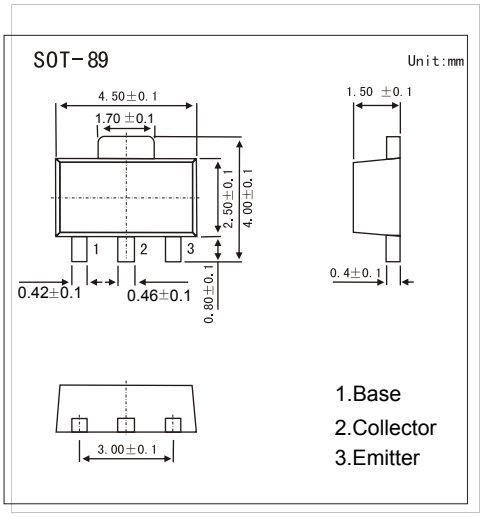
Surface Mount NPN Silicon Power Transistor

FEATURES

- Low Voltage
- High Current

APPLICATIONS

- Driver Stages of Audio Amplifiers



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

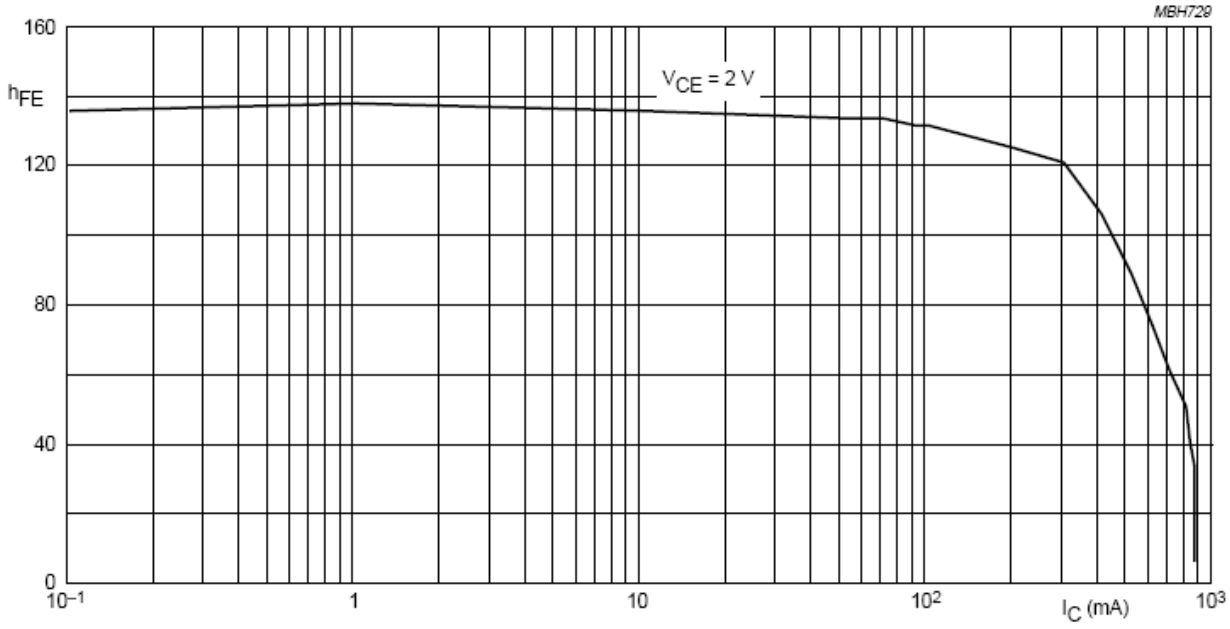
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
I_B	Base Current	0.1	A
I_{BM}	Peak base Current (tp<1ms)	0.2	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃
T_{opr}	Operation Temperature Range	-25~+125	℃

■ Marking

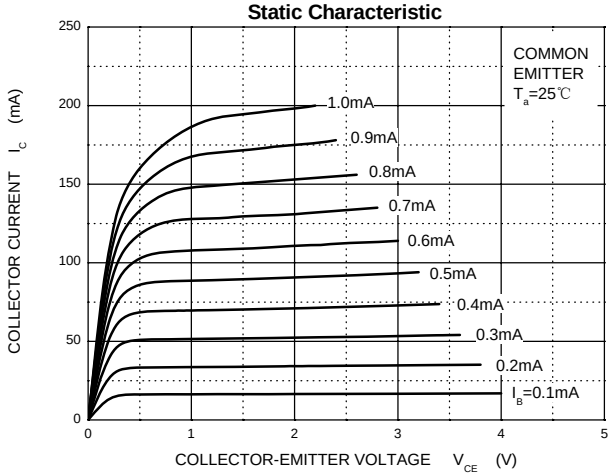
Marking	W4B ***

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0		120		V
Collector-emitter breakdown voltage	$V_{(BR)CEO*}$	I_C=10mA,I_B=0		100		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)*}$	V_{CE}=2V, I_C=5mA	40			
	$h_{FE(2)*}$	V_{CE}=2V, I_C=150mA	63		250	
	$h_{FE(3)*}$	V_{CE}=2V, I_C=0.5A	25			
Collector-emitter saturation voltage	$V_{CE(sat)*}$	I_C=0.5A,I_B=50mA			0.5	V
Base -emitter voltage	V_{BE*}	V_{CE}=2V, I_C=0.5A			1	V
Transition frequency	f_T	V_{CE}=5V,I_C=10mA, f=100MHz		130		MHz

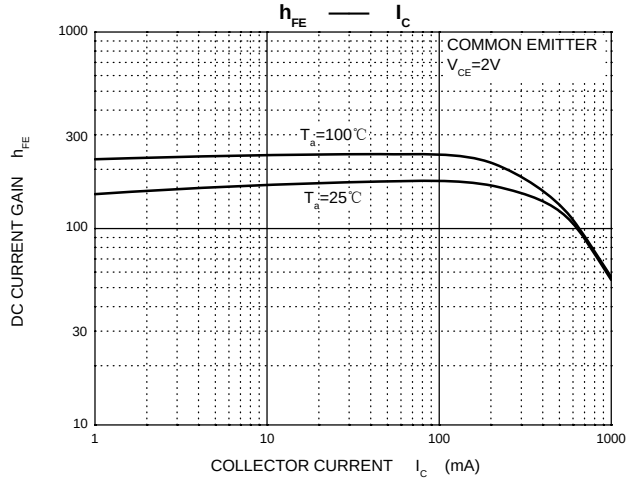
***** Pulse Test



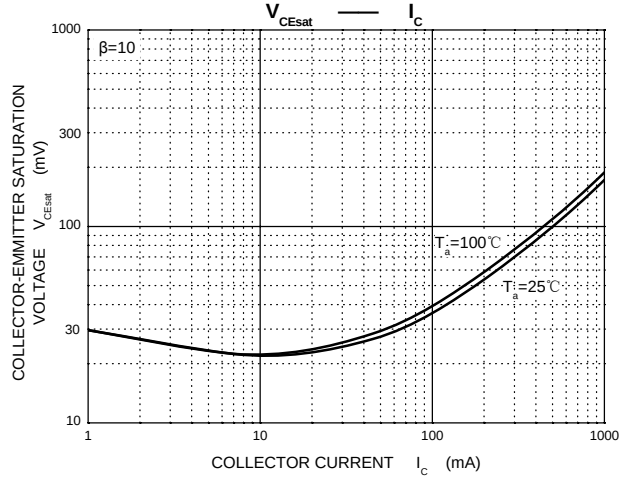
Static Characteristic



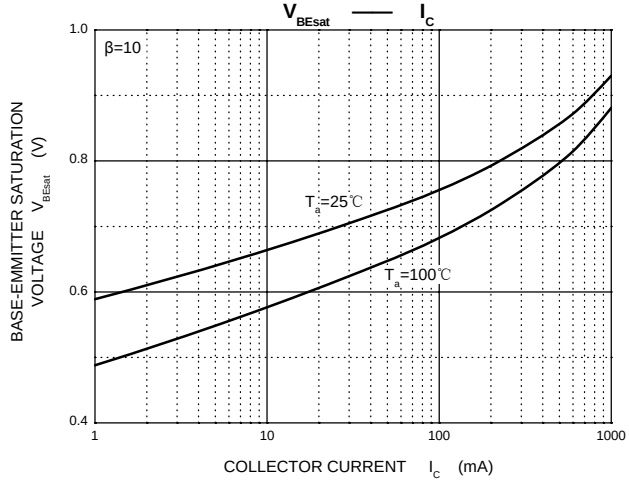
h_{FE} — I_C



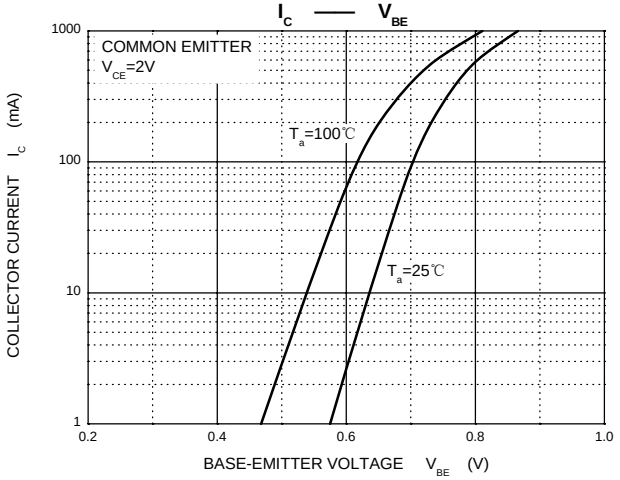
V_{CEsat} — I_C



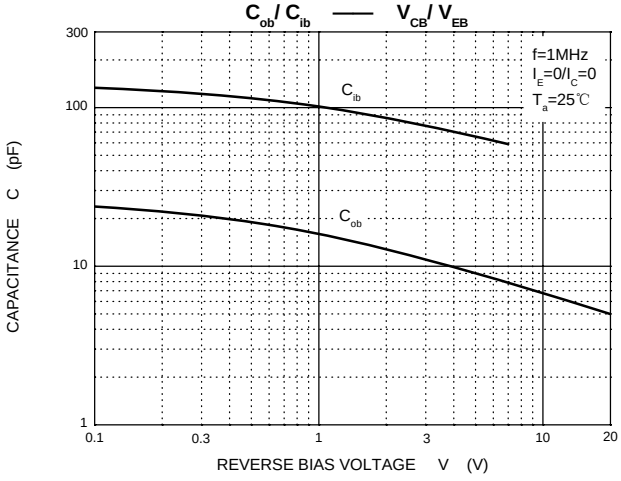
V_{BEsat} — I_C



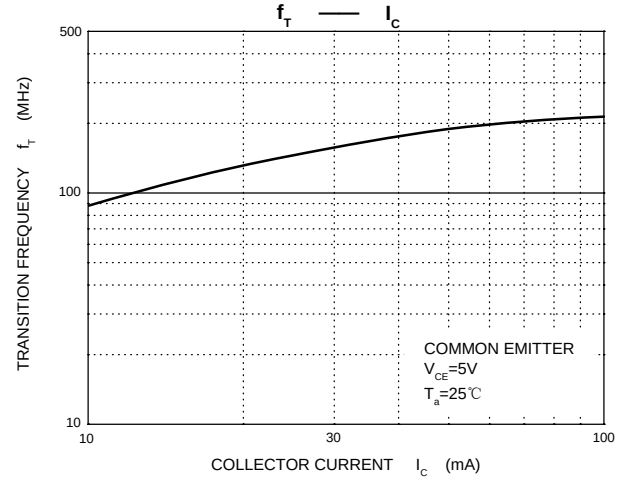
I_C — V_{BE}



C_{ob} / C_{ib} — V_{CB} / V_{EB}



f_T — I_C



P_C — T_a

