

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

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Manufacturers of World Class Discrete Semiconductors

2N6306  
2N6307  
2N6308

NPN Silicon Transistor

JEDEC TO-3 Case

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6306, 2N6307, and 2N6308 are NPN Silicon Power Transistors designed for high voltage inverters, switching regulators, line operated amplifiers, and switching power supplies.

## MAXIMUM RATINGS (T=25°C)

		2N6306	2N6307	2N6308
Collector-Emitter Voltage	V <sub>CE0</sub>	250V	300V	350V
Collector-Base Voltage	V <sub>CB0</sub>	500V	600V	700V
Emitter-Base Voltage	V <sub>EB0</sub>		8V	
Collector Current	I <sub>C</sub>		8A	
Base Current	I <sub>B</sub>		4A	
Power Dissipation	P <sub>T</sub>		125W	
Operating & Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 to +200°C	

## ELECTRICAL CHARACTERISTICS (T=25°C)

Symbol	Test Conditions	2N6306		2N6307		2N6308		Unit
		Min	Max	Min	Max	Min	Max	
I <sub>CEV</sub>	V <sub>CE</sub> =rated V <sub>CB</sub> , V <sub>EB</sub> =1.5V		500		500		500	uA
I <sub>CEO</sub>	V <sub>CE</sub> =rated V <sub>CE0</sub>		500		500		500	uA
I <sub>EB0</sub>	V <sub>EB</sub> =8V		1.0		1.0		1.0	mA
V <sub>CE0</sub>	I <sub>C</sub> =100mA	250		300		350		V
V <sub>CE(s)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =0.6A		0.8		1.0		1.5	V
V <sub>CE(s)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =2A		5.0		5.0			V
V <sub>CE(s)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =2.67A						5.0	V
V <sub>BE(s)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =2A		2.3		2.3			V
V <sub>BE(s)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =2.67A						2.5	V
V <sub>BE(on)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =3A		1.3		1.3		1.5	V
h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =3A	15	75	15	75	12	60	-
h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =8A	4		4		3		-
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.3A, f=1.0 MHZ	5		5		5		MHZ
C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1.0 MHZ		250		250		250	pF
t <sub>r</sub>	V <sub>CC</sub> =125V, I <sub>C</sub> =3.0A, I <sub>B</sub> =0.6A		0.6		0.6		0.6	uS
t <sub>s</sub>	V <sub>CC</sub> =125V, I <sub>C</sub> =3.0A, I <sub>B</sub> =0.6A		1.6		1.6		1.6	uS
t <sub>f</sub>	V <sub>CC</sub> =125V, I <sub>C</sub> =3.0A, I <sub>B</sub> =0.6A		0.4		0.4		0.4	uS

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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