

MJE710 MJE711 MJE712 PNP
MJE720 MJE721 MJE722 NPN

**COMPLEMENTARY SILICON
POWER TRANSISTORS**



TO-126 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MJE710, MJE720 series types are Complementary Silicon Power Transistors designed for low power amplifier and medium speed switching applications.

MARKING: FULL PART NUMBER

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

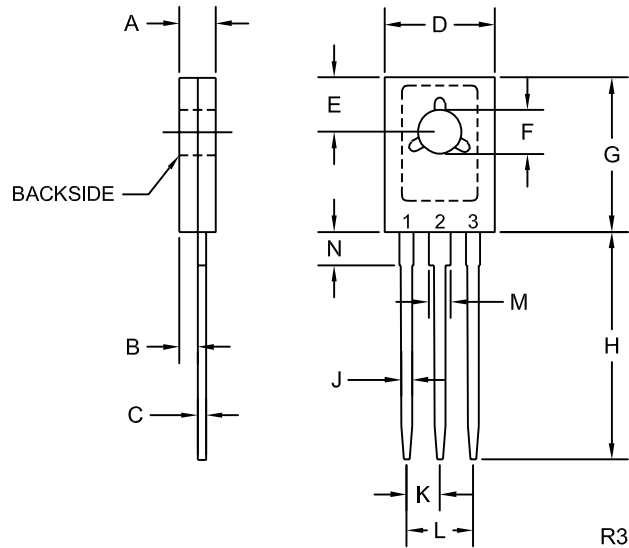
	SYMBOL	MJE710 MJE720	MJE711 MJE721	MJE712 MJE722	UNITS
Collector-Base Voltage	V_{CBO}	40	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Continuous Collector Current	I_C		1.5		A
Base Current	I_B		0.5		A
Power Dissipation	P_D		1.25		W
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D		20		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JA}		100		$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}		6.25		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CEV}	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}(\text{OFF})=1.5\text{V}$		100	μA
I_{CEV}	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}(\text{OFF})=1.5\text{V } (T_C=125^\circ\text{C})$		500	μA
I_{CEO}	$V_{CE}=1/2 \text{ Rated } V_{CEO}$		500	μA
I_{EBO}	$V_{EB}=5.0\text{V}$		1.0	mA
BV_{CEO}	$I_C=50\text{mA}$ (MJE710, MJE720)	40		V
BV_{CEO}	$I_C=50\text{mA}$ (MJE711, MJE721)	60		V
BV_{CEO}	$I_C=50\text{mA}$ (MJE712, MJE722)	80		V
$V_{CE}(\text{SAT})$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.15	V
$V_{CE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.4	V
$V_{CE}(\text{SAT})$	$I_C=1.5\text{A}, I_B=300\text{mA}$		1.0	V
$V_{BE}(\text{SAT})$	$I_C=1.5\text{A}, I_B=300\text{mA}$		1.3	V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$		0.95	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=150\text{mA}$	40		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	20		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	8.0		

R1 (16-September 2008)

TO-126 CASE - MECHANICAL OUTLINE



SYMBOL	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)

LEAD CODE:

- 1) EMITTER
- 2) COLLECTOR
- 3) BASE

MARKING:

FULL PART NUMBER