)	45	50	5	15	30	110-220	5	2	4.5	150	10
BC557B	PNP TO-92 (77)	45	50	5	15	30	200-450	5	2	4.5	150	10
BC558	PNP TO-92 (77)	30	30	5	15	30	110-800	5	2	4.5	150	10
BC558A	PNP TO-92 (77)	30	30	5	15	30	110-220	5	2	4.5	150	10
BC558B	PNP TO-92 (77)	30	30	5	15	30	200-450	5	2	4.5	150	10
BC558C	PNP TO-92 (77)	30	30	5	15	30	420-800	5	2	4.5	150	10
BC559	PNP TO-92 (77)	30	30	5	15	30	110-800	5	2	4.5	150	4
BC559A	PNP TO-92 (77)	30	30	5	15	30	110-220	5	2	4.5	150	4
BC559B	PNP TO-92 (77)	30	30	5	15	30	200-450	5	2	4.5	150	4
BC559C	PNP TO-92 (77)	30	30	5	15	30	420-800	5	2	4.5	150	4
BC560	PNP TO-92 (77)	45	50	5	15	30	110-800	5	2	4.5	150	4
BC560A	PNP TO-92 (77)	45	50	5	15	30	110-220	5	2	4.5	150	4
BC560B	PNP TO-92 (77)	45	50	5	15	30	200-450	5	2	4.5	150	4
BC560C	PNP TO-92 (77)	45	50	5	15	30	420-800	5	2	4.5	150	4
BC635	NPN TO-92 (74)	45	45	5	100	30	40-250	2	150		100	
BC636	PNP TO-92 (74)	45	45	5	100	30	40-250	2	150		100	
BC637	NPN TO-92 (74)	60	60	5	100	30	40-160	2	150		100	
BC638	PNP TO-92 (74)	60	60	5	100	30	40-160	2	150		100	
BC728	PNP TO-92 (72)	25	30	5	10	25	63-630	1	100	20		
BC728-10	PNP TO-92 (72)	25	30	5	10	25	63-160	1	100	20		
BC728-16	PNP TO-92 (72)	25	30	5	10	25	100-250	1	100	20		
BC728-25	PNP TO-92 (72)	25	30	5	10	25	160-400	1	100	20		
BC728-40	PNP TO-92 (72)	25	30	5	10	25	250-630	1	100	20		
BC738	NPN TO-92 (72)	25	30	5	10	25	63-630	1	100	20		
BC738-10	NPN TO-92 (72)	25	30	5	10	25	63-160	1	100	20		
BC738-16	NPN TO-92 (72)	25	30	5	10	25	100-250	1	100	20		
BC738-25	NPN TO-92 (72)	25	30	5	10	25	160-400	1	100	20		
BC738-40	NPN TO-92 (72)	25	30	5	10	25	250-630	1	100	20		
BCX58	NPN TO-92 (72)	32	32	7	10	32	120-630	5	2	4.5	125	6
BCX58-7	NPN TO-92 (72)	32	32	7	10	32	120-220	5	2	4.5	125	6
BCX58-8	NPN TO-92 (72)	32	32	7	10	32	180-310	5	2	4.5	125	6
BCX58-9	NPN TO-92 (72)	32	32	7	10	32	250-460	5	2	4.5	125	6
BCX58-10	NPN TO-92 (72)	32	32	7	10	32	380-630	5	2	4.5	125	6
BCX59	NPN TO-92 (72)	45	45	7	10	45	120-630	5	2	4.5	125	6
BCX59-7	NPN TO-92 (72)	45	45	7	10	45	120-220	5	2	4.5	125	6
BCX59-8	NPN TO-92 (72)	45	45	7	10	45	180-310	5	2	4.5	125	6
BCX59-9	NPN TO-92 (72)	45	45	7	10	45	250-460	5	2	4.5	125	6
BCX59-10	NPN TO-92 (72)	45	45	7	10	45	380-630	5	2	4.5	125	6
BCX73	NPN TO-92 (72)	32	60	5	20	32	100-630	1	100	12	100	
BCX73-16	NPN TO-92 (72)	32	60	5	20	32	100-250	1	100	12	100	
BCX73-25	NPN TO-92 (72)	32	60	5	20	32	160-400	1	100	12	100	
BCX73-40	NPN TO-92 (72)	32	60	5	20	32	250-630	1	100	12	100	
BCX74	NPN TO-92 (72)	45	75	5	20	45	100-630	1	100	12	100	
BCX74-16	NPN TO-92 (72)	45	75	5	20	45	100-250	1	100	12	100	

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00322 D' T.29.01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO	VCB	HFE	VC & IC	COB	FT	NF
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX	(V) (mA) (pF) MAX	(MHz)	(dB) MAX		
BCX74-25	NPN	TO-92 (72)	45	75	5	20	45	160-400	1 100	12	100	
BCX74-40	NPN	TO-92 (72)	45	75	5	20	45	250-630	1 100	12	100	
BCX75	PNP	TO-92 (72)	32	60	5	20	32	100-630	1 100	18	100	
BCX75-16	PNP	TO-92 (72)	32	60	5	20	32	100-250	1 100	18	100	
BCX75-25	PNP	TO-92 (72)	32	60	5	20	32	160-400	1 100	18	100	
BCX75-40	PNP	TO-92 (72)	32	60	5	20	32	250-630	1 100	18	100	
BCX76	PNP	TO-92 (72)	45	75	5	20	45	100-630	1 100	18	100	
BCX76-16	PNP	TO-92 (72)	45	75	5	20	45	100-250	1 100	18	100	
BCX76-25	PNP	TO-92 (72)	45	75	5	20	45	160-400	1 100	18	100	
BCX76-40	PNP	TO-92 (72)	45	75	5	20	45	250-630	1 100	18	100	
BCX78	PNP	TO-92 (72)	32	32	5	10	32	120-630	5 2 4.5	200	6	
BCX78- 7	PNP	TO-92 (72)	32	32	5	10	32	120-220	5 2 4.5	200	6	
BCX78- 8	PNP	TO-92 (72)	32	32	5	10	32	180-310	5 2 4.5	200	6	
BCX78- 9	PNP	TO-92 (72)	32	32	5	10	32	250-460	5 2 4.5	200	6	
BCX78-10	PNP	TO-92 (72)	32	32	5	10	32	380-630	5 2 4.5	200	6	
BCX79	PNP	TO-92 (72)	45	45	5	10	45	120-630	5 2 4.5	200	6	
BCX79- 7	PNP	TO-92 (72)	45	45	5	10	45	120-220	5 2 4.5	200	6	
BCX79- 8	PNP	TO-92 (72)	45	45	5	10	45	180-310	5 2 4.5	200	6	
BCX79- 9	PNP	TO-92 (72)	45	45	5	10	45	250-460	5 2 4.5	200	6	
BCX79-10	PNP	TO-92 (72)	45	45	5	10	45	380-630	5 2 4.5	200	6	
BCY58	NPN	TO-18	32	32	7	10	32	120-630	5 2 4.5	125	6	
BCY58- 7	NPN	TO-18	32	32	7	10	32	120-220	5 2 4.5	125	6	
BCY58- 8	NPN	TO-18	32	32	7	10	32	180-310	5 2 4.5	125	6	
BCY58- 9	NPN	TO-18	32	32	7	10	32	250-460	5 2 4.5	125	6	
BCY58-10	NPN	TO-18	32	32	7	10	32	380-630	5 2 4.5	125	6	
BCY59	NPN	TO-18	45	45	7	10	45	120-630	5 2 4.5	125	6	
BCY59- 7	NPN	TO-18	45	45	7	10	45	120-220	5 2 4.5	125	6	
BCY59- 8	NPN	TO-18	45	45	7	10	45	180-310	5 2 4.5	125	6	
BCY59- 9	NPN	TO-18	45	45	7	10	45	250-460	5 2 4.5	125	6	
BCY59-10	NPN	TO-18	45	45	7	10	45	380-630	5 2 4.5	125	6	
BCY78	PNP	TO-18	32	32	5	10	32	120-630	5 2 4.5	200	6	
BCY78- 7	PNP	TO-18	32	32	5	10	32	120-220	5 2 4.5	200	6	
BCY78- 8	PNP	TO-18	32	32	5	10	32	180-310	5 2 4.5	200	6	
BCY78- 9	PNP	TO-18	32	32	5	10	32	250-460	5 2 4.5	200	6	
BCY78-10	PNP	TO-18	32	32	5	10	32	380-630	5 2 4.5	200	6	
BCY79	PNP	TO-18	45	45	5	10	45	120-630	5 2 4.5	200	6	
BCY79- 7	PNP	TO-18	45	45	5	10	45	120-220	5 2 4.5	200	6	
BCY79- 8	PNP	TO-18	45	45	5	10	45	180-310	5 2 4.5	200	6	
BCY79- 9	PNP	TO-18	45	45	5	10	45	250-460	5 2 4.5	200	6	
BCY79-10	PNP	TO-18	45	45	5	10	45	380-630	5 2 4.5	200	6	
BF198	NPN	TO-92 (72)	30	40	4	100	40	26-	10 4 .4	400		
BF199	NPN	TO-92 (72)	25	40	4	100	40	38-	10 7 .4	550		
BF240	NPN	TO-92 (72)	40	40	4	100	20	67-222	10 1 .4	400		
BF241	NPN	TO-92 (72)	40	40	4	100	20	36-125	10 1 .4	400		
BF254	NPN	TO-92 (72)	20	30	5	100	20	67-220	10 1 .85	260		

2514096 CRIMSON SEMICONDUCTOR INC

99D 00323

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T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN -MAX			
BF255	NPN TO-92 (72)	90	30	5	100	20 36-125	10 1	.85	200
BF257	NPN TO-39	160	160	5	50	100 25-	10 30	5.5	90
BF258	NPN TO-39	250	250	5	50	200 25-	10 30	5.5	90
BF259	NPN TO-39	300	300	5	50	250 25-	10 30	5.5	90
BF297	NPN TO-92 (72)	160	160	5	50	100 30-150	10 30	5.5	95
BF298	NPN TO-92 (72)	250	250	5	50	200 30-150	10 30	5.5	95
BF299	NPN TO-92 (72)	300	300	5	50	250 30-150	10 30	5.5	95
BF336	NPN TO-39	180	185	5	50	100 20-100	10 30	5.5	80
BF337	NPN TO-39	200	250	5	50	200 20-100	10 30	5.5	80
BF338	NPN TO-39	225	300	5	50	250 20-100	10 30	5.5	80
BF397	PNP TO-92 (72)	90	90	6	100	90 40-250	10 10		
BF398	PNP TO-92 (72)	150	150	6	100	120 30-200	10 10		
BF411	NPN TO-92 (72)	90	110	5	100	90 30-	10 10		
BF412	NPN TO-92 (72)	130	150	5	100	120 30-	10 10		
BF413	NPN TO-92 (72)	170	200	5	100	150 30-	10 10		
BFX37	PNP TO-18	60	60	6	20	50 70-300	5 .01	6	40
BFX38	PNP TO-5	55	55	5	50	40 85-	5 100	20	100
BFX39	PNP TO-5	55	55	5	50	40 40-	5 100	20	100
BFX40	PNP TO-5	75	75	5	50	50 85-	5 100	20	100
BFX41	PNP TO-5	75	75	5	50	50 40-	5 100	20	100
BFX65	PNP TO-18	45	45	6	10	40 120-	5 1	6.5	
BFX84	NPN TO-39	60	100	5	500	100 30-	10 150	12	50
BFX87	PNP TO-39	50	50	4	500	50 40-	10 150	12	100
BFY39	NPN TO-18	25	45	5	50	30 35-400	10 10	5	150
BFY39-1	NPN TO-18	25	45	5	50	30 35-110	10 10	5	150
BFY39-2	NPN TO-18	25	45	5	50	30 100-200	10 10	5	150
BFY39-3	NPN TO-18	25	45	5	50	30 180-400	10 10	5	150
BFY50	NPN TO-39	35	80	6	500	80 30-	10 150	12	60
BFY51	NPN TO-39	30	60	6	500	60 40-	10 150	12	60
BFY52	NPN TO-39	20	40	6	500	40 60-	10 150	12	60
BFY72	NPN TO-39	28	50	5	20	40 40-150	10 150	8	250
BFY76	NPN TO-18	45	45	6	20	30 30-200	5 .01	6	
BSX45	NPN TO-39	40	80	7	30	60 40-250	1 100	20	60
BSX45-6	NPN TO-39	40	80	7	30	60 40-100	1 100	20	60
BSX45-10	NPN TO-39	40	80	7	30	60 63-160	1 100	20	60
BSX45-16	NPN TO-39	40	80	7	30	60 100-250	1 100	20	60
BSX46	NPN TO-39	60	100	7	10	60 40-250	1 100	20	60
BSX46-6	NPN TO-39	60	100	7	10	60 40-100	1 100	20	60
BSX46-10	NPN TO-39	60	100	7	10	60 63-160	1 100	20	60
BSX46-16	NPN TO-39	60	100	7	10	60 100-250	1 100	20	60
BSY51	NPN TO-5	25	60	5	100	30 40-120	10 150	9	130
BSY52	NPN TO-5	25	60	5	100	30 100-300	10 150	9	130
BSY53	NPN TO-5	30	75	7	10	60 40-120	10 150	9	150
BSY54	NPN TO-5	30	75	7	10	60 100-300	10 150	9	150
BSY95A	NPN TO-18	15	20	5	50	16 50-200	.35 10	6	200

## 2514096 CRIMSON SEMICONDUCTOR INC

99D 00324 D

T-29-01

DEVICE	TYPE PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB	HFE @ VC & IC	COB	FT	NF	
		(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN - MAX				(V) (mA) (p) MAX
CS1402A	NPN TO-92 (72)	20	25	4	20	10 100- 165 5	2	3.5	125	4
CS1402B	NPN TO-92 (72)	20	25	4	20	10 150- 225 5	2	3.5	125	4
CS1402C	NPN TO-92 (72)	20	25	4	20	10 202- 318 5	2	3.5	125	4
CS1402D	NPN TO-92 (72)	20	25	4	20	10 290- 450 5	2	3.5	125	4
CS1402E	NPN TO-92 (72)	20	25	4	20	10 410- 810 5	2	3.5	125	4
CS1502A	NPN TO-92 (72)	20	20	4	50	18 36- 55 10	1	1.7	600	5
CS1502B	NPN TO-92 (72)	20	20	4	50	18 48- 75 10	1	1.7	600	5
CS1502C	NPN TO-92 (72)	20	20	4	50	18 66- 100 10	1	1.7	600	5
CS1502D	NPN TO-92 (72)	20	20	4	50	18 84- 127 10	1	1.7	600	5
CS1502E	NPN TO-92 (72)	20	20	4	50	18 105- 210 10	1	1.7	600	5
CS1602A	PNP TO-92 (72)	20	25	4	20	10 70- 105 5	2	6	200	4
CS1602B	PNP TO-92 (72)	20	25	4	20	10 90- 135 5	2	6	200	4
CS1602C	PNP TO-92 (72)	20	25	4	20	10 125- 190 5	2	6	200	4
CS1602D	PNP TO-92 (72)	20	25	4	20	10 170- 260 5	2	6	200	4
CS1602E	PNP TO-92 (72)	20	25	4	20	10 223- 475 5	2	6	200	4
CS1702K	NPN TO-92 (72)	25	25	5	500	18 106- 150 1	100	20	150	
CS1702L	NPN TO-92 (72)	25	25	5	500	18 132- 188 1	100	20	150	
CS1702M	NPN TO-92 (72)	25	25	5	500	18 170- 233 1	100	20	150	
CS1702N	NPN TO-92 (72)	25	25	5	500	18 213- 300 1	100	20	150	
CS1702O	NPN TO-92 (72)	25	25	5	500	18 250- 1	100	20	150	
CS1802K	PNP TO-92 (72)	25	25	5	500	18 106- 150 1	100	35	100	
CS1802L	PNP TO-92 (72)	25	25	5	500	18 132- 188 1	100	35	100	
CS1802M	PNP TO-92 (72)	25	25	5	500	18 170- 233 1	100	35	100	
CS1802N	PNP TO-92 (72)	25	25	5	500	18 213- 300 1	100	35	100	
CS1802O	PNP TO-92 (72)	25	25	5	500	18 250- 1	100	35	100	
CS8050B	NPN TO-92 (72)	25	30	5	500	20 85- 160 1	100	20	150	
CS8050C	NPN TO-92 (72)	25	30	5	500	20 120- 200 1	100	20	150	
CS8050D	NPN TO-92 (72)	25	30	5	500	20 160- 300 1	100	20	150	
CS8550B	PNP TO-92 (72)	25	30	5	500	20 85- 160 1	100	35	100	
CS8550C	PNP TO-92 (72)	25	30	5	500	20 120- 200 1	100	35	100	
CS8550D	PNP TO-92 (72)	25	30	5	500	20 160- 300 1	100	35	100	
CS9011D	NPN TO-92 (72)	18	18	3	50	18 29- 44 5	1	3.5	250	4
CS9011E	NPN TO-92 (72)	18	18	3	50	18 40- 59 5	1	3.5	250	4
CS9011F	NPN TO-92 (72)	18	18	3	50	18 54- 80 5	1	3.5	250	4
CS9011G	NPN TO-92 (72)	18	18	3	50	18 72- 108 5	1	3.5	250	4
CS9011H	NPN TO-92 (72)	18	18	3	50	18 97- 146 5	1	3.5	250	4
CS9011I	NPN TO-92 (72)	18	18	3	50	18 132- 198 5	1	3.5	250	4
CS9011J	NPN TO-92 (72)	18	18	3	50	18 182- 273 5	1	3.5	250	4
CS9012D	PNP TO-92 (72)	25	25	3	500	18 64- 91 1	50	12	200	6
CS9012E	PNP TO-92 (72)	25	25	3	500	18 78- 112 1	50	12	200	6
CS9012F	PNP TO-92 (72)	25	25	3	500	18 96- 135 1	50	12	200	6
CS9012G	PNP TO-92 (72)	25	25	3	500	18 118- 166 1	50	12	200	6
CS9012H	PNP TO-92 (72)	25	25	3	500	18 144- 202 1	50	12	200	6
CS9012I	PNP TO-92 (72)	25	25	3	500	18 182- 305 1	50	12	200	6
CS9012J	PNP TO-92 (72)	25	25	3	500	18 278- 465 1	50	12	200	6

2514096 CRIMSON SEMICONDUCTOR INC

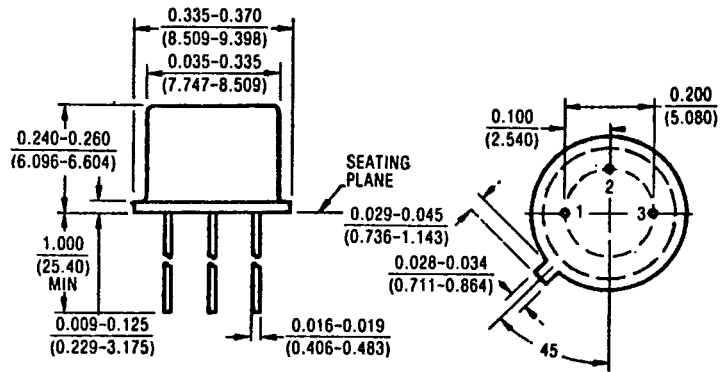
99D 00325 D T-29-01

DEVICE	TYPE	PACKAGE	BVCEO	BVCBO	BVEBO	ICBO @ VCB		HFE @ VC & IC		COB	FT	NF	
			(V) MIN	(V) MIN	(V) MIN	(mA) MAX	(V) MIN	(mA) MAX	(V)				(mA) (p) MAX
CS9013D	NPN	TO-92 (72)	25	25	3	500	18	64- 91	1	50	10	200	6
CS9013E	NPN	TO-92 (72)	25	25	3	500	18	78- 112	1	50	10	200	6
CS9013F	NPN	TO-92 (72)	25	25	3	500	18	96- 135	1	50	10	200	6
CS9013G	NPN	TO-92 (72)	25	25	3	500	18	118- 166	1	50	10	200	6
CS9013H	NPN	TO-92 (72)	25	25	3	500	18	144- 202	1	50	10	200	6
CS9013I	NPN	TO-92 (72)	25	25	3	500	18	182- 305	1	50	10	200	6
CS9013J	NPN	TO-92 (72)	25	25	3	500	18	278- 465	1	50	10	200	6
CS9014A	NPN	TO-92 (72)	18	18	3	50	18	60- 150	5	1	3.5	125	4
CS9014B	NPN	TO-92 (72)	18	18	3	50	18	100- 300	5	1	3.5	125	4
CS9014C	NPN	TO-92 (72)	18	18	3	50	18	200- 600	5	1	3.5	125	4
CS9014D	NPN	TO-92 (72)	18	18	3	50	18	400-1000	5	1	3.5	125	4
CS9014D1	NPN	TO-92 (72)	18	18	3	50	18	400- 630	5	1	3.5	125	4
CS9014D2	NPN	TO-92 (72)	18	18	3	50	18	570- 840	5	1	3.5	125	4
CS9014D3	NPN	TO-92 (72)	18	18	3	50	18	760-1000	5	1	3.5	125	4
CS9014E	NPN	TO-92 (72)	18	18	3	50	18	800-	5	1	3.5	125	4
CS9015A	PNP	TO-92 (72)	18	18	3	50	18	60- 150	5	1	6	200	4
CS9015B	PNP	TO-92 (72)	18	18	3	50	18	100- 300	5	1	6	200	4
CS9015C	PNP	TO-92 (72)	18	18	3	50	18	200- 600	5	1	6	200	4
CS9015D	PNP	TO-92 (72)	18	18	3	50	18	400-1000	5	1	6	200	4
CS9015D1	PNP	TO-92 (72)	18	18	3	50	18	400- 630	5	1	6	200	4
CS9015D2	PNP	TO-92 (72)	18	18	3	50	18	570- 840	5	1	6	200	4
CS9015D3	PNP	TO-92 (72)	18	18	3	50	18	760-1000	5	1	6	200	4
CS9015E	PNP	TO-92 (72)	18	18	3	50	18	800-	5	1	6	200	4
CS9018D	NPN	TO-92 (72)	12	15	3	50	15	29- 44	5	1	1.7	600	5
CS9018E	NPN	TO-92 (72)	12	15	3	50	15	40- 59	5	1	1.7	600	5
CS9018F	NPN	TO-92 (72)	12	15	3	50	15	54- 80	5	1	1.7	600	5
CS9018G	NPN	TO-92 (72)	12	15	3	50	15	72- 108	5	1	1.7	600	5
CS9018H	NPN	TO-92 (72)	12	15	3	50	15	97- 146	5	1	1.7	600	5
CS9018I	NPN	TO-92 (72)	12	15	3	50	15	132- 198	5	1	1.7	600	5
CS9018J	NPN	TO-92 (72)	12	15	3	50	15	182- 273	5	1	1.7	600	5
CSBD135	NPN	TO-237	25	30	5	100	20	40- 250	2	150	20	150	
CSBD135A	NPN	TO-237	25	30	5	100	20	40- 100	2	150	20	150	
CSBD135B	NPN	TO-237	25	30	5	100	20	63- 160	2	150	20	150	
CSBD135C	NPN	TO-237	25	30	5	100	20	100- 250	2	150	20	150	
CSBD135D	NPN	TO-237	25	30	5	100	20	160- 350	2	150	20	150	
CSBD136	PNP	TO-237	25	30	5	100	20	40- 250	2	150	35	100	
CSBD136A	PNP	TO-237	25	30	5	100	20	40- 100	2	150	35	100	
CSBD136B	PNP	TO-237	25	30	5	100	20	63- 160	2	150	35	100	
CSBD136C	PNP	TO-237	25	30	5	100	20	100- 250	2	150	35	100	
CSBD136D	PNP	TO-237	25	30	5	100	20	160- 350	2	150	35	100	

2514096 CRIMSON SEMICONDUCTOR INC  
 99D 00326 D T.29.01  
**PACKAGE OUTLINES**

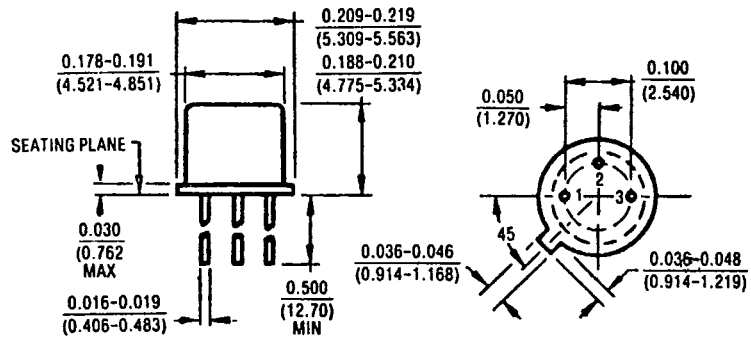
T0-5

PIN	T
1	E
2	B
3	C



T0-18

PIN	T
1	E
2	B
3	C



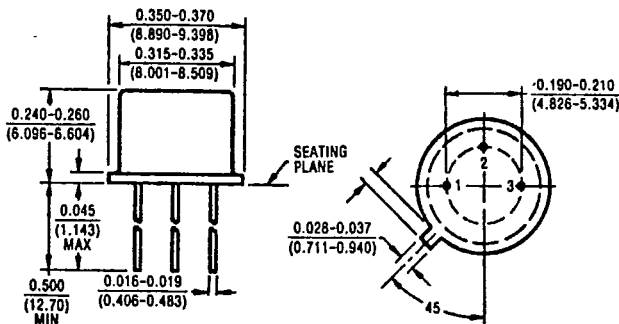
2514096 CRIMSON SEMICONDUCTOR INC

99D 00327 D T-29-01

PACKAGE OUTLINES

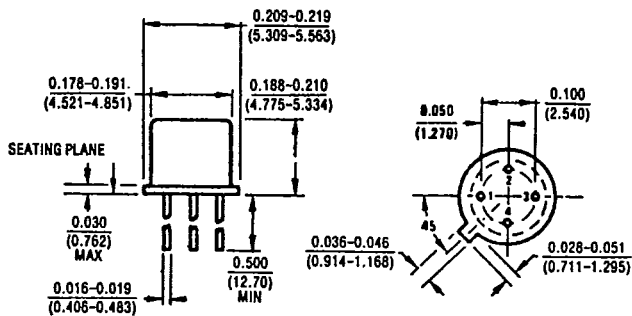
TO-39

PN	T
1	E
2	B
3	C



TO-72

PN	T
1	E
2	B
3	C
4	GND



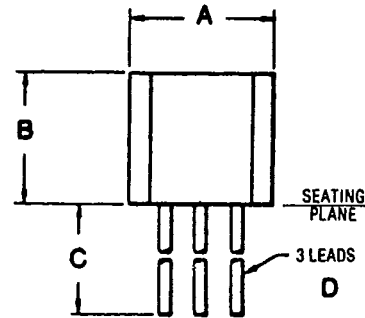
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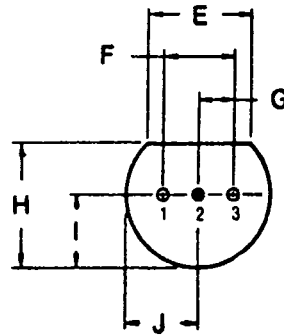
PACKAGE OUTLINES

TO-92 (72, 74, 75, 76, 77, 78)

#	N	L	P	O	K	M
PN	72	74	75	76	77	78
1	E	E	B	B	C	C
2	B	C	C	E	B	E
3	C	B	E	C	E	B

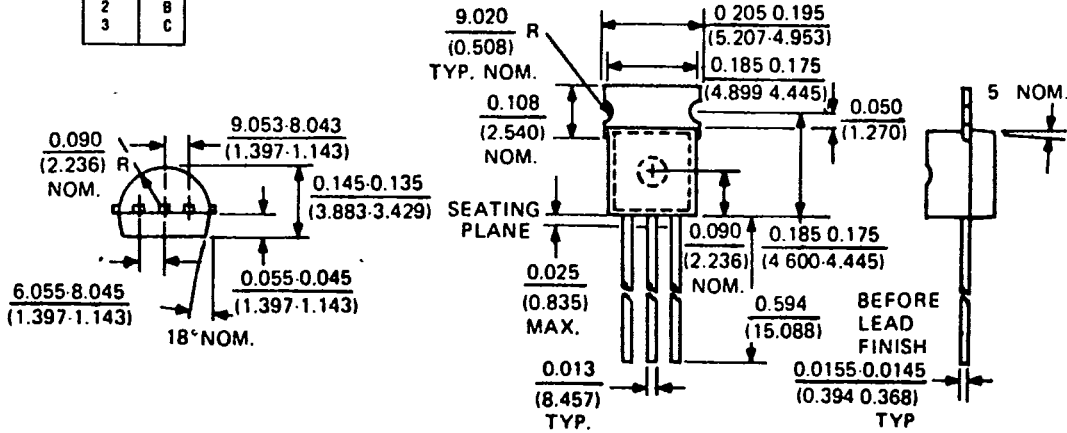


DIM.	INCHES		MILLIMETRES		
	MIN.	TYP. MAX.	MIN.	TYP.	MAX.
A	.175	.205	4.45		5.20
B	.170	.210	4.32		5.33
C	.500		12.70		
D	.016	.019	0.406		0.483
E	.135		.343		
F	.100			2.54	
G	.050			1.27	
H	.125	.165	3.18		4.19
I	.080	.105	2.03		2.67
J	.080	.105	2.03		2.67



TO-237 (TO-92 PLUS)

PN	T
1	E
2	B
3	C





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