

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N4921
2N4922
2N4923

NPN Silicon Transistor
General Purpose Power

JEDEC TO-126 Case

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4921, 2N4922, and 2N4923 are Silicon NPN Epitaxial Base Power Transistors designed for Medium power amplifier and switching applications.

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

		<u>2N4921</u>	<u>2N4922</u>	<u>2N4923</u>
Collector-Base Voltage	V_{CB0}	40V	60V	80V
Collector-Emitter Voltage	V_{CE0}	40V	60V	80V
Emitter-Base Voltage	V_{EB0}		5.0V	
Collector Current, Continuous	I_C		1.0A	
Collector Current, Peak	I_{CM}		3.0A	
Base Current	I_B		1.0A	
Power Dissipation ($T_C=25^{\circ}\text{C}$)	P_D		30W	
Operating & Storage Junction Temperature	T_J, T_{stg}		-65 to +150 $^{\circ}\text{C}$	
Thermal Resistance, Junction to Case	θ_{J-C}		3.12 $^{\circ}\text{C/W}$	

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNIT</u>
I_{CB0}	$V_{CB}=\text{Rated } V_{CB}$		100	μA
I_{CEV}	$V_{CE}=\text{Rated } V_{CE0}, V_{EB}=1.5\text{V}$		100	μA
I_{CE0}	$V_{CE}=0.5\text{X Rated } V_{CE0}$		500	μA
I_{EB0}	$V_{EB}=5.0\text{V}$		1.0	mA
BV_{CE0}	$I_C=0.1\text{A}$	40(2N4921)		V
		60(2N4922)		V
		80(2N4923)		V
$V_{CE(s)}$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		0.6	V
$V_{BE(s)}$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		1.3	V
$V_{BE(on)}$	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$		1.3	V
hFE	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	40		-
hFE	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	20	100	-
hFE	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	10		-
fT	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1.0\text{MHz}$	3.0		MHz
C_{ob}	$V_{CB}=10\text{V}, f=100\text{kHz}$		100	pF

