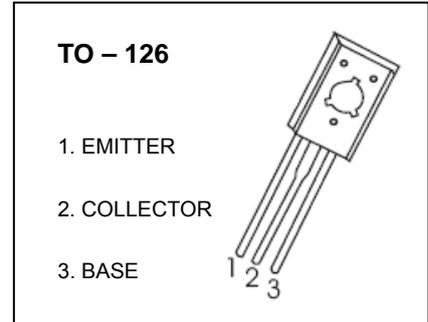


## TO-126 Plastic-Encapsulate Transistors

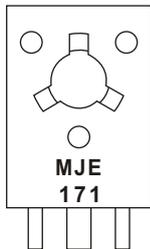
### MJE171 TRANSISTOR (PNP)

#### FEATURES

- Low Power Audio Amplifier
- Low Current, High Speed Switching Applications

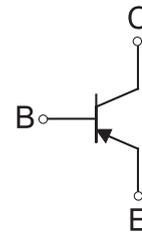


#### MARKING



MJE171=Device code

#### Equivalent Circuit



#### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MJE171	TO-126	Bulk	200pcs/Bag
MJE171-TU	TO-126	Tube	60pcs/Tube

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

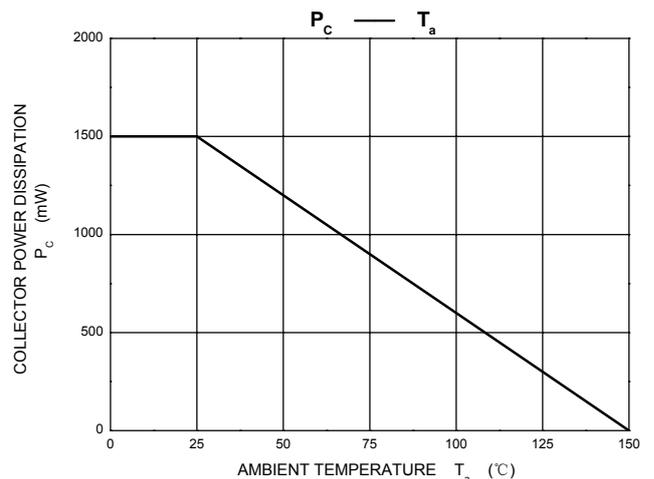
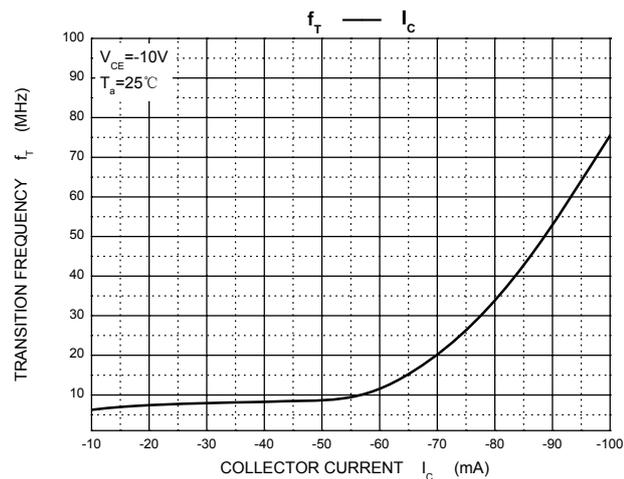
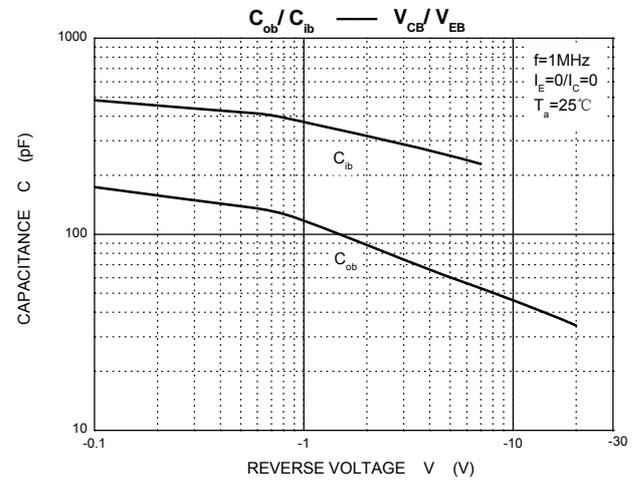
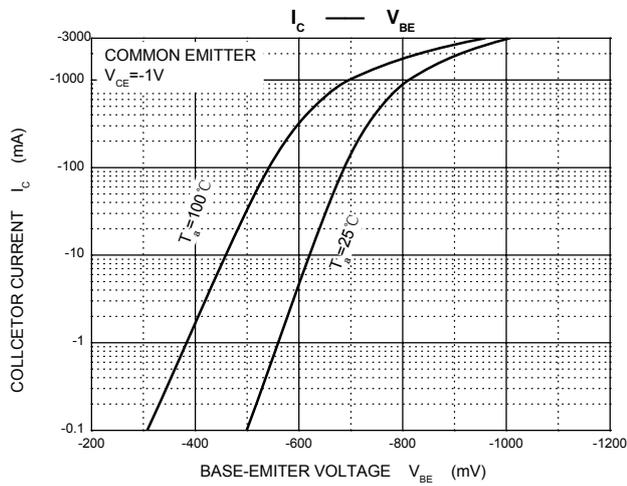
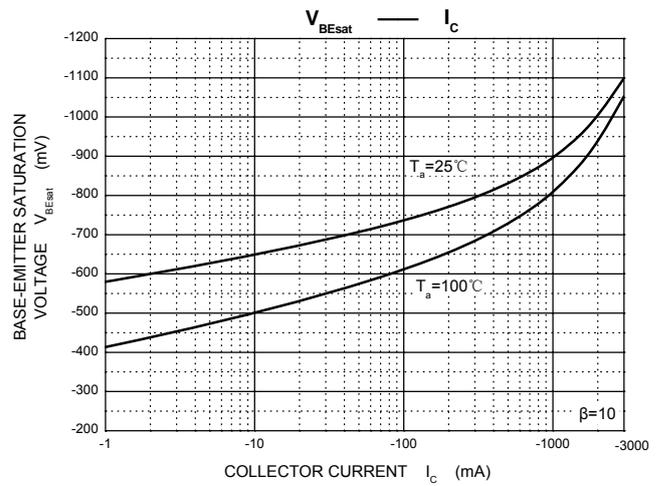
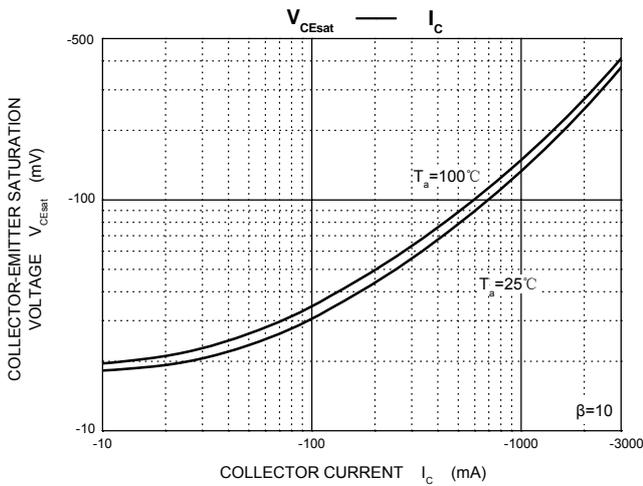
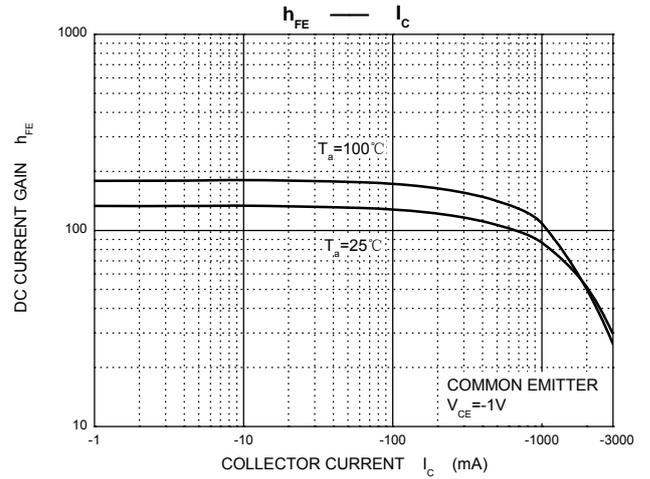
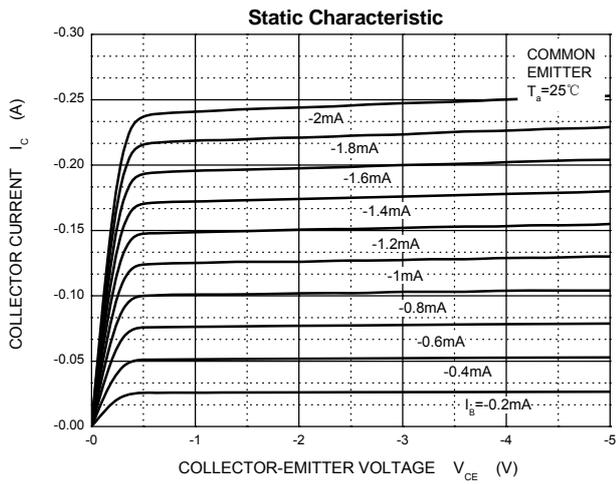
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-7	V
$I_C$	Collector Current	-3	A
$P_C$	Collector Power Dissipation	1.5	.W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	83	$^{\circ}\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

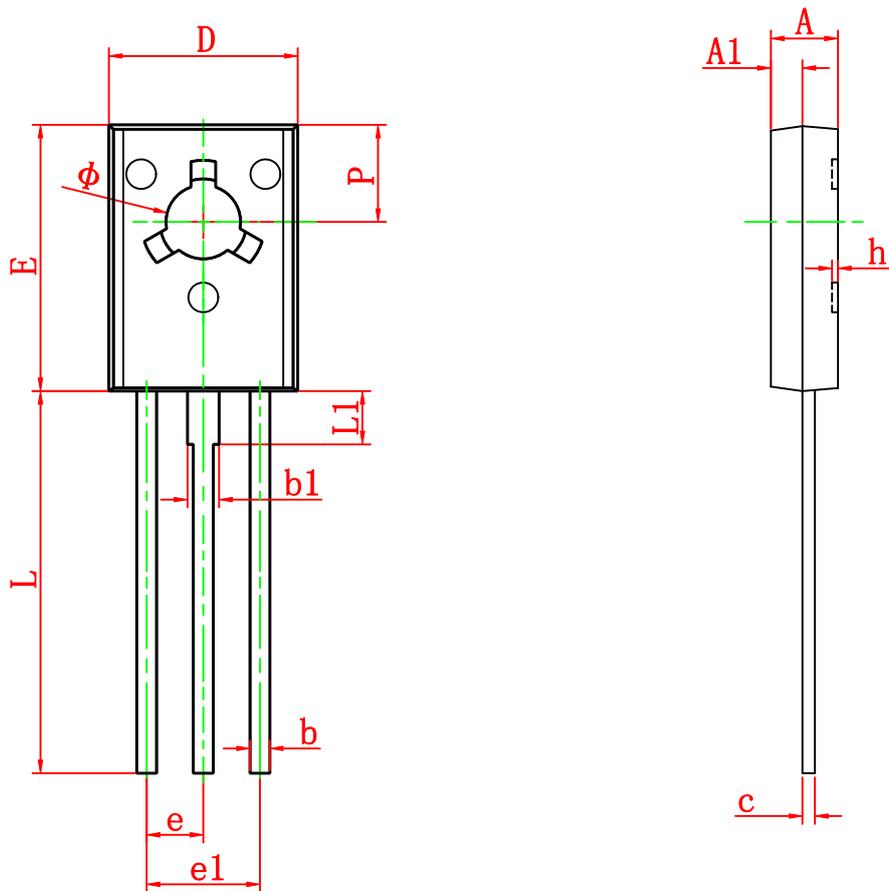
$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1\text{mA}, I_E = 0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\text{mA}, I_C = 0$	-7			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -80\text{V}, I_E = 0$			-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -7\text{V}, I_C = 0$			-100	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -0.1\text{A}$	50		250	
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -0.5\text{A}$	30			
	$h_{FE(3)}$	$V_{CE} = -1\text{V}, I_C = -1.5\text{A}$	12			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-0.3	V
	$V_{CE(sat)(2)}$	$I_C = -1.5\text{A}, I_B = -150\text{mA}$			-0.9	V
	$V_{CE(sat)(3)}$	$I_C = -3\text{A}, I_B = -600\text{mA}$			-1.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1.5\text{A}, I_B = -150\text{mA}$			-1.5	V
		$I_C = -3\text{A}, I_B = -600\text{mA}$			-2	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = -1\text{V}, I_C = -500\text{mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}, I_C = -0.1\text{A}$	50			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 0.1\text{MHz}$			50	pF

# Typical Characteristics



# TO-126 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
$\phi$	3.000	3.200	0.118	0.126