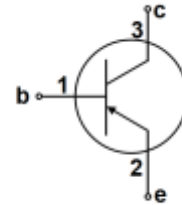


Features

- High DC Current Gain
- RoHS Product

Applications

- Audio amplifiers



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	
Emitter-Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-8	A
Total Device Dissipation($T_A=25^{\circ}\text{C}$)	P_D	54	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~150	

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition		Min	Type	Max	Unit
Collector-Emitter Breakdown Voltage ¹	V _{(BR)CEO}	I _C =-1.0mA, I _B =0		-150	-	-	V
Collector-Base Breakdown Voltage ¹	V _{(BR)CBO}	I _C =-100μA, I _E =0		-160	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0		-5	-	-	V
Collector Cutoff Current	I _{CEO}	V _{CE} =-150V, I _B =0		-	-	-1000	nA
Collector Sustain Current	I _{CBO}	V _{CB} =-150V, I _E =0		-	-	-1000	nA
Emitter Sustain Current	I _{EBO}	V _{EB} =-5V, I _C =0		-	-	-100	nA
DC Current Gain	H _{FE}	V _{CE} =-10V	I _C =-0.01A	6	-	-	V
			I _C =-0.1A	6	-	-	V
			I _C =-1	60	105	-	V
			I _C =-2A	60	-	-	V
			I _C =-4A	30	-	-	V
Collector-Emitter Saturation	V _{CE(sat)}	I _C =-5A, I _B =-500mA		-	0.23	0.50	V

Base-Emitter Saturation	$V_{BE(sat)}$	$I_C = -5A, I_B = -500mA$	-	-1.1	-1.3	V
Maximum cut-off frequency	f_T	$V_{CE} = -10V, I_C = -500mA, f = 10MHz$	40	-	-	MHz

Thermal Characteristics

Thermal data			
Parameter	Symbol	Value	Unit
Thermal resistance junction-case max	$R_{thj-case}$	2.3	$^{\circ}C/W$
Thermal resistance junction-ambient max	$R_{thj-amb}$	60	

Ordering Information

Ordering code	Silkprint	Package
MSJ8P15BT0	MSJ8P15BT0	TO-220

Typical Performance Characteristics

Fig.1 Static Characteristic

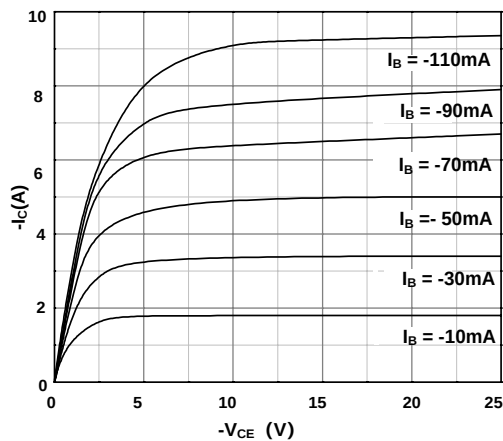


Fig.2 DC Current Gain

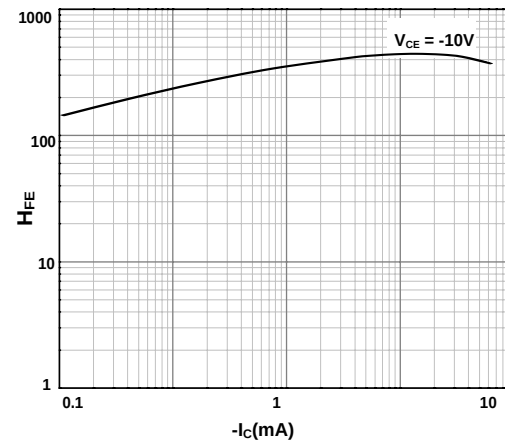


Fig 3 Saturation Voltage

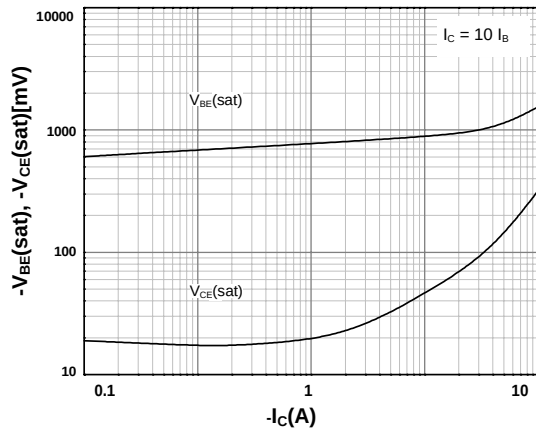


Fig.4 Base-Emitter On Voltage

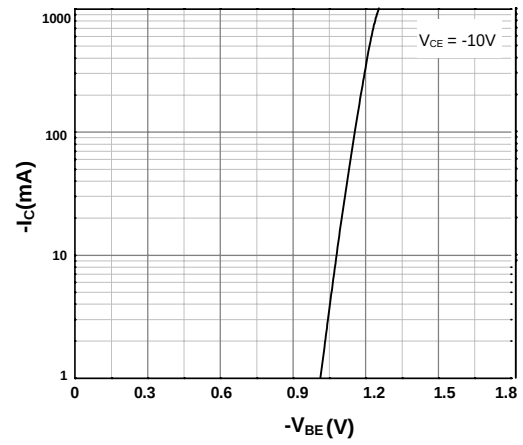


Fig5. Collector Output Capacitance

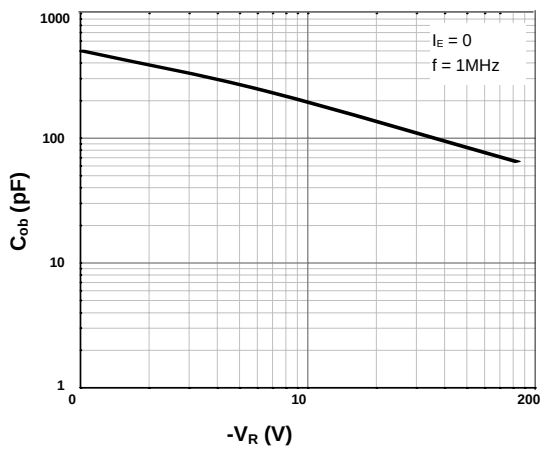


Fig6. Current Gain Bandwidth Product

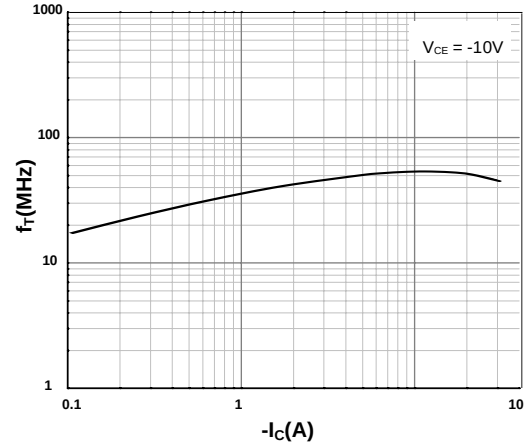


Fig 7. Power De-rating

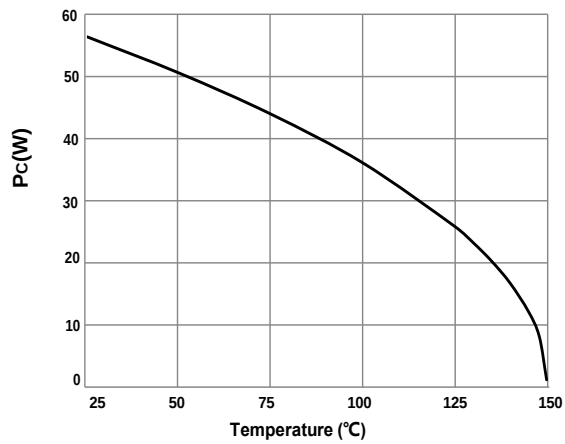
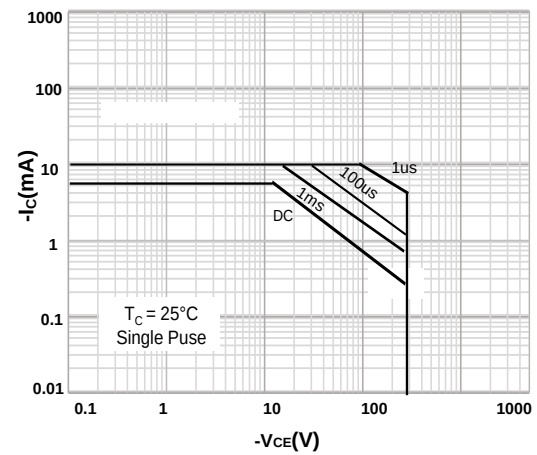


Fig 8. Maximum Safe Operating Area



Package Mechanical Data

