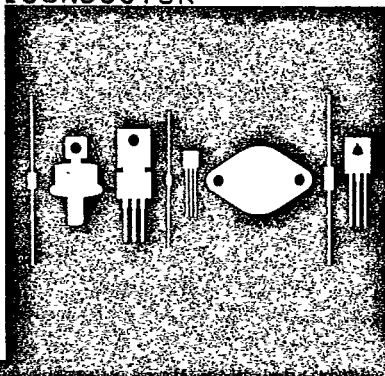


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145 Adams Avenue
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MPS-A42 MPS-A43 NPN D

SILICON HIGH VOLTAGE TRANSISTORS

JEDEC TO-92 Case

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPS-A42 Series types are NPN Molded Epoxy Small Signal Silicon Transistors designed for high voltage applications.

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

	SYMBOL	MPS-A42	MPS-A43	UNIT
Collector-Base Voltage	V_{CB0}	300	200	V
Collector-Emitter Voltage	V_{CE0}	300	200	V
Emitter-Base Voltage	V_{EB0}	6.0	6.0	V
Power Dissipation	P_D	625	625	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 TO +150		$^\circ\text{C}$
Collector Current	I_C	500		mA
Thermal Resistance	θ_{JA}	.200		$^\circ\text{C}/\text{mW}$

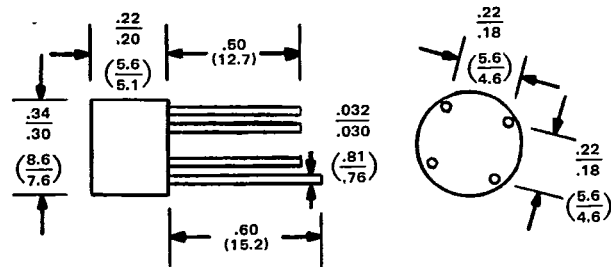
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

SYMBOL	TEST CONDITIONS	MPS-A42		MPS-A43		UNIT
		MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=200\text{V}$		0.1		-	μA
I_{CB0}	$V_{CB}=160\text{V}$		-		0.1	μA
I_{EB0}	$V_{BE}=6.0\text{V}$		0.1		-	μA
I_{EB0}	$V_{BE}=4.0\text{V}$		-		0.1	μA
BV_{CB0}	$I_C=100\mu\text{A}$	300		200		V
BV_{CE0}	$I_C=1.0\text{mA}$	300		200		V
BV_{EB0}	$I_C=100\mu\text{A}$	6.0		6.0		V
$V_{CE}(\text{SAT})$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.5		0.4	V
$V_{BE}(\text{SAT})$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.9		0.9	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25		25		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	40		40		
h_{FE}	$V_{CE}=10\text{V}, I_C=30\text{mA}$	40	-	50	200	
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	50		50		MHz
C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		3.0		4.0	pF

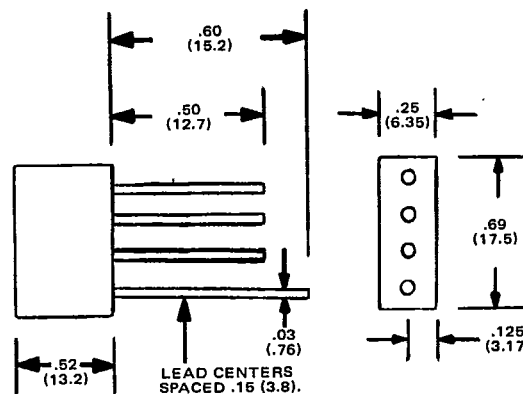


CASE OUTLINE DRAWINGS

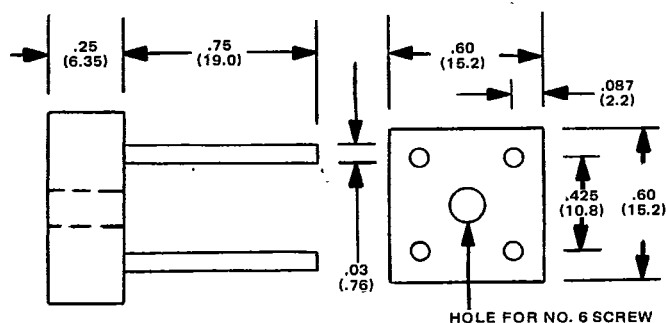
D



CASE A

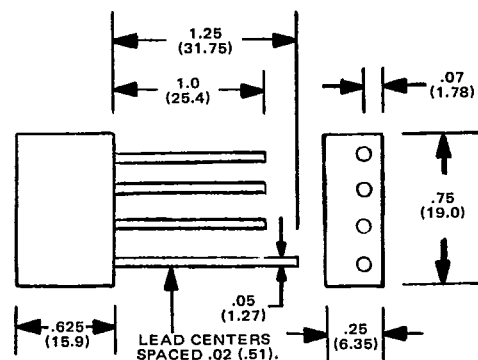
CBR1 Series
CBR2 Series

CASE B

CBR1-L Series
CBR2-L Series

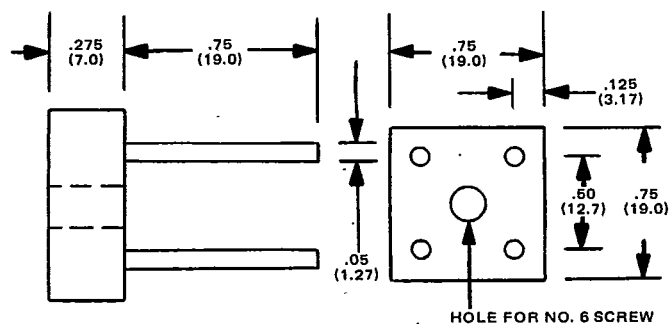
CASE C

CBR3-P Series



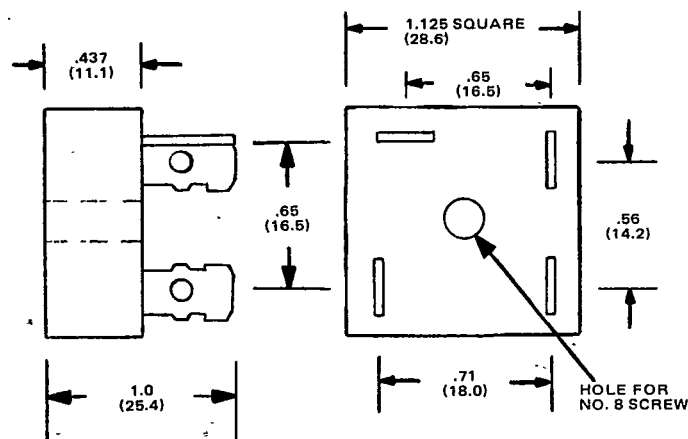
CASE D

CBR4-L Series



CASE E

CBR8 Series



CASE F

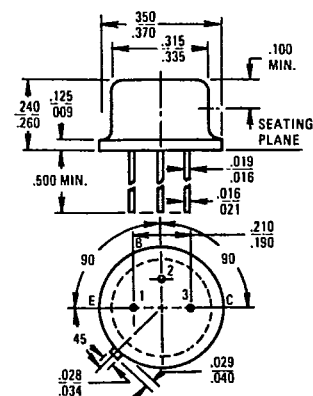
CBR10 Series, CBR25 Series
CBR12 Series, CBR30 Series

All Dimensions in Inches (Millimeters)

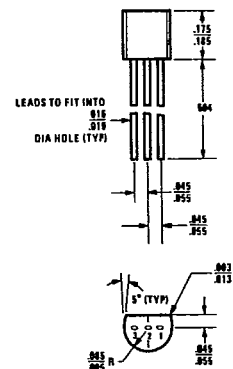
Drawings Not To Scale

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TO-39



TO-92



TO-106

