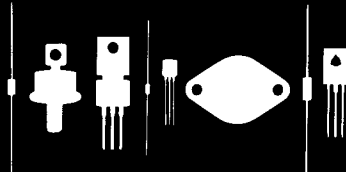


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145 Adams Avenue  
Hauppauge, New York 11788



MJ2500 MJ2501 PNP  
MJ3000 MJ3001 NPN

SILICON COMPLEMENTARY TRANSISTORS  
POWER DARLINGTON  
10 AMPERES, 60-80 VOLTS

JEDEC TO-3 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR MJ2500, MJ3000 Series are medium-power Complementary Silicon Darlington Transistors designed for general purpose amplifier applications as complementary output devices.

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

	SYMBOL	MJ2500 MJ3000	MJ2501 MJ3001	UNIT
Collector-Base Voltage	$V_{CB0}$	60	80	V
Collector-Emitter Voltage	$V_{CE0}$	60	80	V
Emitter-Base Voltage	$V_{EB0}$	5.0	5.0	V
Collector Current	$I_C$	10	10	A
Base Current	$I_B$	0.2	0.2	A
Power Dissipation	$P_D$	150	150	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 TO +200		$^{\circ}\text{C}$
Thermal Resistance, Junction TO Case	$\theta_{JC}$	1.17		$^{\circ}\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MJ2500 MJ3000		MJ2501 MJ3001		UNIT
		MIN	MAX	MIN	MAX	
$I_{CER}$	$V_{CE}=\text{Rated}, R_{BE}=1,000\Omega$		1.0		1.0	mA
$I_{CER}$	$V_{CE}=\text{Rated}, R_{BE}=1,000\Omega, T_C=150^{\circ}\text{C}$		5.0		5.0	mA
$I_{CEO}$	$V_{CE}=\frac{1}{2} \times \text{Rated } V_{CE}$		1.0		1.0	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0		2.0	mA
$BV_{CEO}$	$I_C=100\text{mA}$	60		80		V
$V_{CE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=20\text{mA}$		2.0		2.0	V
$V_{CE}(\text{SAT})$	$I_C=10\text{A}, I_B=50\text{mA}$		4.0		4.0	V
$V_{BE}(\text{on})$	$V_{CE}=3.0\text{V}, I_C=5.0\text{A}$		3.0		3.0	V
$h_{fe}$	$V_{CE}=3.0\text{V}, I_C=5.0\text{A}$	1000		1000		-

## 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

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
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