

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

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Manufacturers of World Class Discrete Semiconductors  
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MPS455

NPN TRANSISTOR

TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPS455 is a silicon NPN Medium Power Transistor, manufactured by the epitaxial planar process, designed for general purpose amplifier and switching applications.

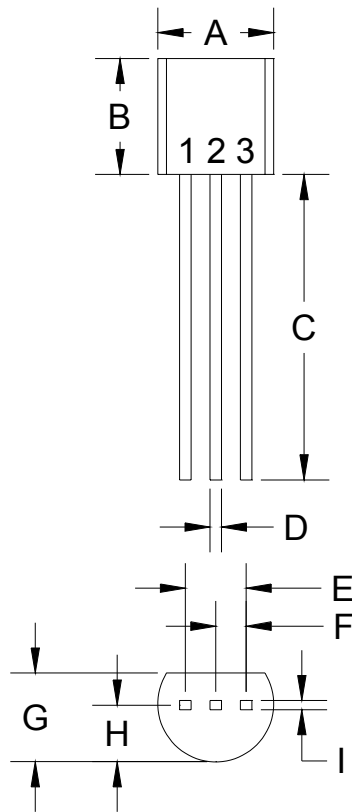
MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	$V_{CB0}$	160	V
Collector-Emitter Voltage	$V_{CEO}$	140	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	1.0	A
Peak Collector Current	$I_{CM}$	2.0	A
Power Dissipation	$P_D$	1.0	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	125	$^\circ\text{C/W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{CBO}$	$V_{CB}=140\text{V}$			0.1	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$			0.1	$\mu\text{A}$
$BV_{CBO}$	$I_C=100\mu\text{A}$	160			V
$BV_{CEO}$	$I_C=10\text{mA}$	140			V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.70	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100		300	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$		10		
$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	100			MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			15	pF

(SEE REVERSE SIDE)

TO-92 PACKAGE - MECHANICAL OUTLINE

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

Lead Code: 1) Emitter  
2) Base  
3) Collector

R1

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