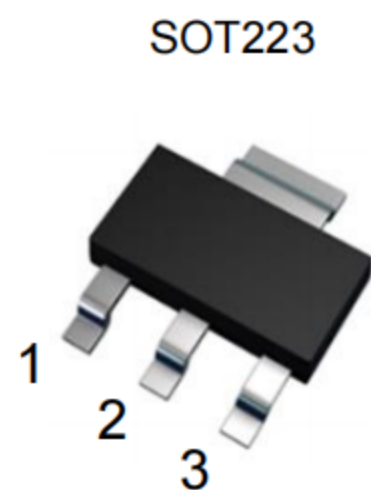


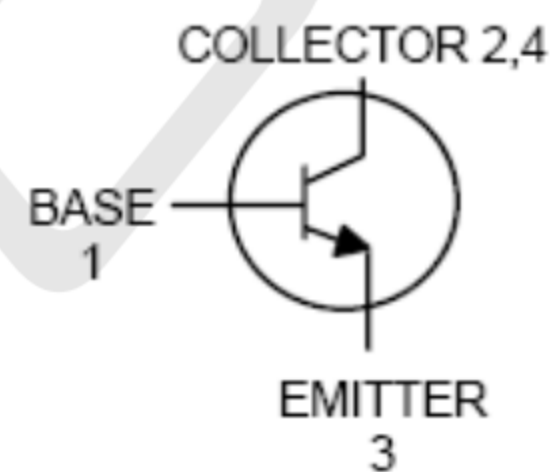


Features

- Low Voltage and Low Current
- Complementary to TPPZT3906
- General Purpose Amplifier and Switch Application



Circuit Diagram



Marking: ZT3904

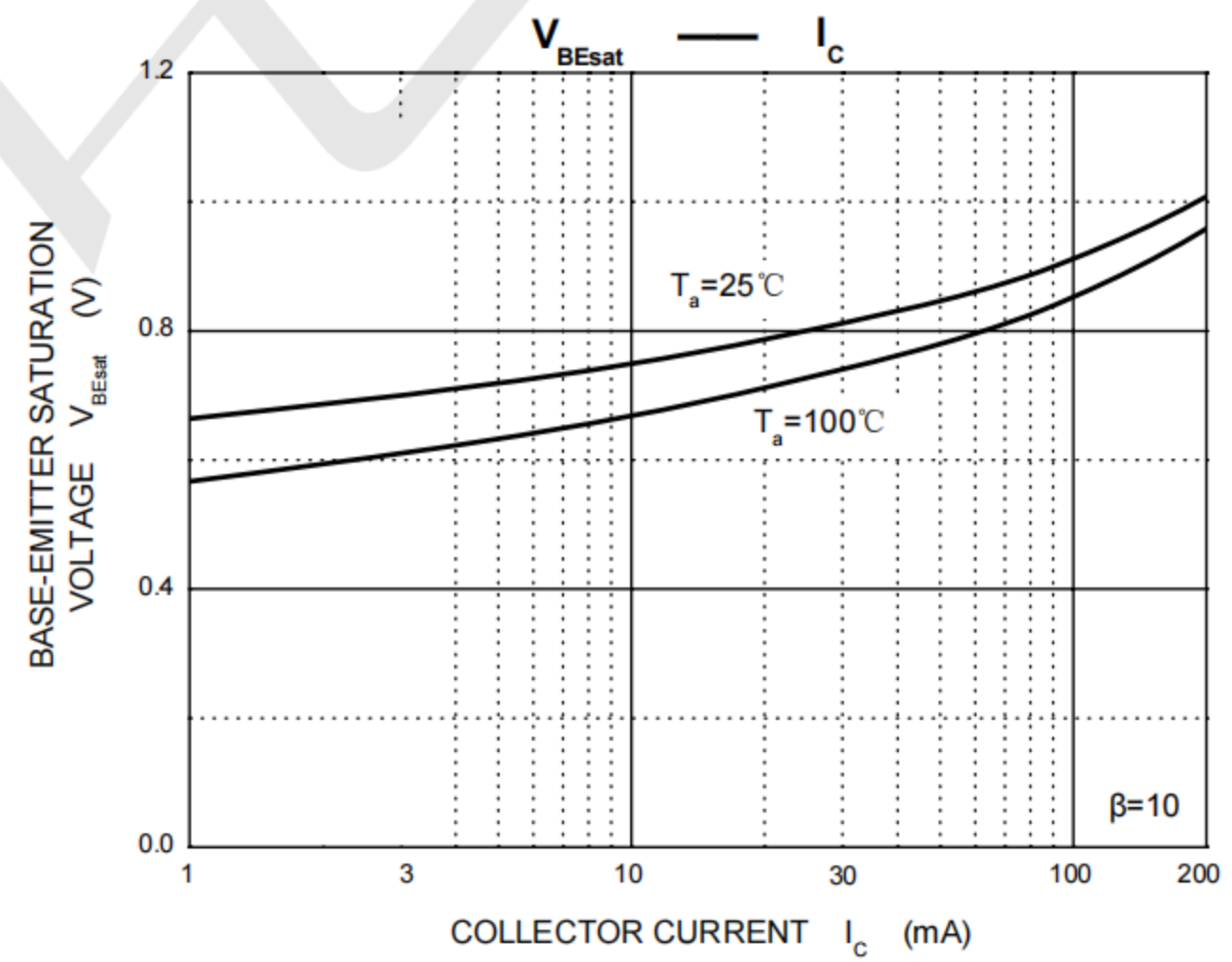
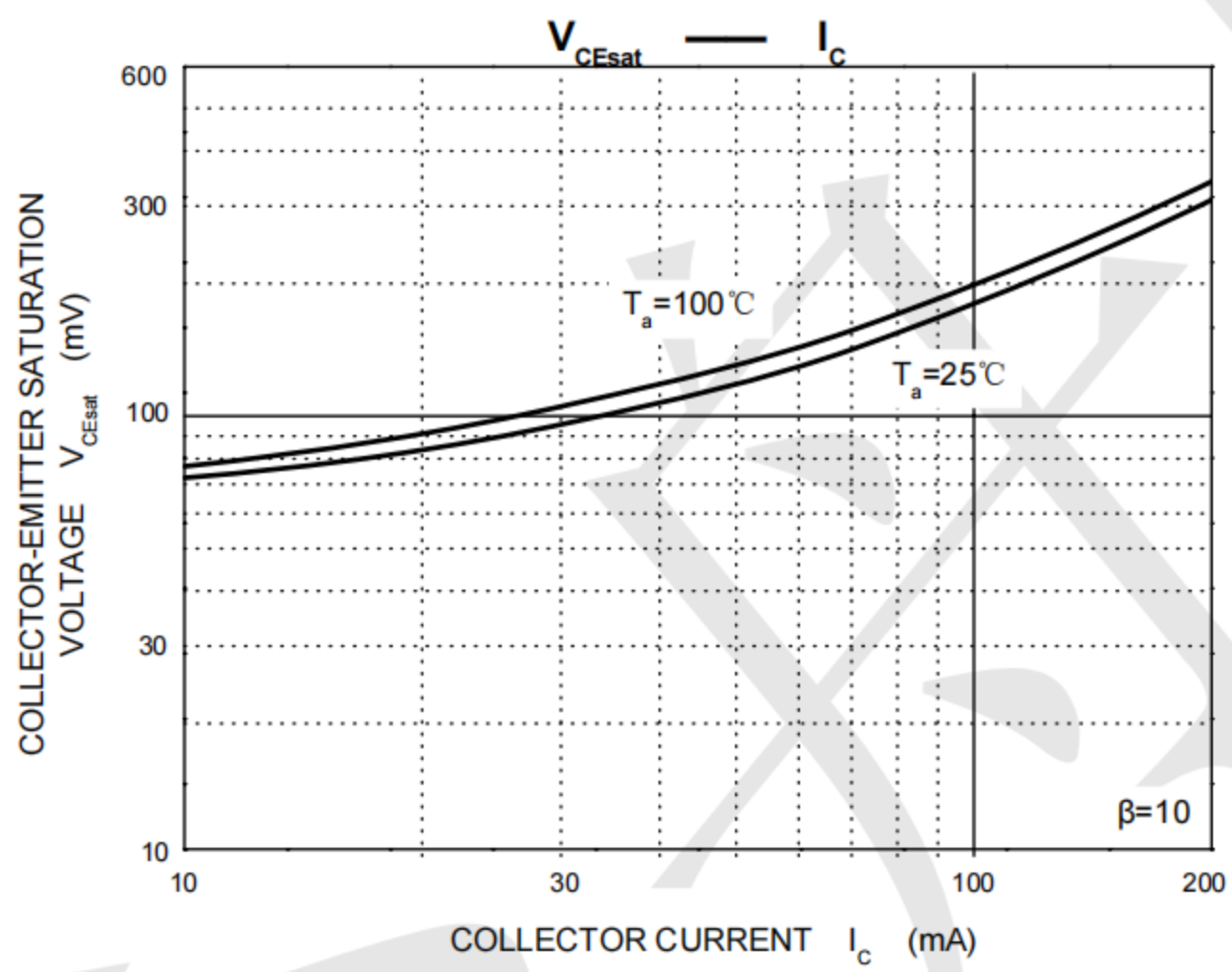
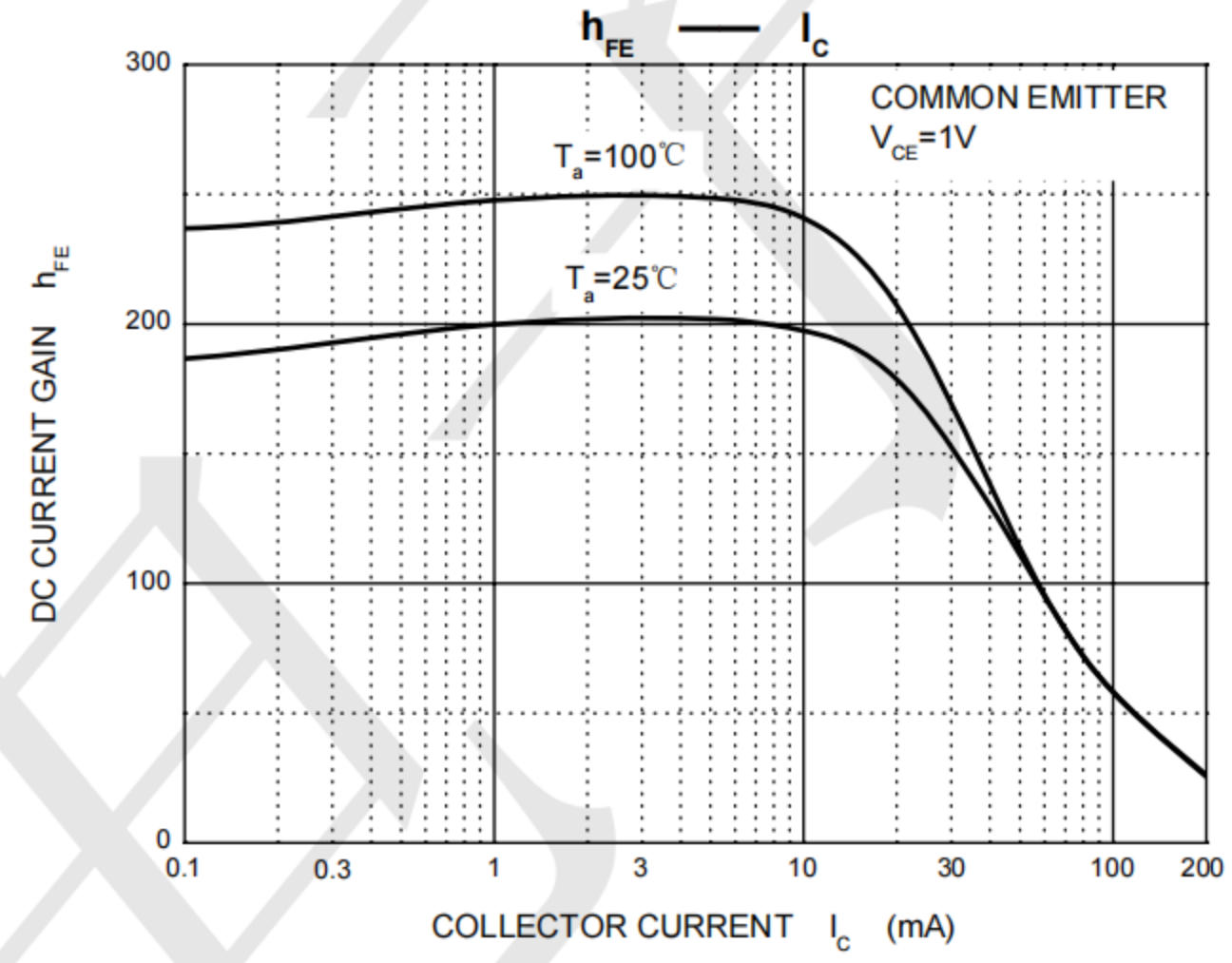
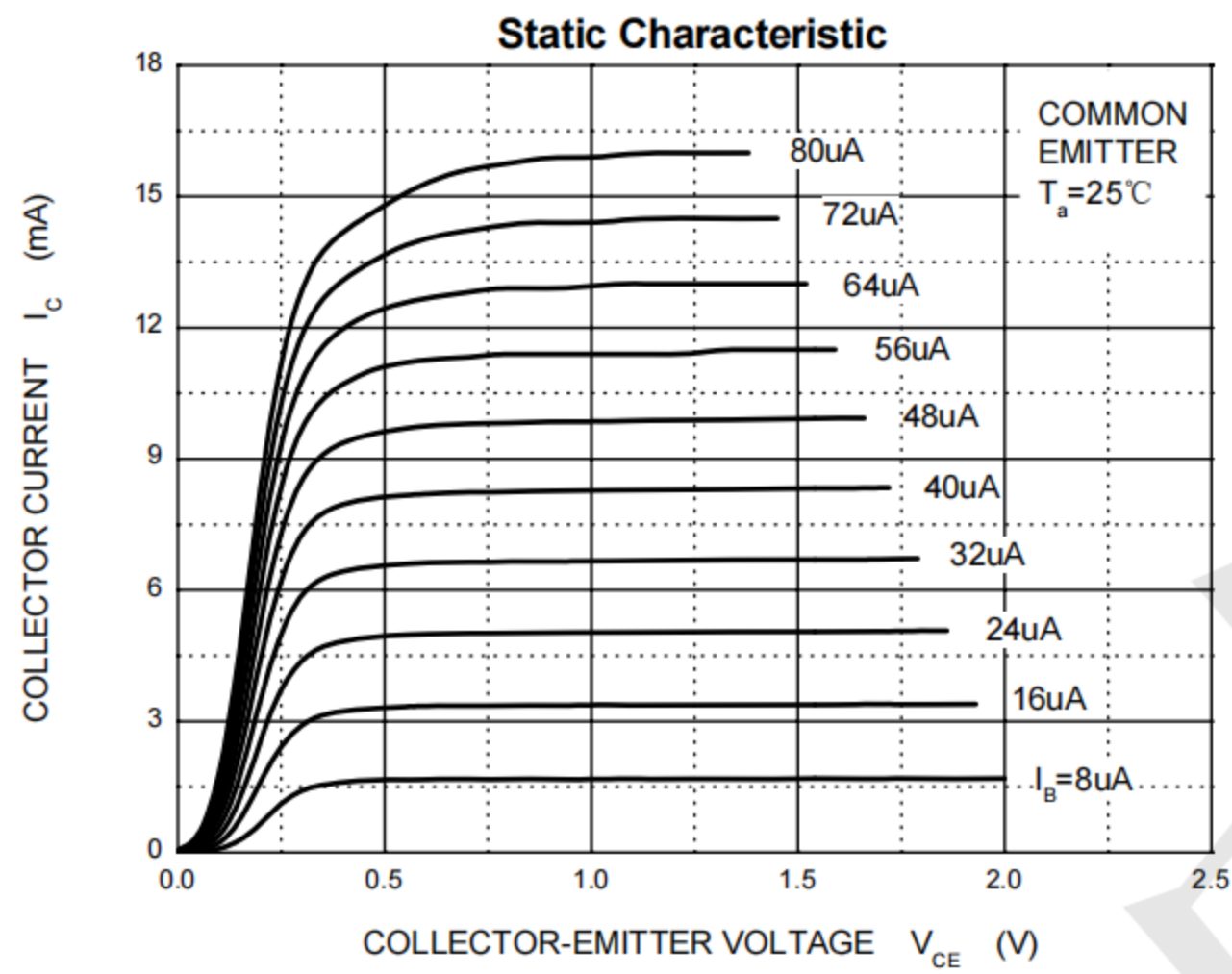
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

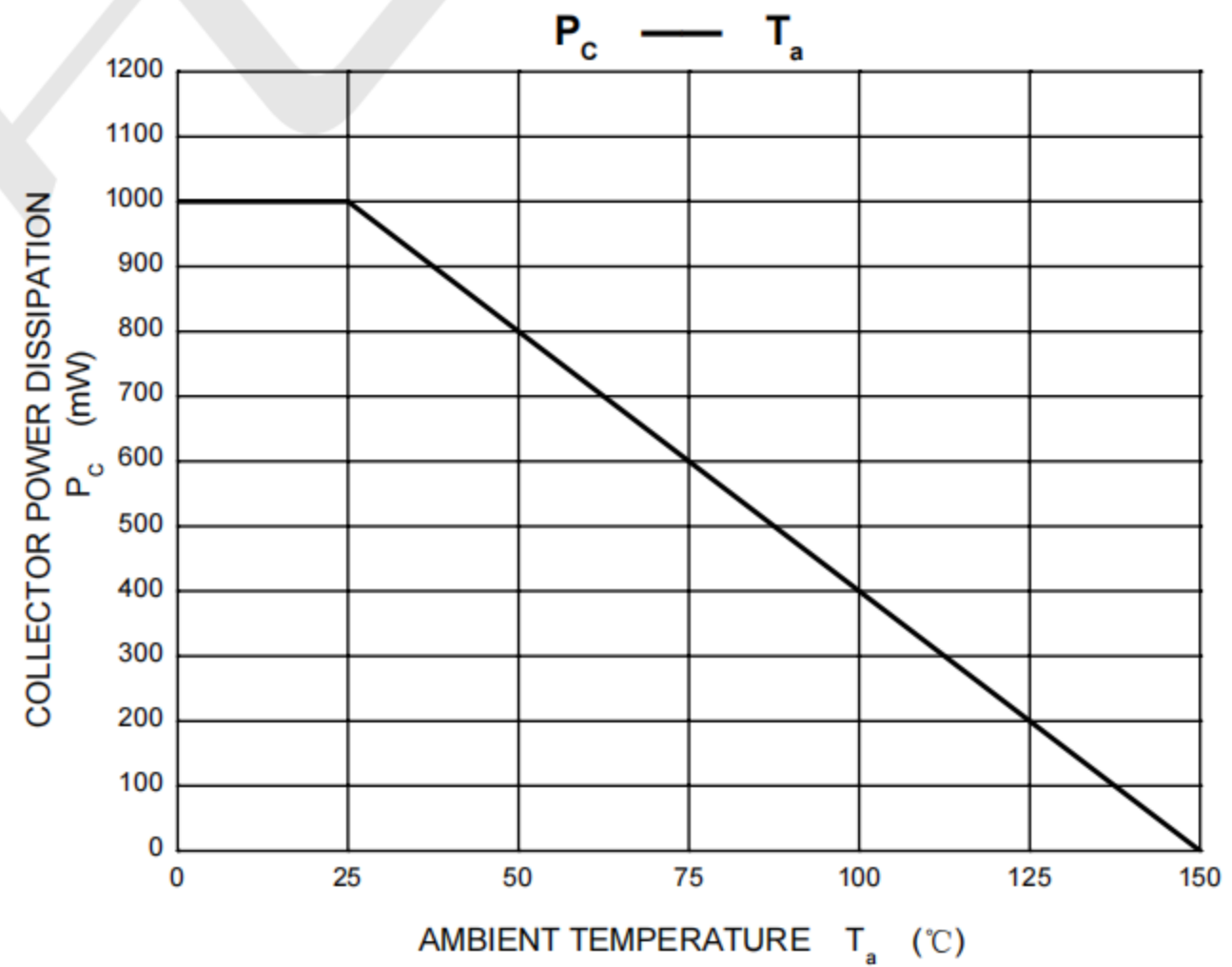
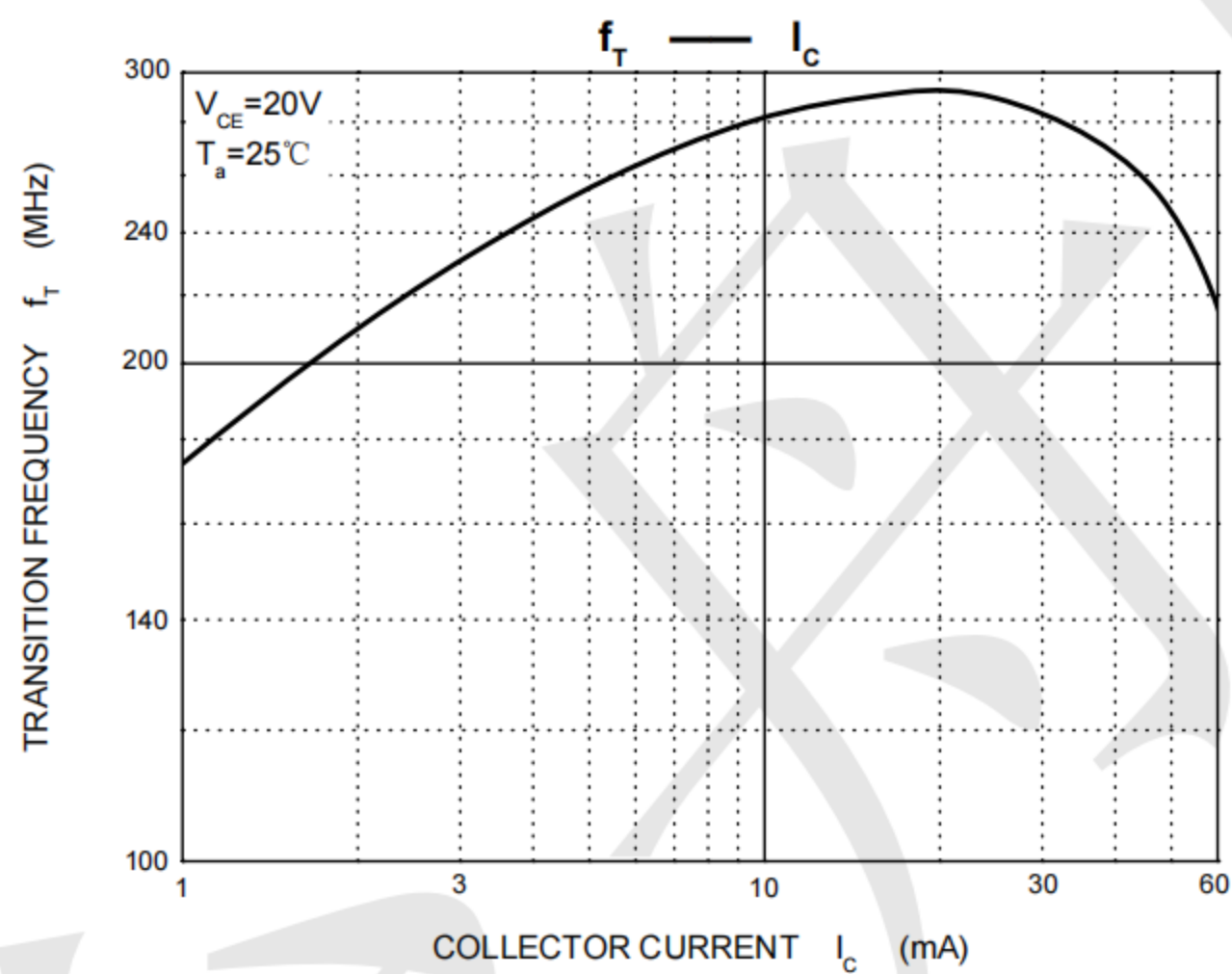
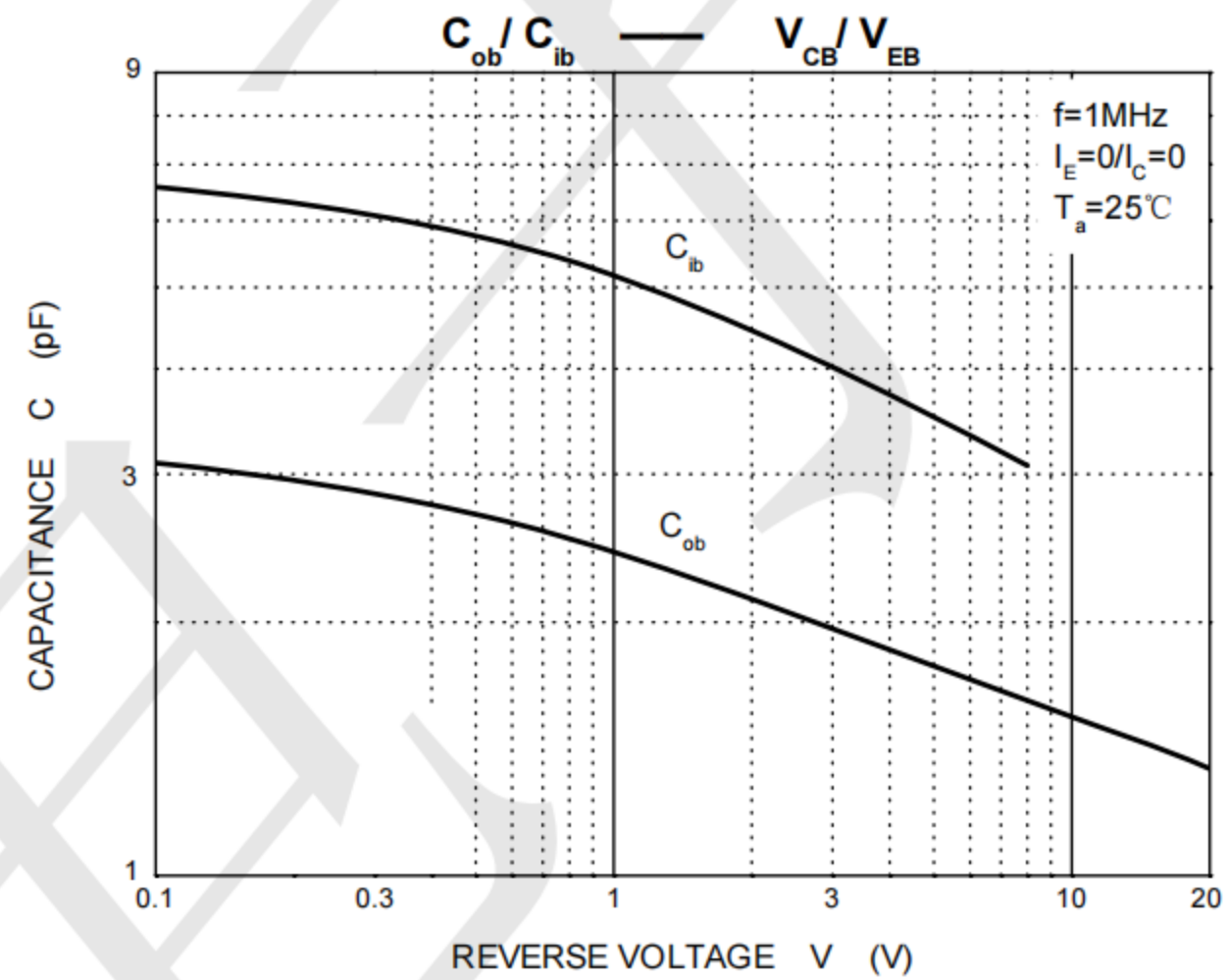
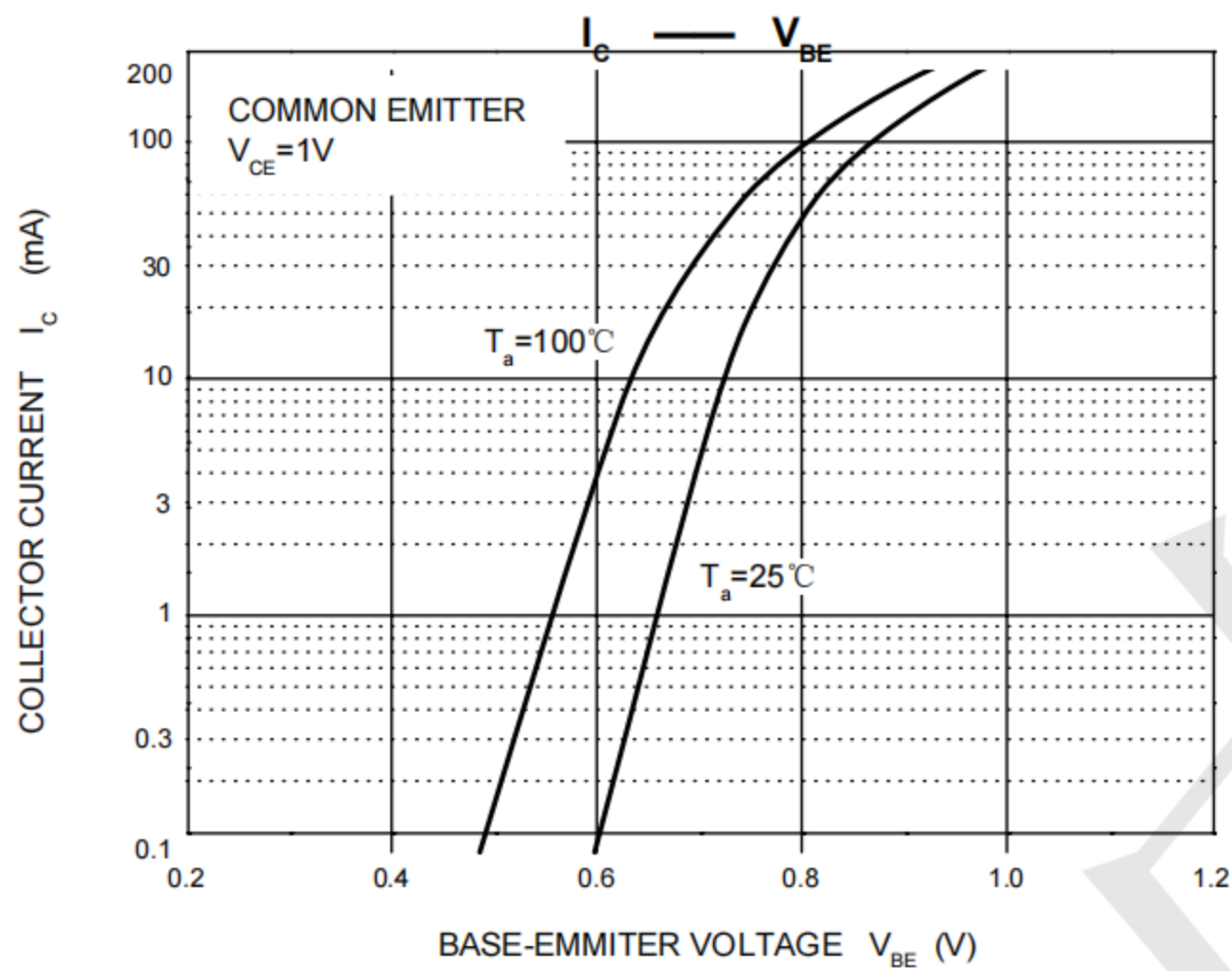
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current	200	mA
P _C	Collector Power Dissipation	1	W
R _{θJA}	Thermal Resistance From Junction To Ambient	125	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C



Electrical Characteristics (TA=25°C unless otherwise specified)

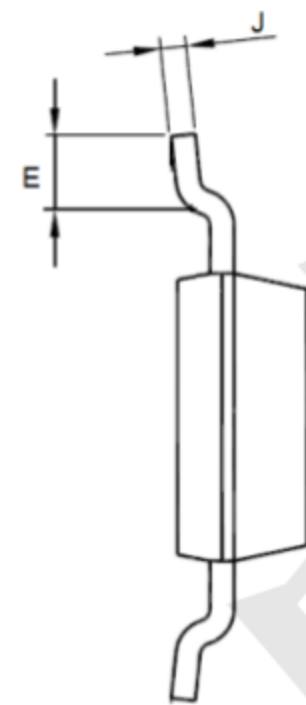
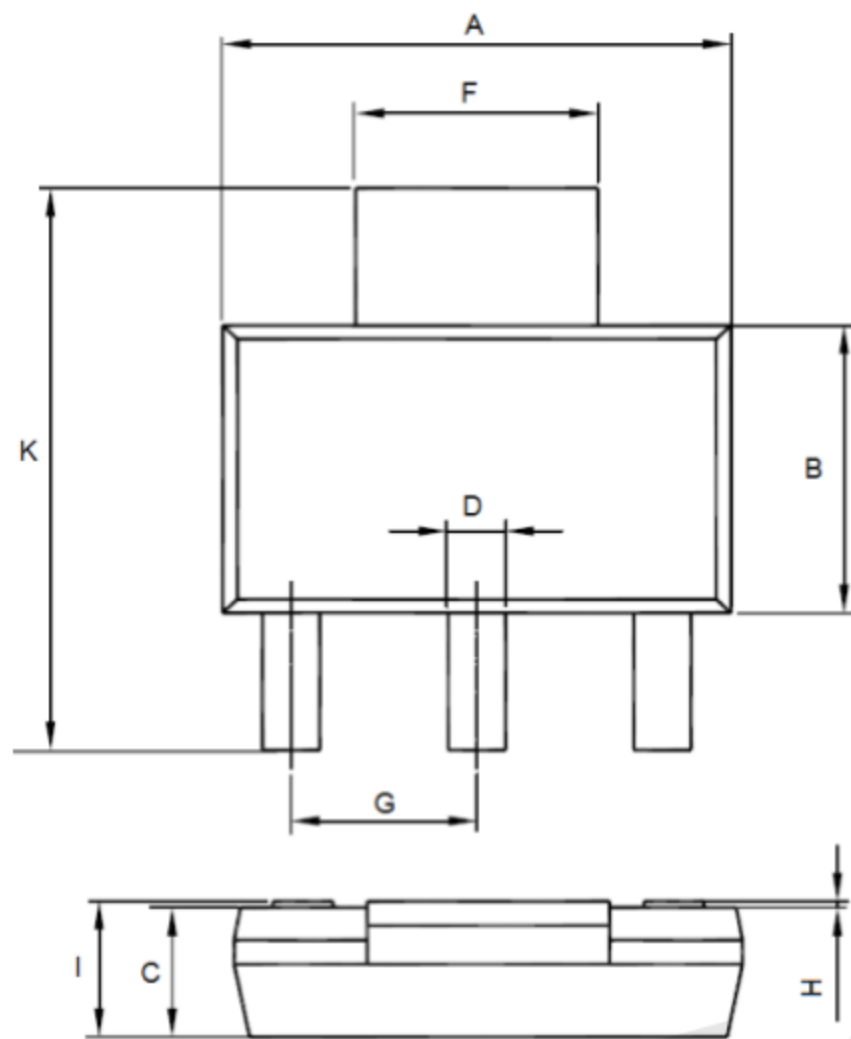
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.01mA, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01mA, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			50	nA
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{EB}=3V$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=0.1mA$	40			
	$h_{FE(2)}$	$V_{CE}=1V, I_C=1mA$	70			
	$h_{FE(3)}$	$V_{CE}=1V, I_C=10mA$	100		300	
	$h_{FE(4)}$	$V_{CE}=1V, I_C=50mA$	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.2	V
		$I_C=50mA, I_B=5mA$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$	0.65		0.85	V
		$I_C=50mA, I_B=5mA$			0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300			MHz
Collector output capacitance	C_{ob}	$V_{CB}=5V, I_E=0, f=1MHz$			4	pF
Delay time	t_d	$V_{CC}=3V, V_{BE(off)}=0.5V, I_C=10mA,$ $I_{B1}=-I_{B2}=1mA$			35	ns
Rise time	t_r				35	
Storage time	t_s	$V_{CC}=3V, I_C=10mA,$ $I_{B1}=-I_{B2}=1mA$			200	ns
Fall time	t_f				50	







Outline Drawing - SOT223



SOT-223		
Dim	Min	Max
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30

