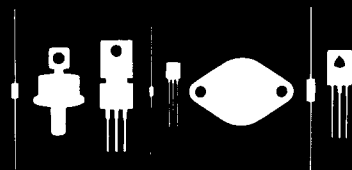


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MJE700T THRU MJE703T PNP
MJE800T THRU MJE803T NPN

SILICON POWER DARLINGTON
COMPLEMENTARY TRANSISTORS

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MJE700T, MJE800T Series types are Medium Power Complementary Silicon Darlington Transistors designed for audio amplifier applications as complementary output devices.

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

	<u>SYMBOL</u>	<u>MJE700T</u> <u>MJE701T</u> <u>MJE800T</u> <u>MJE801T</u>	<u>MJE702T</u> <u>MJE703T</u> <u>MJE802T</u> <u>MJE803T</u>	<u>UNIT</u>
Collector-Base Voltage	V_{CB0}	60	80	V
Collector-Emitter Voltage	V_{CE0}	60	80	V
Emitter-Base Voltage	V_{EB0}	5.0	5.0	V
Collector Current	I_C	4.0	4.0	A
Base Current	I_B	0.1	0.1	A
Power Dissipation	P_D	50	50	W
Operating and Storage				
Junction Temperature	T_J, T_{stg}	-55 TO +150		$^\circ\text{C}$
Thermal Resistance	θ_{JC}	2.5	2.5	$^\circ\text{C/W}$

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}	$V_{CB}=\text{Rated } V_{CE0}$		0.2	mA	
I_{CB0}	$V_{CB}=\text{Rated } V_{CE0}, T_C=100^\circ\text{C}$		2.0	mA	
I_{CE0}	$V_{CE}=\frac{1}{2} \text{ Rated } V_{CE0}$		500	μA	
I_{EB0}	$V_{BE}=5.0\text{V}$		2.0	mA	
BV_{CE0}	$I_C=50\text{mA}, (\text{MJE700}, 701, 800, 801 \text{ ONLY})$	60		V	
BV_{CE0}	$I_C=50\text{mA}, (\text{MJE702}, 703, 802, 803 \text{ ONLY})$	80		V	
		<u>MJE700T</u> <u>MJE702T</u> <u>MJE800T</u> <u>MJE802T</u>	<u>MJE701T</u> <u>MJE703T</u> <u>MJE801T</u> <u>MJE803T</u>		
		<u>MIN</u> <u>MAX</u>	<u>MIN</u> <u>MAX</u>	<u>UNIT</u>	
$V_{CE(\text{SAT})}$	$I_C=1.5\text{A}, I_B=30\text{mA}$		2.5	V	
$V_{CE(\text{SAT})}$	$I_C=2.0\text{A}, I_B=40\text{mA}$		-	2.8	V
$V_{BE(\text{ON})}$	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}$		2.5	-	V
$V_{BE(\text{ON})}$	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$		-	2.5	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}$	750		-	-
h_{FE}	$V_{CE}=3.0\text{V}, I_C=2.0\text{A}$	-		750	-
h_{fe}	$V_{CE}=3.0\text{V}, I_C=1.5\text{A}, f=1.0\text{MHz}$	1.0		1.0	-