

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MJE200

MJE210

COMPLEMENTARY SILICON
POWER TRANSISTORS

JEDEC TO-126 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MJE200, MJE210 types are Complementary Silicon Power Transistors designed for high gain amplifier applications.

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

	<u>SYMBOL</u>		<u>UNIT</u>
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	8.0	V
Collector Current	I_C	5.0	A
Collector Current (Peak)	I_{CM}	10	A
Base Current	I_B	1.0	A
Power Dissipation	P_D	1.5	W
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	15	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 TO +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	83.4	$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}	8.34	$^\circ\text{C/W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNIT</u>
I_{CB0}	$V_{CB}=40\text{V}$		100	nA
I_{CBO}	$V_{CB}=40\text{V}, T_J=125^\circ\text{C}$		100	μA
I_{EBO}	$V_{BE}=8.0\text{V}$		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
f_T	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=10\text{MHz}$	65		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (MJE200)		80	pF
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (MJE210)		120	pF