

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

MJE170 MJE171 MJE172 PNP
MJE180 MJE181 MJE182 NPN

SILICON COMPLEMENTARY
POWER TRANSISTOR

JEDEC TO-126 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MJE170, MJE180 series types are complementary Silicon Plastic Power Transistors designed for audio and high speed switching applications.

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

	SYMBOL	MJE170 MJE180	MJE171 MJE181	MJE172 MJE182	UNIT
Collector-Base Voltage	V _{CB0}	60	80	100	V
Collector-Emitter Voltage	V _{CE0}	40	60	80	V
Emitter-Base Voltage	V _{EB0}	7.0	7.0	7.0	V
Collector Current	I _C	3.0	3.0	3.0	A
Collector Current (Peak)	I _{CM}	6.0	6.0	6.0	A
Base Current	I _B	1.0	1.0	1.0	A
Power Dissipation (T _A =25°C)	P _D	1.5	1.5	1.5	W
Power Dissipation	P _D	15	15	15	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 TO +150			°C
Thermal Resistance	θ _{JA}	83			°C/W
Thermal Resistance	θ _{JC}	8.3			°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I _{CB0}	V _{CB} =Rated V _{CB0}		0.1	μA
I _{CB0}	V _{CB} =Rated V _{CB0} , T _C =150°C		0.1	mA
I _{EB0}	V _{BE} =7.0V		0.1	μA
BV _{CE0}	I _C =10mA, (MJE170, MJE180)	40		V
BV _{CE0}	I _C =10mA, (MJE171, MJE181)	60		V
BV _{CE0}	I _C =10mA, (MJE172, MJE182)	80		V
V _{CE} (SAT)	I _C =500mA, I _B =50mA		0.3	V
V _{CE} (SAT)	I _C =1.5A, I _B =150mA		0.9	V
V _{CE} (SAT)	I _C =3.0A, I _B =600mA		1.7	V
V _{BE} (SAT)	I _C =1.5A, I _B =150mA		1.5	V
V _{BE} (SAT)	I _C =3.0A, I _B =600mA		2.0	V
V _{BE} (ON)	V _{CE} =1.0V, I _C =500mA		1.2	V
h _{FE}	V _{CE} =1.0V, I _C =100mA	50	250	
h _{FE}	V _{CE} =1.0V, I _C =500mA	30		
h _{FE}	V _{CE} =1.0V, I _C =1.5A	12		
f _T	V _{CE} =10V, I _C =100mA, f=10MHz	50		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz (NPN)		30	pF
C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz (PNP)		50	pF