

MJE200 NPN  
MJE210 PNP

**COMPLEMENTARY SILICON  
POWER TRANSISTORS**



**TO-126 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR MJE200, MJE210 types are complementary silicon transistors designed for high gain amplifier applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation
Power Dissipation ( $T_C=25^\circ\text{C}$ )
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance

SYMBOL		UNITS
$V_{CBO}$	40	V
$V_{CEO}$	25	V
$V_{EBO}$	8.0	V
$I_C$	5.0	A
$I_{CM}$	10	A
$I_B$	1.0	A
$P_D$	1.5	W
$P_D$	15	W
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JA}$	83.4	$^\circ\text{C/W}$
$\theta_{JC}$	8.34	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=40\text{V}$		100	nA
$I_{CBO}$	$V_{CB}=40\text{V}, T_J=125^\circ\text{C}$		100	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=8.0\text{V}$		100	nA
$BV_{CEO}$	$I_C=10\text{mA}$	25		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.3	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		0.75	V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=1.0\text{A}$		1.8	V
$V_{BE(SAT)}$	$I_C=5.0\text{A}, I_B=1.0\text{A}$		2.5	V
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}, I_C=2.0\text{A}$		1.6	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	70		
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=2.0\text{A}$	45	180	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$	10		
$f_T$	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=10\text{MHz}$	65		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$ (MJE200)		80	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$ (MJE210)		120	pF

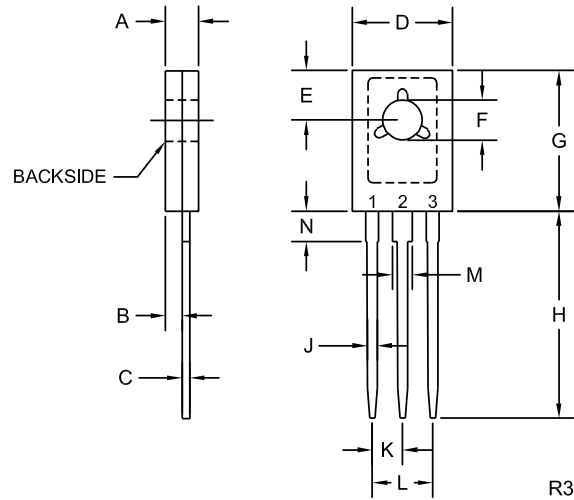
R1 (2-May 2012)

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TO-126 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.094	0.110	2.40	2.80
B	0.050		1.27	
C	0.015	0.030	0.38	0.75
D	0.291	0.335	7.40	8.50
E	0.148		3.75	
F	0.118	0.134	3.00	3.40
G	0.413	0.472	10.50	12.00
H	0.618		15.70	
J	0.024	0.035	0.62	0.90
K	0.089		2.25	
L	0.177		4.50	
M	0.045	0.055	1.14	1.40
N	0.083		2.10	

TO-126 (REV:R3)

R1 (2-May 2012)