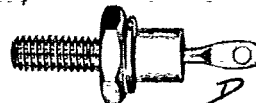
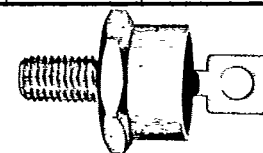


10 Watt Zener Diode • 5% Tolerance • Case D (Do-4) •

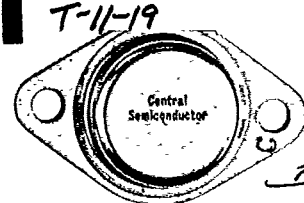
TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current I _{ZM}	TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current I _{ZM}
	Volts	mA	Ohms	mA		Volts	mA	Ohms	mA
1N3993A	3.9	640	2.0	2380	1N2990B	33	75	9.0	260
1N3994A	4.3	580	1.5	2130	1N2991B	36	70	10	230
1N3995A	4.7	530	1.2	1940	1N2992B	39	65	11	210
1N3996A	5.1	490	1.1	1780	1N2993B	43	60	12	195
1N3997A	5.6	445	1.0	1620	1N2994B	45	55	13	185
1N3998A	6.2	405	1.1	1460	1N2995B	47	55	14	175
1N3999A/1N2970B	6.8	370	1.2	1330/1320	1N2996B	50	50	15	165
1N4000A/1N2971B	7.5	335	1.3	1210/1180	1N2997B	51	50	15	163
1N2972B	8.2	305	1.5	1040	1N2998B	52	50	15	160
1N2973B	9.1	275	2.0	960	1N2999B	56	45	16	150
1N2974B	10	250	3.0	860	1N3000B	62	40	17	130
1N2975B	11	230	3.0	780	1N3001B	68	37	18	120
1N2976B	12	210	3.0	720	1N3002B	75	33	22	110
1N2977B	13	190	3.0	660	1N3003B	82	30	25	100
1N2978B	14	180	3.0	600	1N3004B	91	28	35	85
1N2979B	15	170	3.0	560	1N3005B	100	25	40	80
1N2980B	16	155	4.0	530	1N3006B	105	25	45	75
1N2981B	17	145	4.0	490	1N3007B	110	23	55	72
1N2982B	18	140	4.0	460	1N3008B	120	20	75	67
1N2983B	19	130	4.0	440	1N3009B	130	19	100	62
1N2984B	20	125	4.0	420	1N3010B	140	18	125	58
1N2985B	22	115	5.0	380	1N3011B	150	17	175	54
1N2986B	24	105	5.0	350	1N3012B	160	16	200	50
1N2987B	25	100	6.0	320	1N3013B	170	15	250	47
1N2988B	27	95	7.0	300	1N3014B	180	14	260	45
1N2989B	30	85	8.0	280	1N3015B	200	12	300	40

50 Watt Zener Diode • 5% Tolerance • Case E (Do-5) •

TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current* I _{ZM}	TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current* I _{ZM}
	Volts	mA	Ohms	mA		Volts	mA	Ohms	mA
1N4549B	3.9	3200	0.16	11900	1N3325B	33	380	3.2	1300
1N4550B	4.3	2900	0.16	10650	1N3326B	36	350	3.5	1150
1N4551B	4.7	2650	0.12	9700	1N3327B	39	320	4.0	1050
1N4552B	5.1	2450	0.12	8900	1N3328B	43	290	4.5	975
1N4553B	5.6	2250	0.12	8100	1N3329B	45	280	4.5	930
1N4554B	6.2	2000	0.14	7300	1N3330B	47	270	5.0	880
1N4555B/1N3305B	6.8	1850	0.16/0.2	6650/6600	1N3331B	50	250	5.0	830
1N4556B/1N3306B	7.5	1650/1700	0.24/0.3	6050/5950	1N3332B	51	245	5.2	810
1N3307B	8.2	1500	0.4	5200	1N3333B	52	240	5.5	790
1N3308B	9.1	1370	0.5	4800	1N3334B	56	220	6.0	740
1N3309B	10	1200	0.6	4300	1N3335B	62	200	7.0	660
1N3310B	11	1100	0.8	3900	1N3336B	68	180	8.0	600
1N3311B	12	1000	1.0	3600	1N3337B	75	170	9.0	540
1N3312B	13	960	1.1	3300	1N3338B	82	150	11	490
1N3313B	14	890	1.2	3000	1N3339B	91	140	15	420
1N3314B	15	830	1.4	2800	1N3340B	100	120	20	400
1N3315B	16	780	1.6	2650	1N3341B	105	120	25	380
1N3316B	17	740	1.8	2500	1N3342B	110	110	30	365
1N3317B	18	700	2.0	2300	1N3343B	120	100	40	335
1N3318B	19	660	2.2	2200	1N3344B	130	95	50	310
1N3319B	20	630	2.4	2100	1N3345B	140	90	60	290
1N3320B	22	570	2.5	1900	1N3346B	150	85	75	270
1N3321B	24	520	2.6	1750	1N3347B	160	80	80	250
1N3322B	25	500	2.7	1550	1N3348B	175	70	85	230
1N3323B	27	460	2.8	1500	1N3349B	180	68	90	220
1N3324B	30	420	3.0	1400	1N3350B	200	65	100	200

*T_C = 75°C

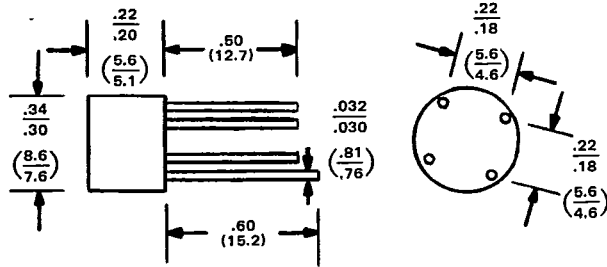
50 Watt Zener Diode • 5% Tolerance • Case F (To-3) •



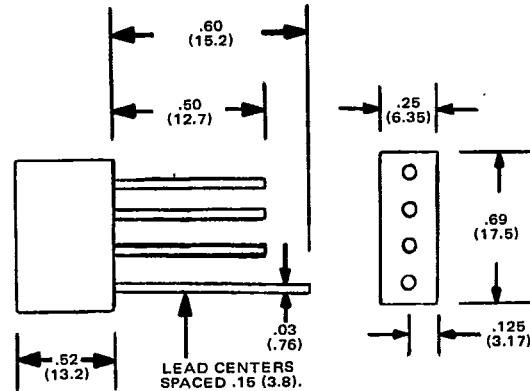
TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current T _C = 75°C I _{ZM}	TYPE NO.	Zener Voltage V _Z @ I _Z	Test Current I _Z	Zener Impedance Z _Z	Maximum Zener Current T _C = 75°C I _{ZM}
	Volts	mA	Ohms	mA		Volts	mA	Ohms	mA
1N4557B	3.9	3200	0.16	11900	1N2823B	30	420	3.0	1400
1N4558B	4.3	2900	0.16	10650	1N2824B	33	380	3.2	1300
1N4559B	4.7	2650	0.12	9700	1N2825B	36	350	3.5	1150
1N4560B	5.1	2450	0.12	8900	1N2826B	36	320	4.0	1050
1N4561B	5.6	2250	0.12	8100	1N2827B	43	290	4.5	975
1N4562B	6.2	2000	0.14	7300	1N2828B	45	280	4.5	930
1N4563B/1N2804B	6.8	1850	0.16/0.2	6650	1N2829B	47	270	5.0	880
1N4564B/1N2805B	7.5	1650/1700	0.24/0.3	6050	1N2830B	50	250	5.0	830
1N2806B	8.2	1500	0.4	5200	1N2831B	51	245	5.2	810
1N2807B	9.1	1370	0.5	4800	1N2832B	56	220	6.0	740
1N2808B	10	1200	0.6	4300	1N2833B	62	200	7.0	660
1N2809B	11	1100	0.8	3900	1N2834B	68	180	8.0	600
1N2810B	12	1000	1.0	3600	1N2835B	75	170	9.0	540
1N2811B	13	960	1.1	3300	1N2836B	82	150	11	490
1N2812B	14	890	1.2	3000	1N2837B	91	140	15	420
1N2813B	15	830	1.4	2800	1N2838B	100	120	20	400
1N2814B	16	780	1.6	2650	1N2839B	105	120	25	380
1N2815B	17	740	1.8	2500	1N2840B	110	110	30	365
1N2816B	18	700	2.0	2300	1N2841B	120	100	40	335
1N2817B	19	660	2.2	2200	1N2842B	130	95	50	310
1N2818B	20	630	2.4	2100	1N2843B	150	85	75	270
1N2819B	22	570	2.5	1900	1N2844B	160	80	80	250
1N2820B	24	520	2.6	1750	1N2845B	180	68	90	220
1N2821B	25	500	2.7	1550	1N2846B	200	65	100	200
1N2822B	27	460	2.8	1500					

CASE OUTLINE DRAWINGS

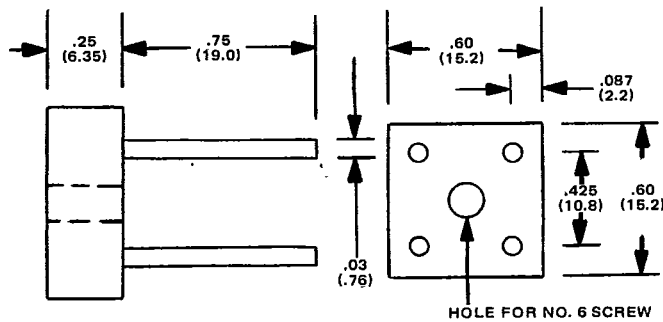
D



CASE A

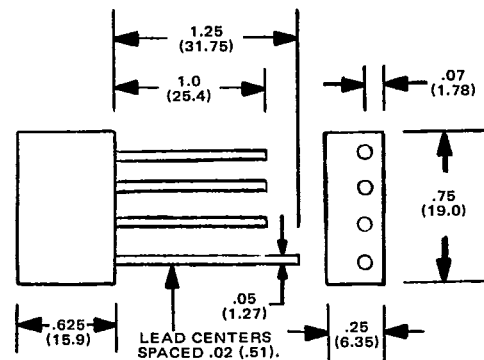
CBR1 Series
CBR2 Series

CASE B

CBR1-L Series
CBR2-L Series

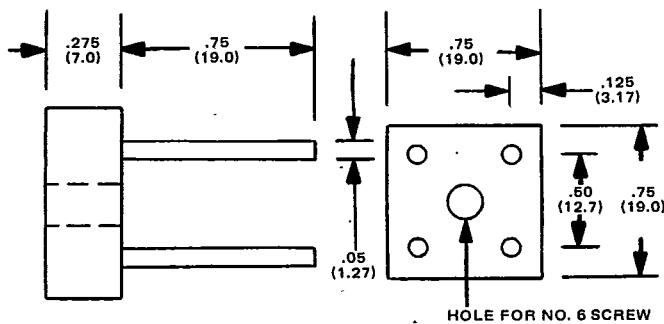
CASE C

CBR3-P Series



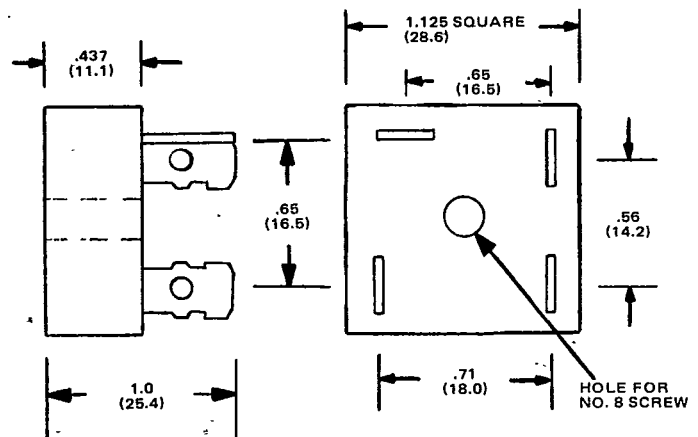
CASE D

CBR4-L Series



CASE E

CBR8 Series



CASE F

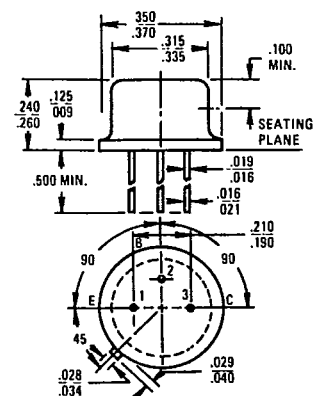
CBR10 Series, CBR25 Series
CBR12 Series, CBR30 Series

All Dimensions in Inches (Millimeters)

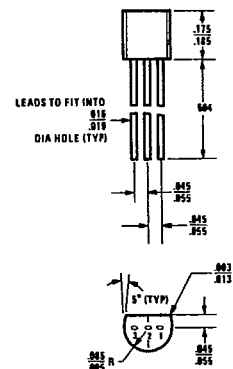
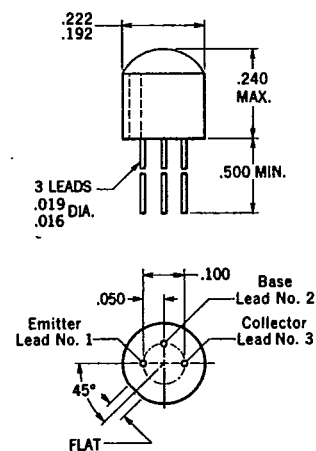
Drawings Not To Scale

カ

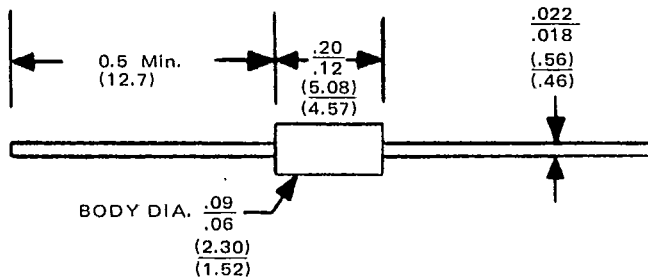
TO-39



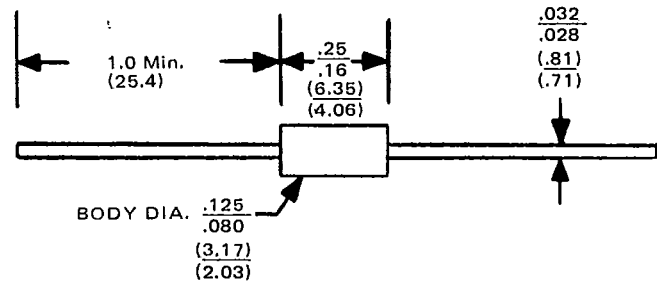
TO-92

**TO-106**

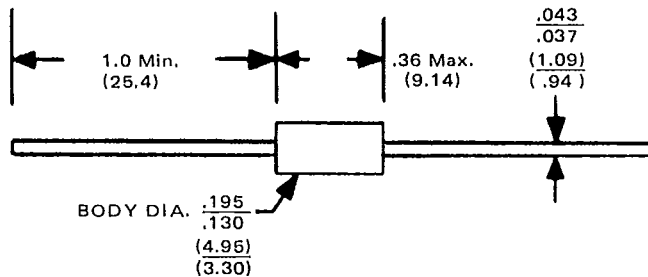
OUTLINE DRAWINGS FOR CENTRAL SEMICONDUCTOR ZENER DIODES



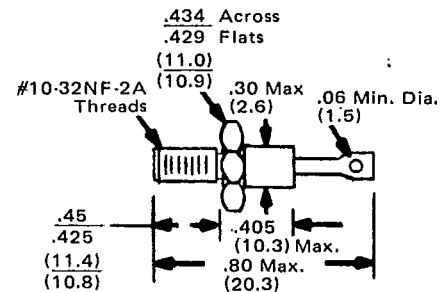
CASE A (Do-35)



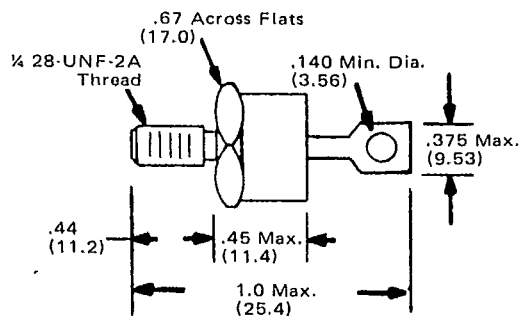
CASE B



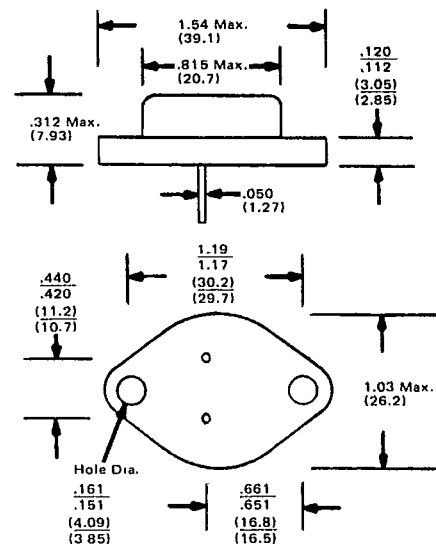
CASE C



CASE D (Do-4)



CASE E (Do-5)



CASE F (To-3)

ALL DIMENSIONS IN INCHES (MILLIMETERS)

DRAWINGS NOT TO SCALE