

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

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Manufacturers of World Class Discrete Semiconductors

NPN

PNP

TIP120 SEL01  
TIP121 SEL01  
TIP122 SEL01

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 TIP125 SEL01	TIP121 SEL01 TIP126 SEL01	TIP122 SEL01 TIP127 SEL01	UNITS
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		$^\circ\text{C/W}$

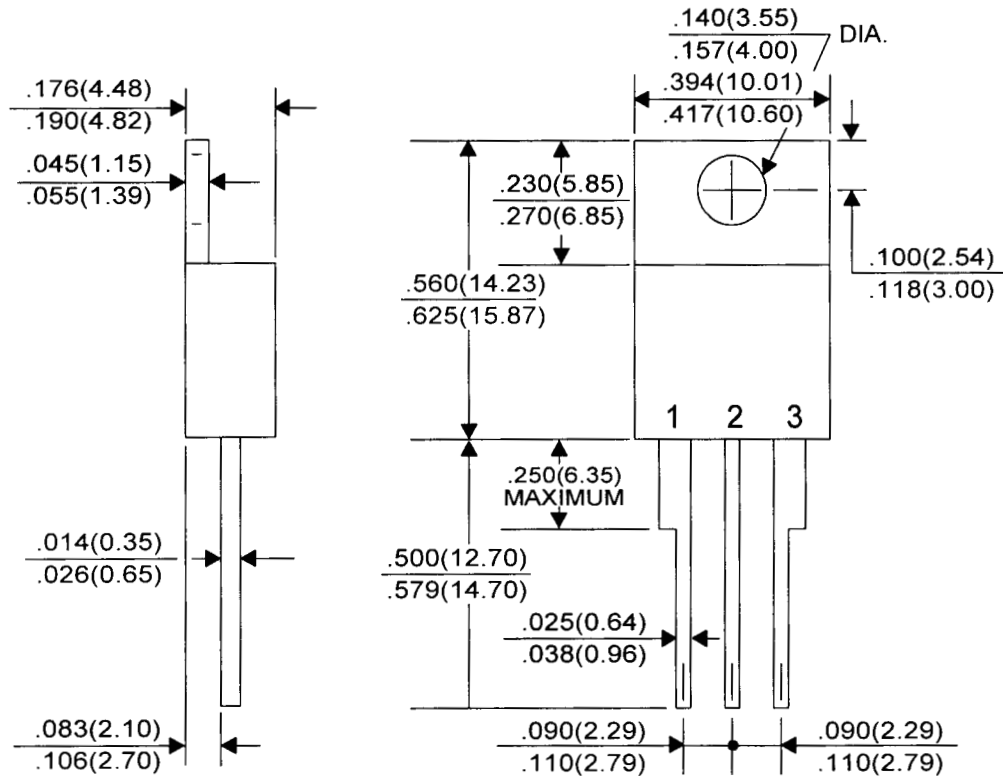
### ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TIP120 SEL01 TIP125 SEL01		TIP121 SEL01 TIP126 SEL01		TIP122 SEL01 TIP127 SEL01		UNITS
		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	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.