

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

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Manufacturers of World Class Discrete Semiconductors

## NPN

TIP120 SEL01  
TIP121 SEL01  
TIP122 SEL01

## PNP

TIP125 SEL01  
TIP126 SEL01  
TIP127 SEL01

SILICON POWER DARLINGTON  
COMPLEMENTARY TRANSISTORS

JEDEC TO-220 AB CASE

## SUBCONTRACTOR BUILD SPECIFICATION

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

	SYMBOL	TIP120 SEL01	TIP121 SEL01	TIP122 SEL01	UNITS
		TIP125 SEL01	TIP126 SEL01	TIP127 SEL01	
Collector-Base Voltage	$V_{CB0}$	60	80	100	V
Collector-Emitter Voltage	$V_{CEO}$	60	80	100	V
Emitter-Base Voltage	$V_{EBO}$		5.0		V
Collector Current	$I_C$		5.0		A
Collector Current (Peak)	$I_{CM}$		8.0		A
Base Current	$I_B$		120		mA
Power Dissipation	$P_D$		65		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		1.92		$^\circ\text{C/W}$

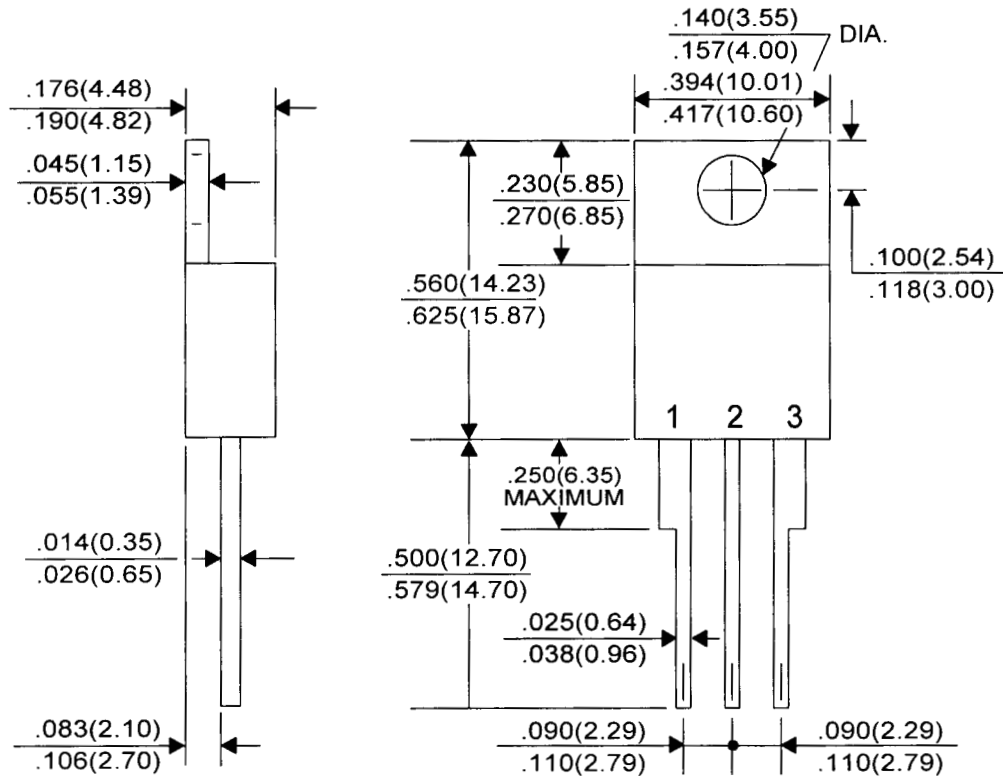
### ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TIP120 SEL01		TIP121 SEL01		TIP122 SEL01		UNITS
		TIP125 SEL01	TIP126 SEL01	TIP126 SEL01	TIP127 SEL01	TIP127 SEL01	TIP127 SEL01	
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CBO}$	$V_{CB}=60\text{V}$		0.2	-	-	-	-	mA
$I_{CBO}$	$V_{CB}=80\text{V}$		-	0.2	-	-	-	mA
$I_{CBO}$	$V_{CB}=100\text{V}$		-	-	-	0.2	-	mA
$I_{CEO}$	$V_{CE}=30\text{V}$		0.5	-	-	-	-	mA
$I_{CEO}$	$V_{CE}=40\text{V}$		-	0.5	-	-	-	mA
$I_{CEO}$	$V_{CE}=50\text{V}$		-	-	-	0.5	-	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0	2.0	2.0	2.0	2.0	mA
$BV_{CEO}$	$I_C=100\text{mA}$	60		80		100		V
$V_{CE(SAT)}$	$I_C=3.0\text{A}, I_B=12\text{mA}$		2.0	2.0	2.0	2.0	2.0	V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=20\text{mA}$		4.0	4.0	4.0	4.0	4.0	V
$V_{BE(ON)}$	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}$		2.5	2.5	2.5	2.5	2.5	V
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=0.5\text{A}$	1000		1000		1000		
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}$	1000		1000		1000		
$V_F$	$I_{EC}=5.0\text{A}$		2.0	2.0	2.0	2.0	2.0	V
$ h_{fe} $	$V_{CE}=4.0\text{V}, I_C=3.0\text{A}, f=1.0\text{MHz}$	4.0		4.0		4.0		

(Continued on reverse side)

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

<u>SYMBOL</u>	<u>CONTIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=0.1\text{MHz}$ TIP120 SEL01, TIP121 SEL01, TIP122 SEL01		200	pF
$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=0.1\text{MHz}$ TIP125 SEL01, TIP126 SEL01, TIP127 SEL01		300	pF

JEDEC TO-220AB CASE - MECHANICAL OUTLINE

All Dimensions in Inches (mm).

Lead Code:

- 1) Base
- 2) Collector
- 3) Emitter

Tab is common To Pin 2.

Marking: Devices should be marked in accordance with CPS161.