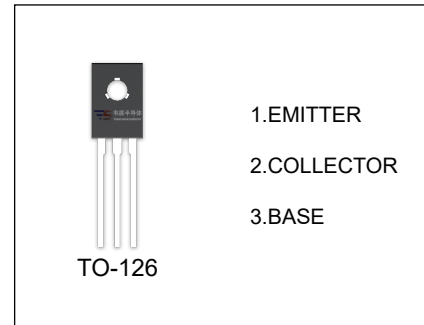


MJE171 TRANSISTOR (PNP)

FEATURES

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



ORDERING INFORMATION

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

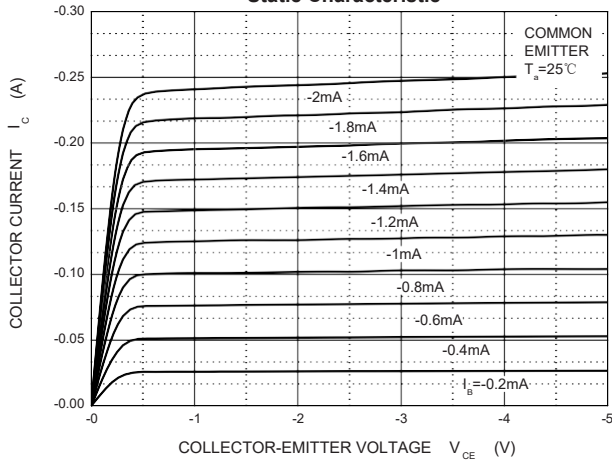
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

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, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

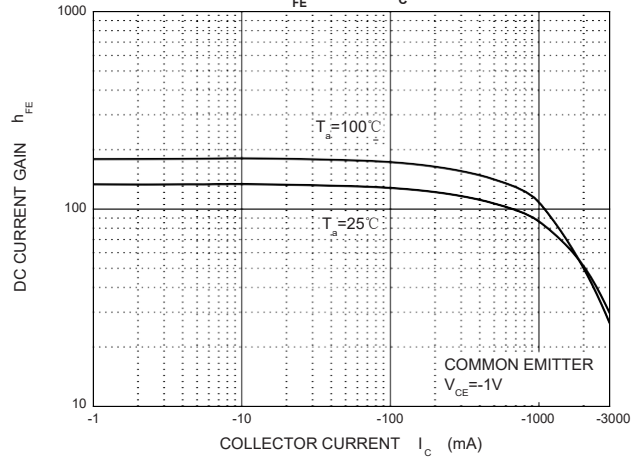
$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

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

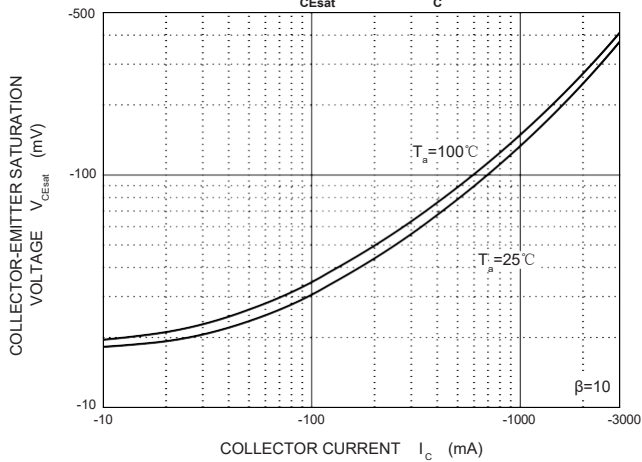
Static Characteristic



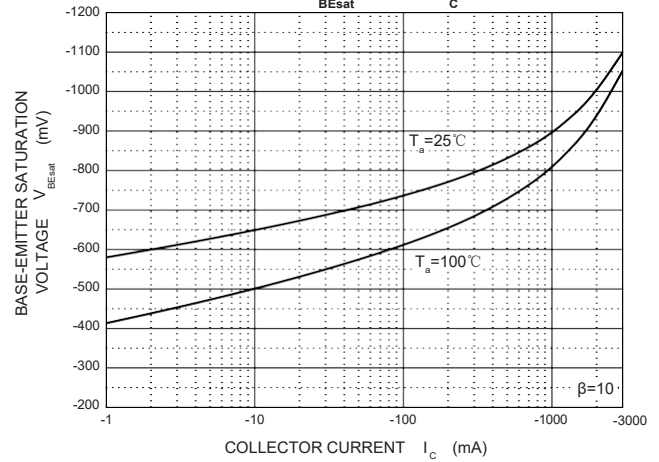
h_{FE} — I_c



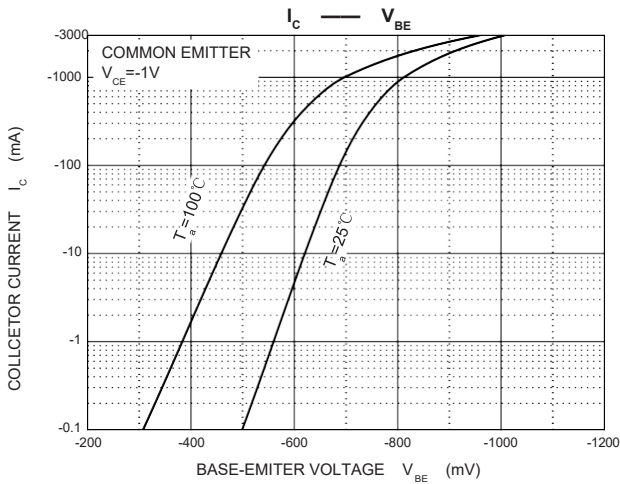
V_{CEsat} — I_c



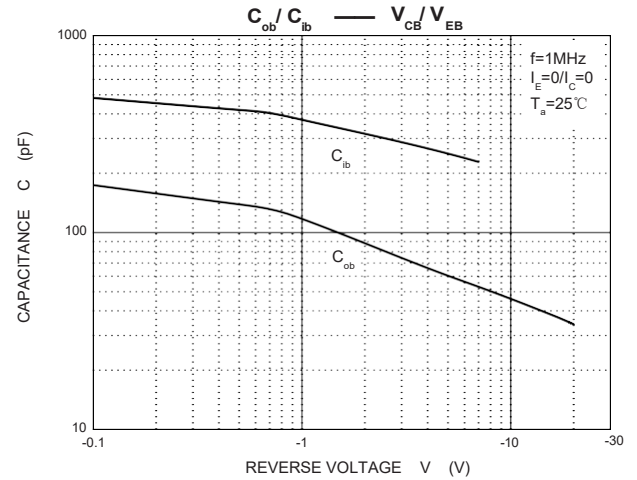
V_{BEsat} — I_c



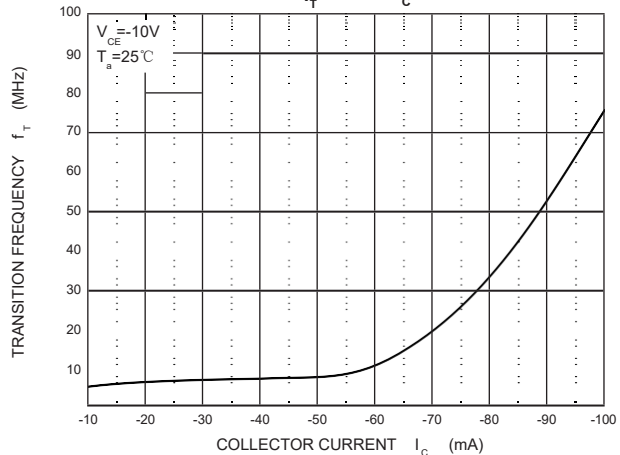
I_c — V_{BE}



C_{ob}/C_{ib} — V_{CB}/V_{EB}



f_T — I_c



P_c — T_a

