

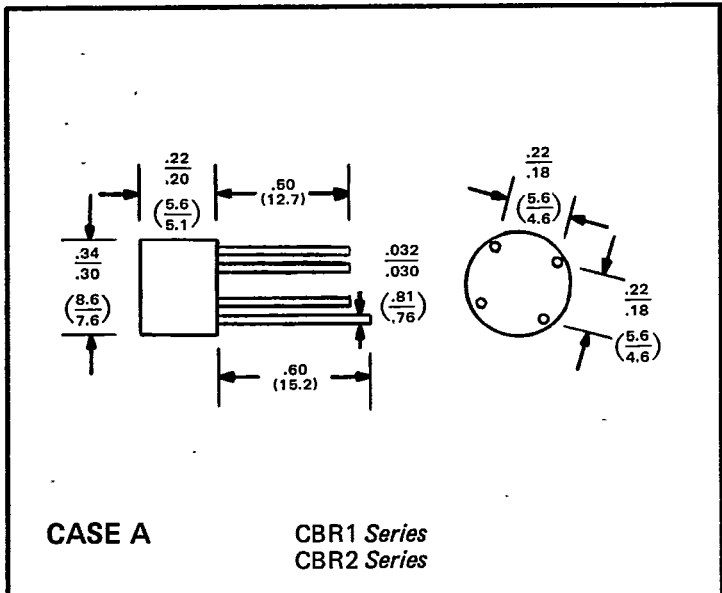
## NPN METAL CAN - SWITCHING AND GENERAL PURPOSE (Cont'd.)

D

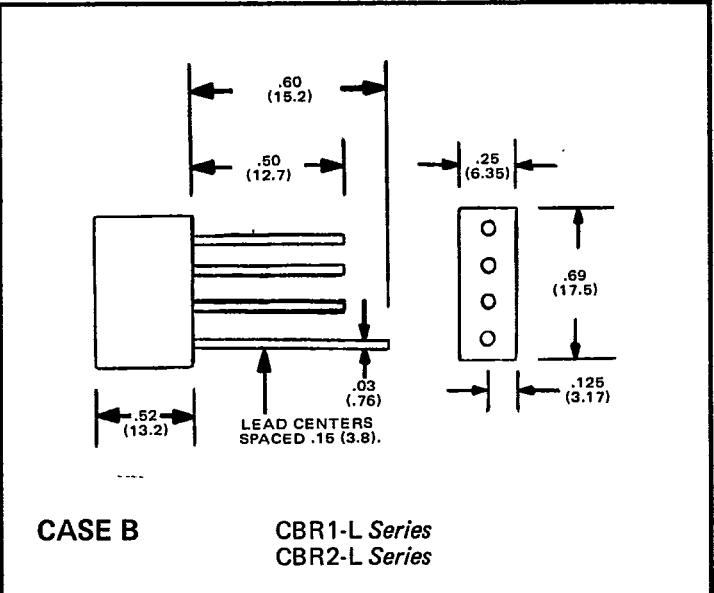
TYPE NO.	V <sub>CB</sub>	V <sub>CE</sub>	V <sub>EB</sub>	h <sub>FE</sub>	at	I <sub>C</sub>	V <sub>CE</sub>	V <sub>CE(s)</sub> at I <sub>B</sub>	I <sub>C</sub>	f <sub>T</sub>	C <sub>ob</sub>	I <sub>CB0</sub> at V <sub>CB</sub>	CASE		
	V	V	V	min	max	mA	V	V	mA	mA	MHz	pF		μA	V
2N2219	60	30	5	100	300	150	10	0.4	15	150	250	8	0.01	50	TO-5
2N2219A	75	40	6	100	300	150	10	0.3	15	150	250	8	0.01	60	TO-5
2N2220	60	30	5	20	60	150	10	0.4	15	150	250	8	0.01	50	TO-18
2N2221	60	30	5	40	120	150	10	0.4	15	150	250	8	0.01	50	TO-18
2N2221A	75	40	6	40	120	150	10	0.3	15	150	250	8	0.01	60	TO-18
2N2222	60	30	5	100	300	150	10	0.4	15	150	250	8	0.01	50	TO-18
2N2222A	75	40	6	100	300	150	10	0.3	15	150	250	8	0.01	60	TO-18
2N2236	40	20	6	15	60	100	10	0.25	20	100	50	35	—	—	TO-5
2N2237	40	20	6	40	125	100	10	0.25	20	100	50	35	—	—	TO-5
2N2243	120	80	7	40	120	150	10	.35	15	150	50	15	10	60	TO-5
2N2243A	120	80	8	40	120	150	10	.25	15	150	50	15	10	60	TO-5
2N2270	60	45	7	50	200	150	10	0.9	15	150	100	15	.05	60	TO-39
2N2297	80	35	7	40	120	150	10	1	100	1000	60	12	0.01	60	TO-5
2N2309	30	30	5	25	125	0.2	5	—	—	—	40	25	—	—	TO-5
2N2350	60	40	5	100	300	150	10	.35	15	150	50	20	.01	30	TO-46
2N2350A	60	40	5	100	300	150	10	.25	15	150	50	20	.01	30	TO-46
2N2351	80	50	8	40	120	150	10	.35	15	150	50	20	.01	60	TO-46
2N2351A	80	50	8	40	120	150	10	.25	15	150	50	20	.01	60	TO-46
2N2352	60	40	5	20	60	150	10	.35	15	150	50	20	.01	30	TO-46
2N2352A	60	40	5	20	60	150	10	.25	15	150	50	20	.01	30	TO-46
2N2353	45	25	5	20	—	150	10	.35	15	150	50	20	.10	30	TO-46
2N2353A	45	25	5	20	—	150	10	.25	15	150	50	20	.10	30	TO-46
2N2380	80	40	5	20	120	150	10	1.3	15	150	100	14	—	—	TO-5
2N2380A	80	40	5	20	120	150	10	1.3	15	150	100	14	—	—	TO-5
2N2405	30	30	7	30	120	150	10	0.45	15	150	200	11	—	—	TO-5
2N2476	60	20	5	20	—	150	10	0.4	15	150	250	10	0.2	50	TO-5
2N2477	60	20	5	40	—	150	10	0.4	15	150	250	10	0.2	50	TO-5
2N2479	80	40	5	30	120	150	10	0.85	15	150	150	14	—	—	TO-5
2N2594	80	80	7	50	150	100	5	1	20	200	40	20	0.1	60	TO-5
2N2645	75	40	7	100	300	150	10	.4	1	10	50	25	.01	60	TO-18
2N2657	80	60	7	40	120	1000	2	0.5	100	1000	20	150	0.1	60	TO-39
2N2658	100	80	7	40	120	1000	2	0.5	100	1000	20	150	0.1	60	TO-39
2N2726	200	180	10	30	90	200	10	2	40	200	5	—	1	100	TO-5
2N2727	200	180	10	75	150	200	10	2	40	200	5	—	1	100	TO-5
2N2868	60	40	7	40	120	150	10	.25	15	150	50	20	.1	30	TO-5
2N2890	100	80	5	30	90	1000	2	.5	100	1000	30	70	.1	60	TO-5
2N2891	100	80	5	50	150	1000	2	.5	100	1000	30	70	.1	60	TO-5
2N2895	120	65	7	40	120	150	10	0.5	50	500	120	15	—	—	TO-18
2N2896	140	90	7	60	200	150	10	0.5	50	500	120	15	—	—	TO-18
2N2897	60	45	7	50	200	150	10	0.5	50	500	100	15	—	—	TO-18
2N2951	60	20	5	20	—	150	10	0.5	15	150	200	8	0.1	50	TO-5
2N2952	60	20	5	20	—	150	10	0.5	15	150	200	8	0.1	50	TO-18
2N2958	20	20	5	40	120	150	10	0.5	15	150	250	8	—	—	TO-5
2N2959	20	20	5	100	300	150	10	0.5	15	150	250	8	—	—	TO-5
2N2960	60	30	5	100	300	150	10	0.5	50	150	250	8	—	—	TO-5
2N2961	60	30	5	100	300	150	10	2.0	50	500	250	8	—	—	TO-5
2N2987	95	80	7	25	75	.200	5	.8	.020	.200	30	50	.025	90	TO-5
2N2988	155	100	7	25	75	.200	5	.8	.020	.200	30	50	.025	150	TO-5
2N2989	95	80	7	60	120	.200	5	.8	.020	.200	30	50	.025	90	TO-5
2N2990	155	100	7	60	120	.200	5	.8	.020	.200	30	50	.025	150	TO-5
2N3019	140	80	7	100	300	150	10	0.2	15	150	100	12	.01	90	TO-5
2N3020	140	80	7	40	120	150	10	0.2	15	150	100	12	.01	90	TO-5
2N3036	120	80	7	50	150	150	10	0.25	15	150	50	15	—	—	TO-5
2N3053	60	40	5	50	250	150	10	1.4	15	150	100	15	—	—	TO-5
2N3056	100	60	7	40	120	150	10	.25	15	150	80	12	.01	60	TO-46
2N3056A	140	80	7	30	120	150	10	.25	15	150	80	12	.01	80	TO-46
2N3057	100	60	7	100	300	150	10	.25	15	150	100	12	.01	60	TO-46
2N3057A	140	80	7	80	300	150	10	.25	15	150	100	12	.01	80	TO-46
2N3107	100	60	7	100	300	150	10	.25	15	150	70	20	.01	60	TO-5
2N3108	100	60	7	40	120	150	10	.25	15	150	60	20	.01	60	TO-5
2N3109	80	40	7	100	300	150	10	.25	15	150	70	25	.01	60	TO-5
2N3110	80	40	7	40	120	150	10	.25	15	150	60	25	.01	60	TO-5
2N3114	150	150	5	30	120	.030	10	1	.005	.050	40	9	10	100	TO-5
2N3115	20	20	5	40	120	150	10	0.5	15	150	250	8	—	—	TO-18
2N3116	20	20	5	100	300	150	10	0.5	15	150	250	8	—	—	TO-18
2N3117	60	60	6	250	500	.01	10	.35	.1	1	60	4.5	.01	45	TO-18
2N3122	50	30	5	25	100	300	10	1.5	30	300	60	25	—	—	TO-5
2N3299	60	30	5	40	120	150	10	.22	15	150	250	8	.01	50	TO-5
2N3300	60	30	5	100	300	150	10	.22	15	150	250	8	.01	50	TO-5
2N3301	60	30	5	40	120	150	10	.22	15	150	250	8	.01	50	TO-18

# CASE OUTLINE DRAWINGS

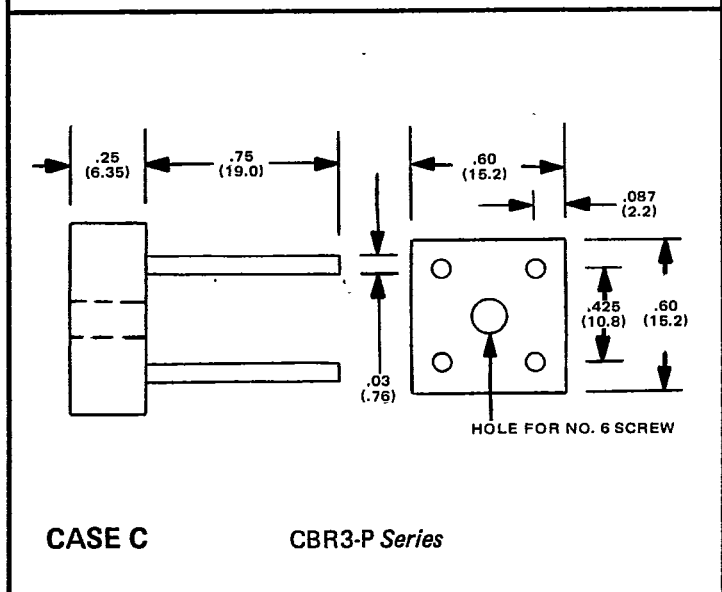
D



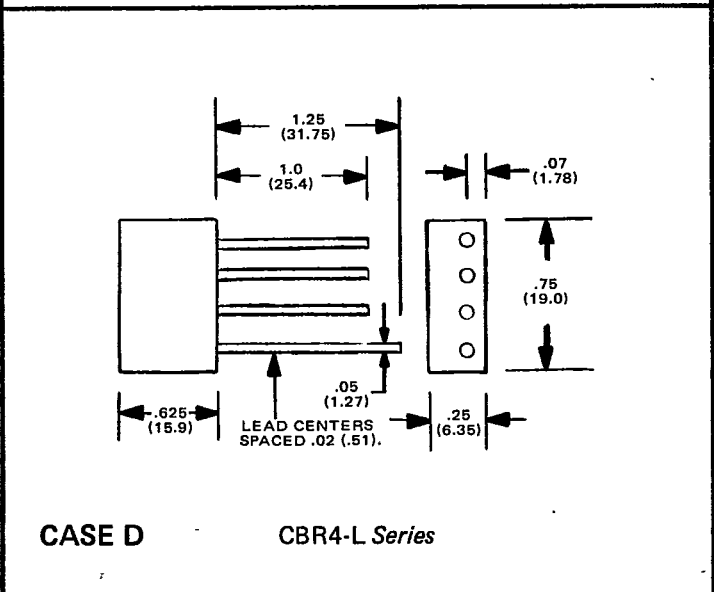
**CASE A** CBR1 Series  
CBR2 Series



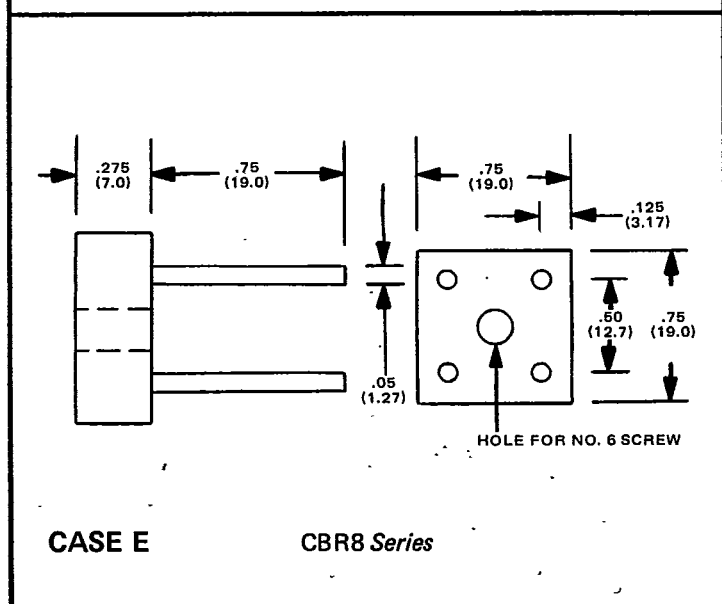
**CASE B** CBR1-L Series  
CBR2-L Series



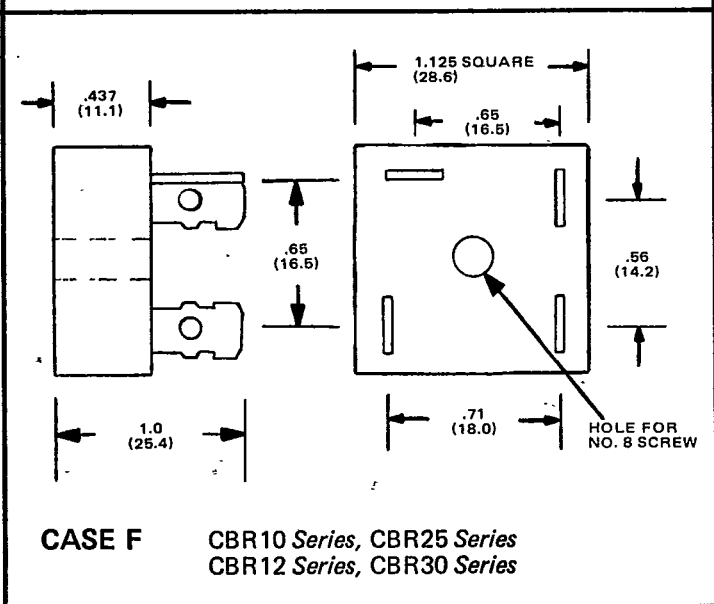
**CASE C** CBR3-P Series



**CASE D** CBR4-L Series



**CASE E** CBR8 Series



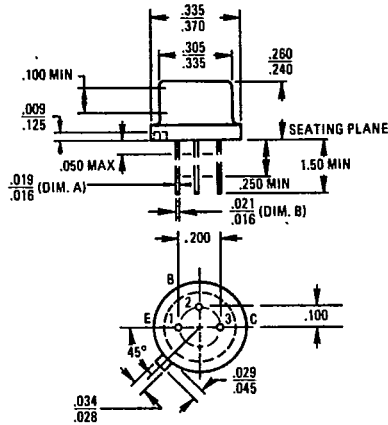
**CASE F** CBR10 Series, CBR25 Series  
CBR12 Series, CBR30 Series

All Dimensions in Inches (Millimeters)  
Drawings Not To Scale

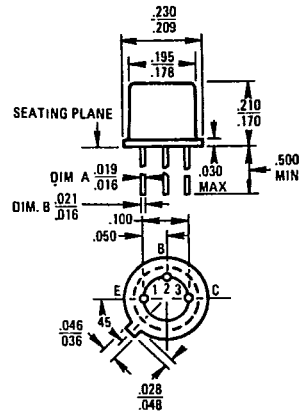
f

# MECHANICAL OUTLINE DRAWINGS

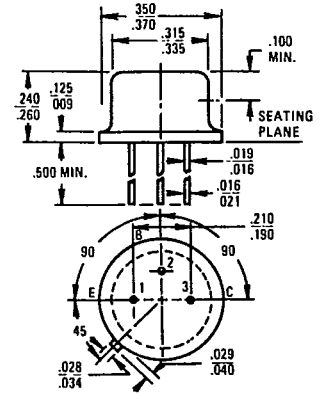
TO-5



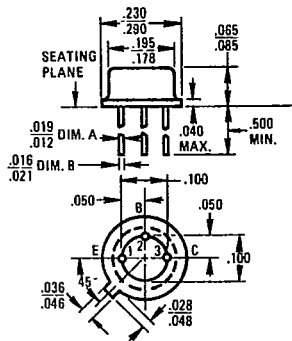
TO-18



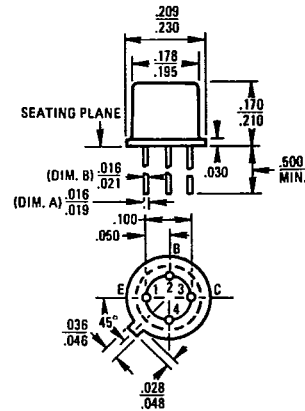
TO-39



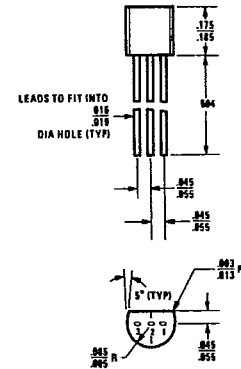
TO-46



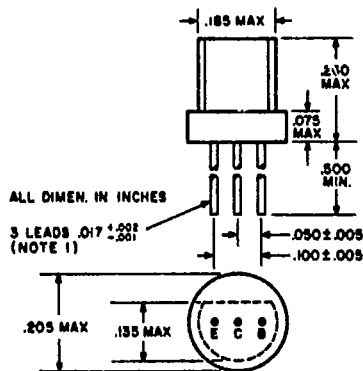
TO-72



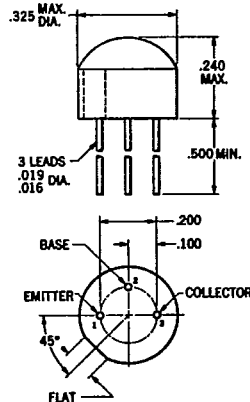
TO-92



TO-98



TO-105



TO-106

