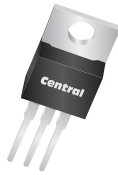


MJE700T THRU MJE703T PNP  
MJE800T THRU MJE803T NPN

**COMPLEMENTARY  
POWER DARLINGTON TRANSISTORS**



**TO-220 CASE**



[www.centra-semi.com](http://www.centra-semi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR MJE700T, MJE800T series devices are medium power complementary silicon Darlington transistors designed for audio amplifier applications as complementary output devices.

**MARKING: FULL PART NUMBER**

	SYMBOL	MJE700T	MJE702T	UNITS
		MJE701T	MJE703T	
MAXIMUM RATINGS: (T <sub>C</sub> =25°C)		MJE800T	MJE802T	
		MJE801T	MJE803T	
Collector-Base Voltage	V <sub>CBO</sub>	60	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	60	80	V
Emitter-Base Voltage	V <sub>EBO</sub>		5.0	V
Continuous Collector Current	I <sub>C</sub>		4.0	A
Continuous Base Current	I <sub>B</sub>		100	mA
Power Dissipation	P <sub>D</sub>		50	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150		°C
Thermal Resistance	θ <sub>JC</sub>	2.5		°C/W

**ELECTRICAL CHARACTERISTICS: (T<sub>C</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =Rated V <sub>CBO</sub>		100	μA
I <sub>CBO</sub>	V <sub>CB</sub> =Rated V <sub>CBO</sub> , T <sub>C</sub> =100°C		500	μA
I <sub>CEO</sub>	V <sub>CE</sub> =Rated V <sub>CEO</sub>		100	μA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V		2.0	mA
BV <sub>CEO</sub>	I <sub>C</sub> =50mA (MJE702T,703T,802T,803T)	80		V
BV <sub>CEO</sub>	I <sub>C</sub> =50mA (MJE700T,701T,800T,801T)	60		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =1.5A, I <sub>B</sub> =30mA (MJE700T,702T,800T,802T)		2.5	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =2.0A, I <sub>B</sub> =40mA (MJE701T,703T,801T,803T)		2.8	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =4.0A, I <sub>B</sub> =40mA		3.0	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =1.5A (MJE700T,702T,800T,802T)		2.5	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =2.0A (MJE701T,703T,801T,803T)		2.5	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =4.0A		3.0	V
h <sub>FE</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =1.5A (MJE700T,702T,800T,802T)	750		
h <sub>FE</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =2.0A (MJE701T,703T,801T,803T)	750		
h <sub>FE</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =4.0A	100		
f <sub>T</sub>	V <sub>CE</sub> =3.0V, I <sub>C</sub> =1.5A, f=1.0MHz	1.0		MHz

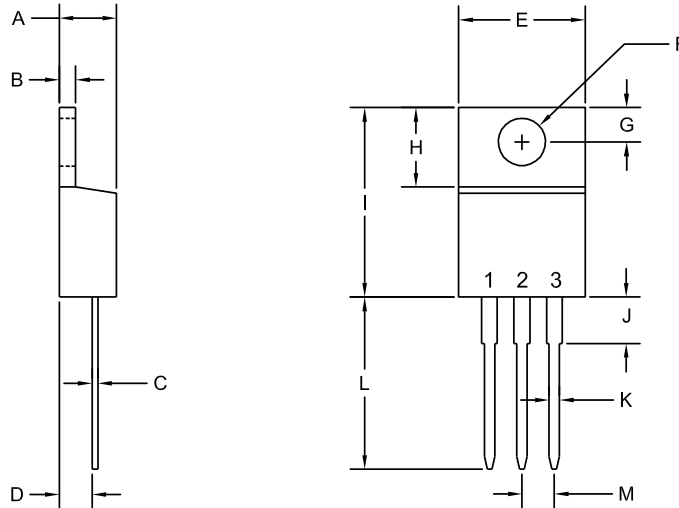
R1 (23-January 2014)

MJE700T THRU MJE703T PNP  
MJE800T THRU MJE803T NPN

COMPLEMENTARY  
POWER DARLINGTON TRANSISTORS



TO-220 CASE - MECHANICAL OUTLINE



R2

**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- Tab is common to pin 2

**MARKING:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

R1 (23-January 2014)

## 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

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**Worldwide Distributors:**  
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