

CentralTM 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 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	θ_{JC}		1.92		$^\circ\text{C/W}$

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

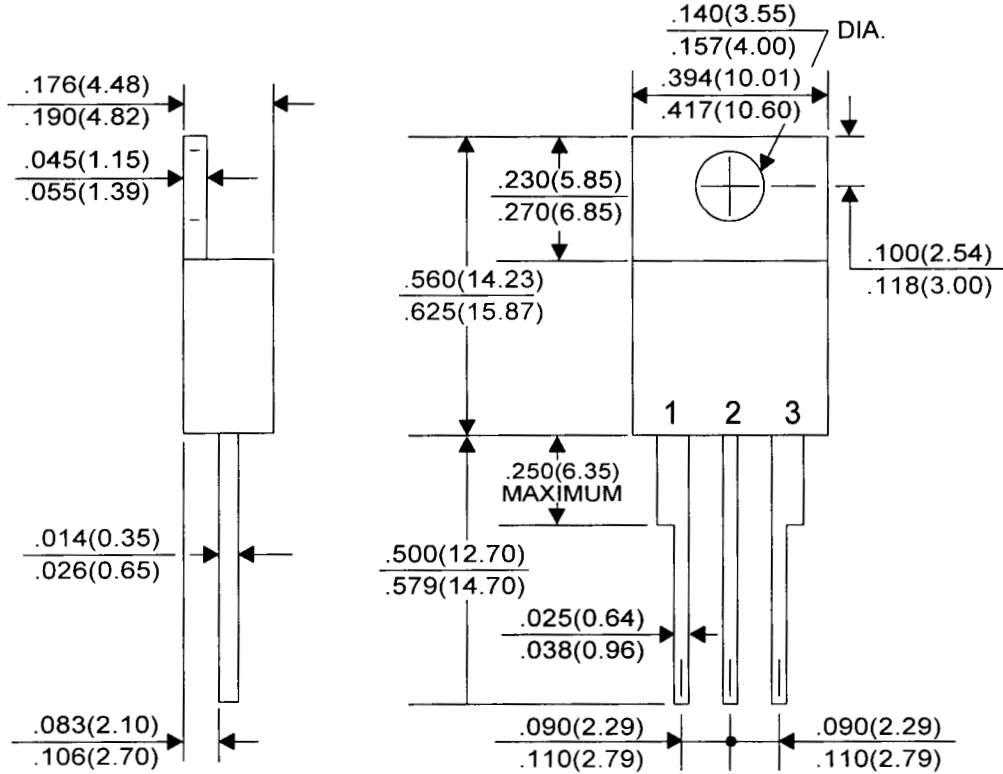
SYMBOL	TEST CONDITIONS	TIP120 SEL01 TIP125 SEL01		TIP121 SEL01 TIP126 SEL01		TIP122 SEL01 TIP127 SEL01		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=60\text{V}$		0.2	-	-	-	-	mA
I_{CBO}	$V_{CB}=80\text{V}$		-	0.2	-	-	-	mA
I_{CBO}	$V_{CB}=100\text{V}$		-	-	-	0.2	-	mA
I_{CEO}	$V_{CE}=30\text{V}$		0.5	-	-	-	-	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.