

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MPS404A

PNP SILICON  
CHOPPER TRANSISTOR

JEDEC TO-92 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR MPS404A type is an PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a TO-92 package, designed for chopper applications.

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

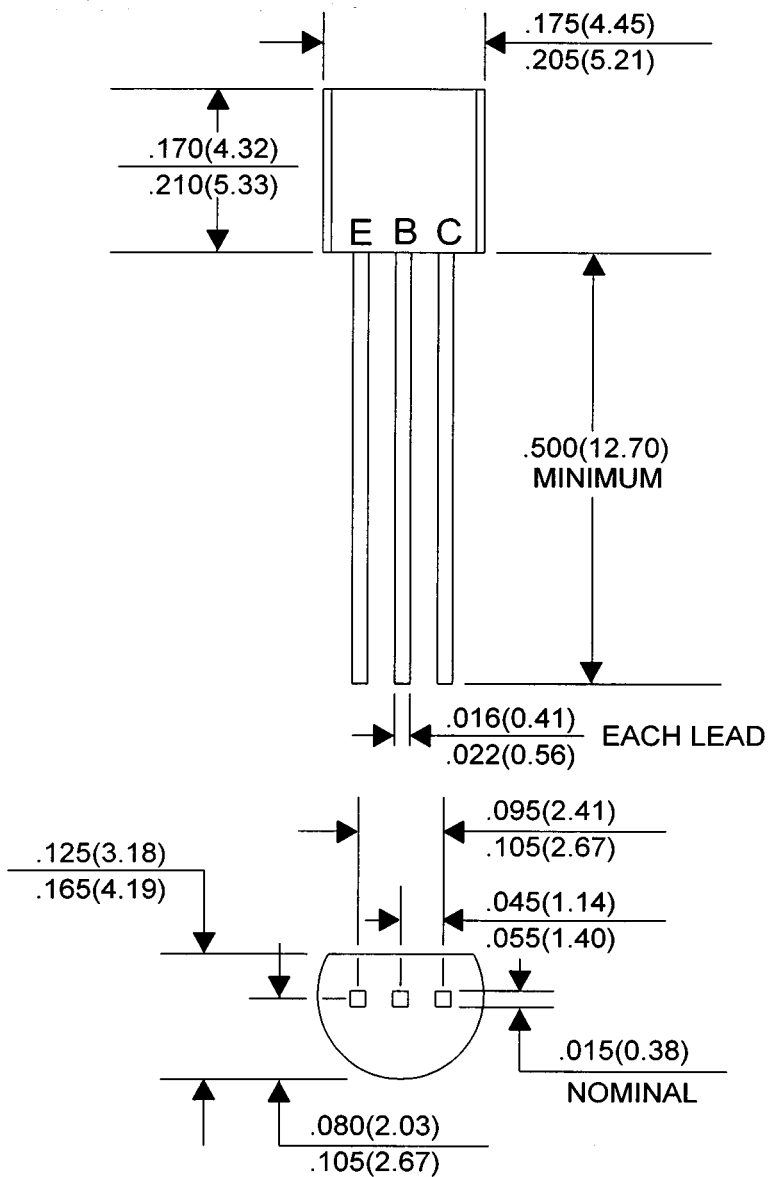
	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	$V_{CB0}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	35	V
Emitter-Base Voltage	$V_{EBO}$	25	V
Collector Current	$I_C$	150	mA
Power Dissipation	$P_D$	625	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	200	$^\circ\text{C/W}$

## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{CB0}$	$V_{CB}=10\text{V}$			100	nA
$I_{EBO}$	$V_{EB}=10\text{V}$			100	nA
$BV_{CB0}$	$I_C=10\mu\text{A}$	40			V
$BV_{CEO}$	$I_C=10\text{mA}$	35			V
$BV_{EBO}$	$I_E=10\mu\text{A}$	25			V
$V_{CE(SAT)}$	$I_C=12\text{mA}, I_B=400\mu\text{A}$			0.15	V
$V_{CE(SAT)}$	$I_C=24\text{mA}, I_B=1.0\text{mA}$			0.20	V
$V_{BE(SAT)}$	$I_C=12\text{mA}, I_B=400\mu\text{A}$			0.85	V
$V_{BE(SAT)}$	$I_C=24\text{mA}, I_B=1.0\text{mA}$			1.00	V
$h_{FE}$	$V_{CE}=0.15\text{V}, I_C=12\text{mA}$	100		400	
$C_{ob}$	$V_{CB}=6.0\text{V}, I_E=0, f=1.0\text{MHz}$		40		pF
$t_d$	$V_{CC}=10\text{V}, I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		150		ns
$t_r$	$V_{CC}=10\text{V}, I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		400		ns
$t_s$	$V_{CC}=10\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		3.0		$\mu\text{s}$
$t_f$	$V_{CC}=10\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		750		ns

(See Reverse Side)

R1

JEDEC TO-92 CASE - MECHANICAL OUTLINE

All Dimensions in Inches (mm).