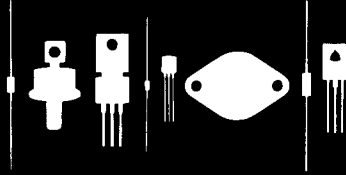


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MJE710 MJE711 MJE712 PNP
MJE720 MJE721 MJE722 NPN
COMPLEMENTARY SILICON
PLASTIC POWER TRANSISTORS
JEDEC TO-126 CASE

DESCRIPTION

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

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

	SYMBOL	MJE710 MJE720	MJE711 MJE721	MJE712 MJE722	UNIT
Collector-Base Voltage	V_{CBO}	40	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}	40	60	80	V
Collect Current	I_C		1.5		A
Base Current	I_B		0.5		A
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D		1.5		W
Power Dissipation	P_D		25		W
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +150			$^\circ\text{C}$
Thermal Resistance	θ_{JA}		83.3		$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}		5.0		$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
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}	$V_{CE}=\frac{1}{2}\text{Rated } V_{CEO}$		500	μA
I_{EBO}	$V_{BE}=5.0\text{V}$		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}	$V_{CE}=1.0\text{V}, k=1.0\text{A}$	8.0		