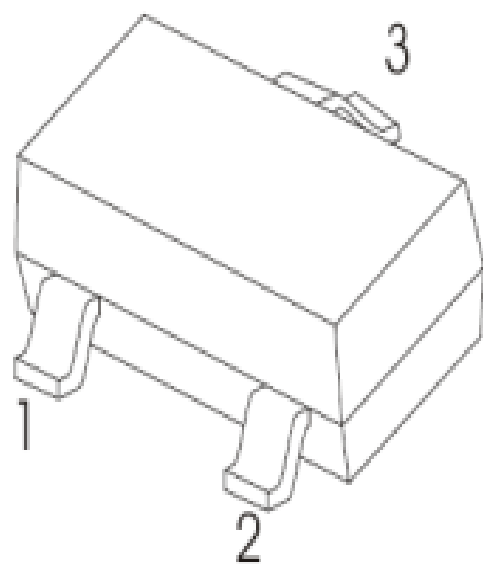


Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

Circuit Diagram

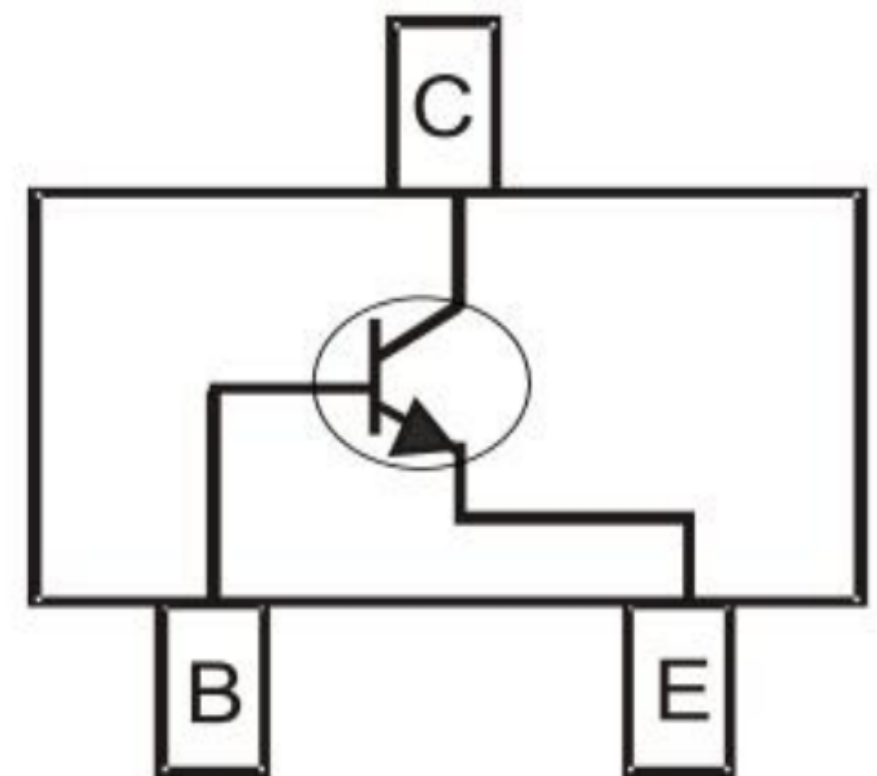


1. BASE

2. EMITTER

3. COLLECTOR

SOT523



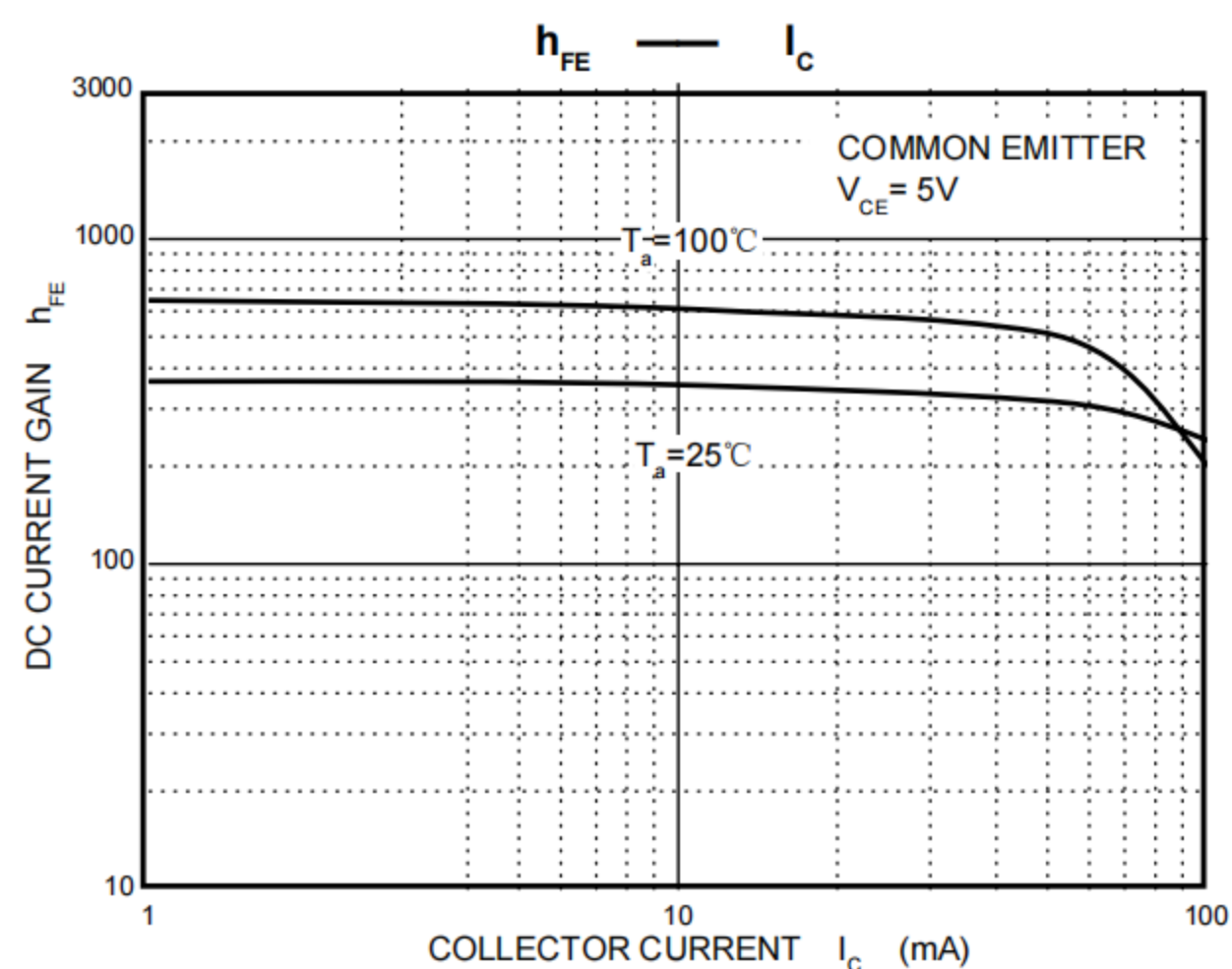
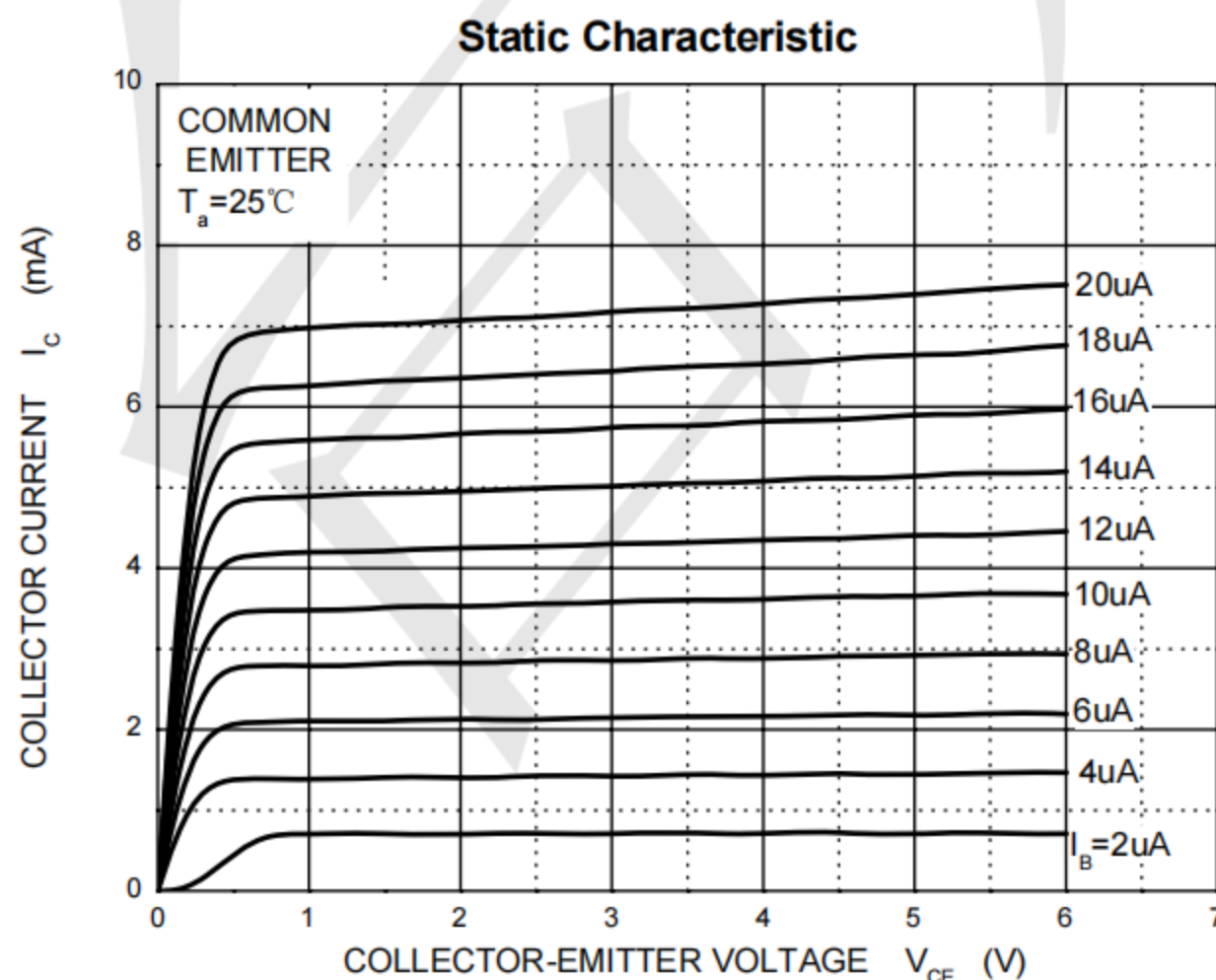
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	V
V _{EB0}	Emitter-Base Voltage	6	V
I _C	Collector Current –Continuous	0.1	A
P _C	Collector Power Dissipation	150	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55-150	°C

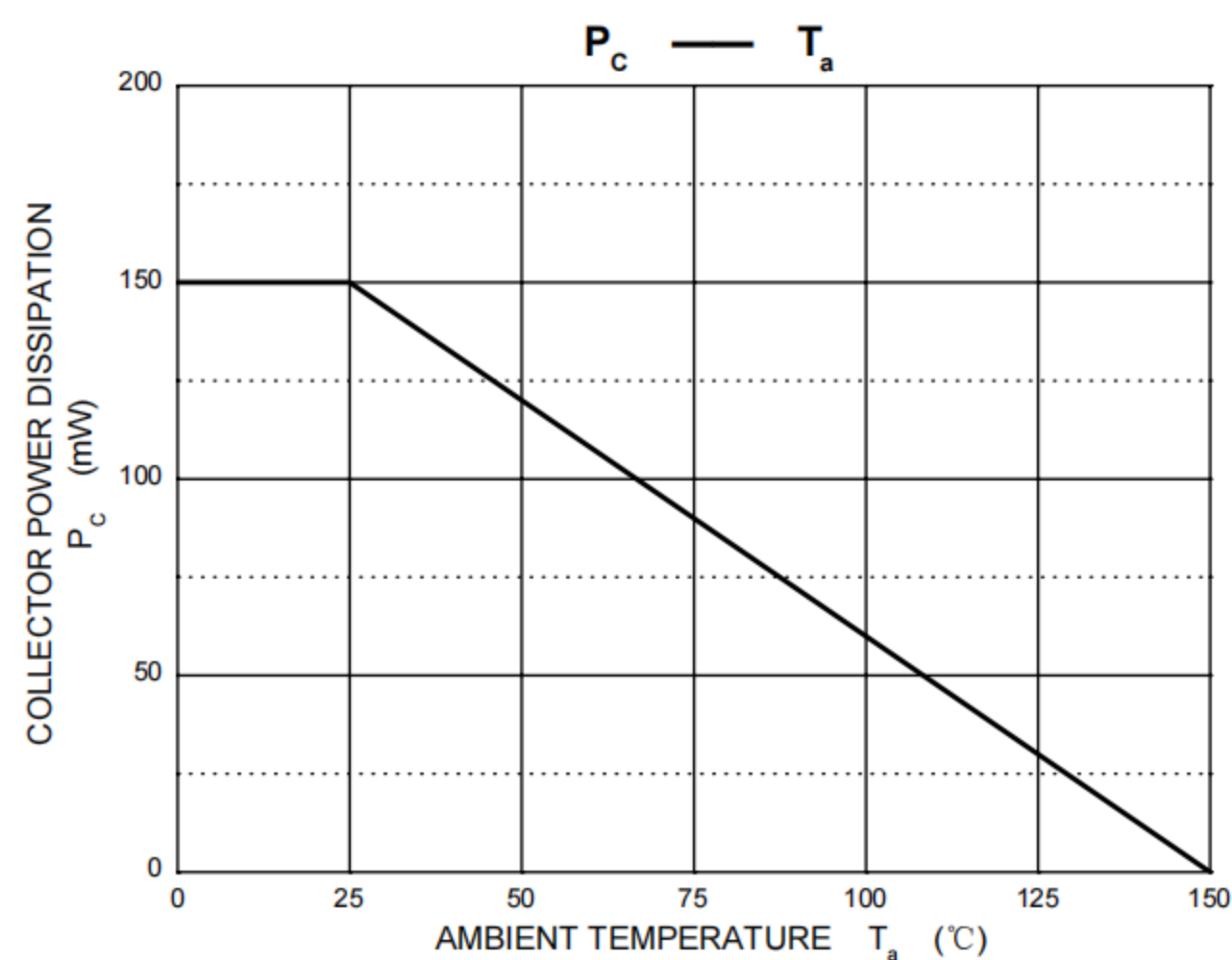
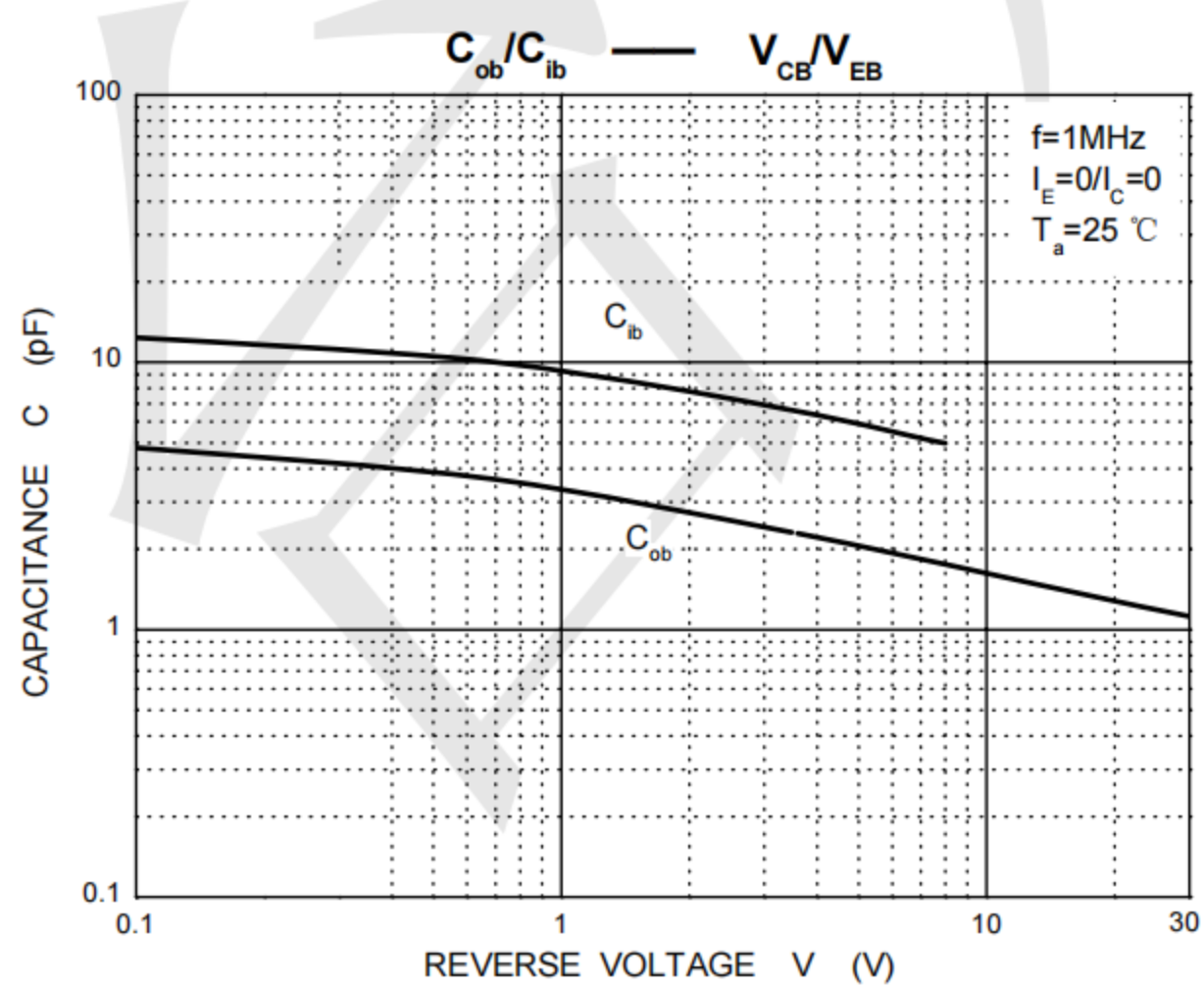
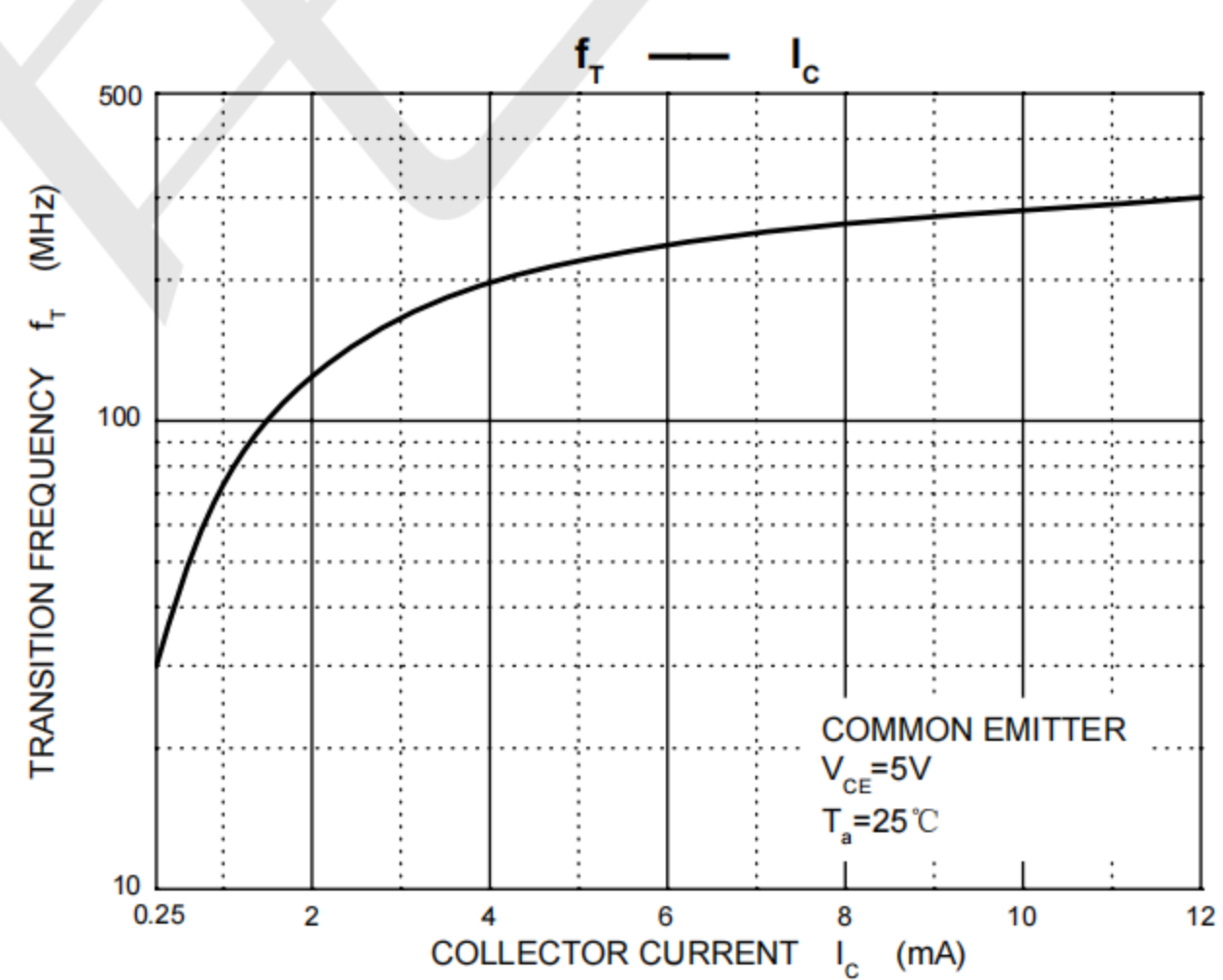
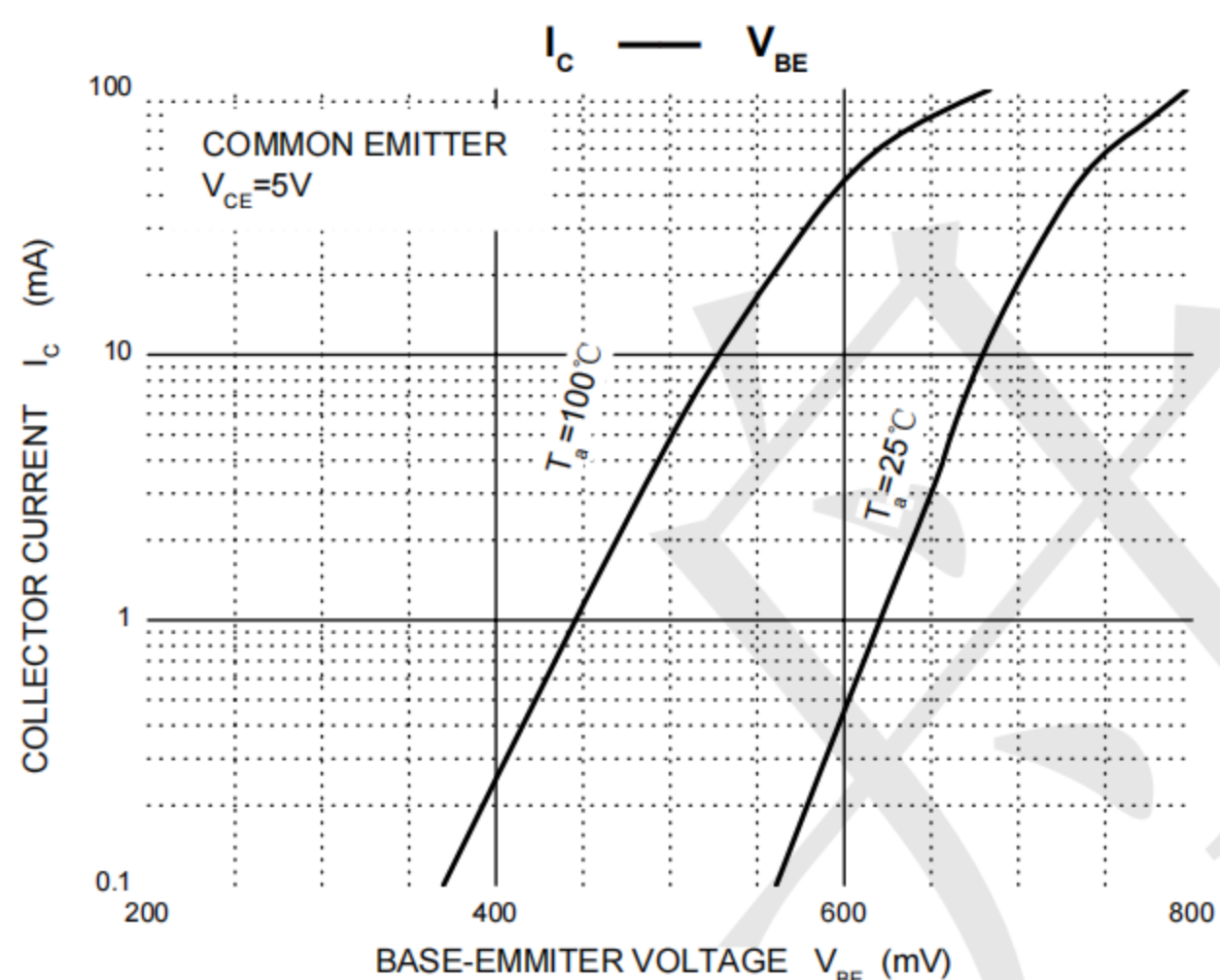
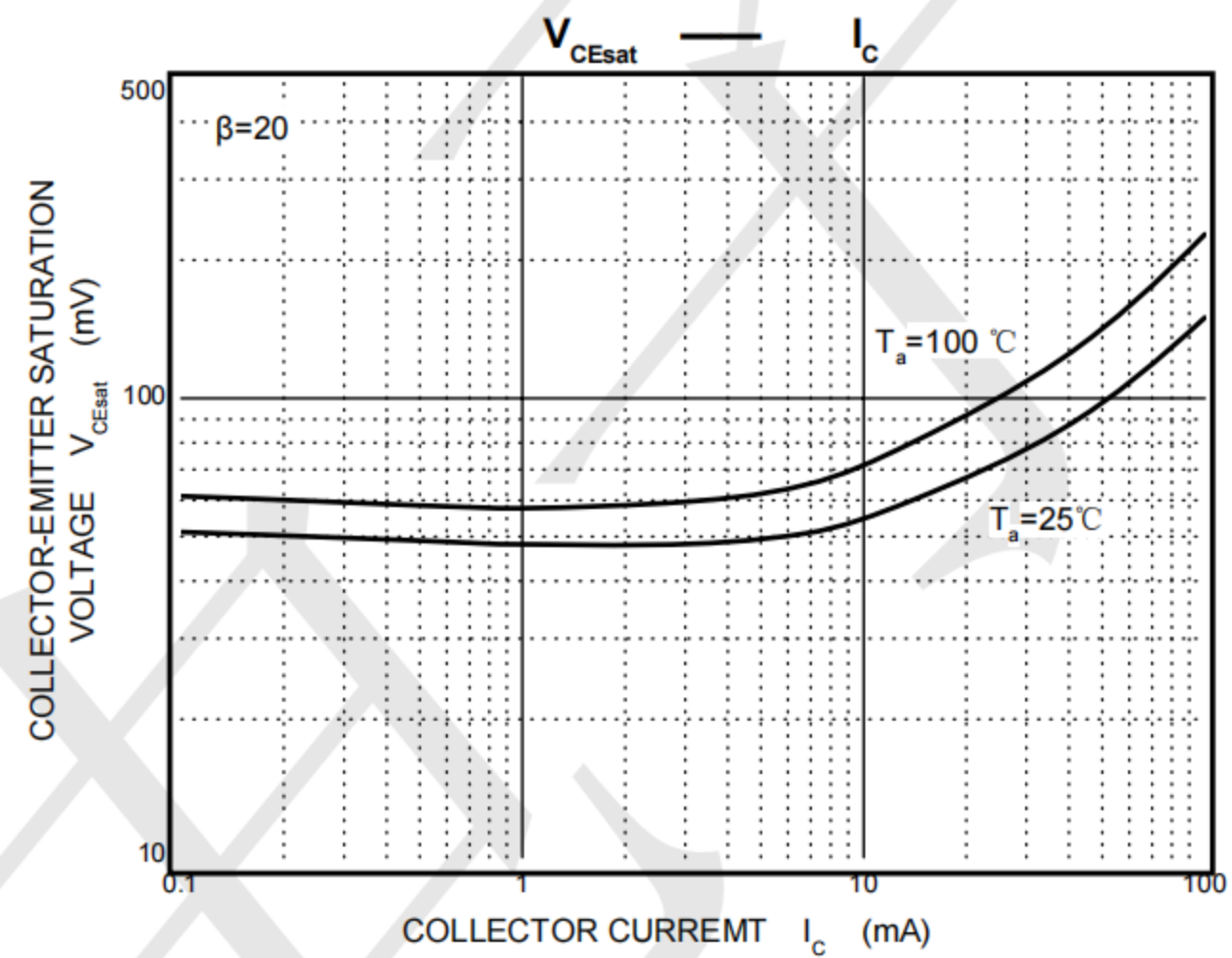
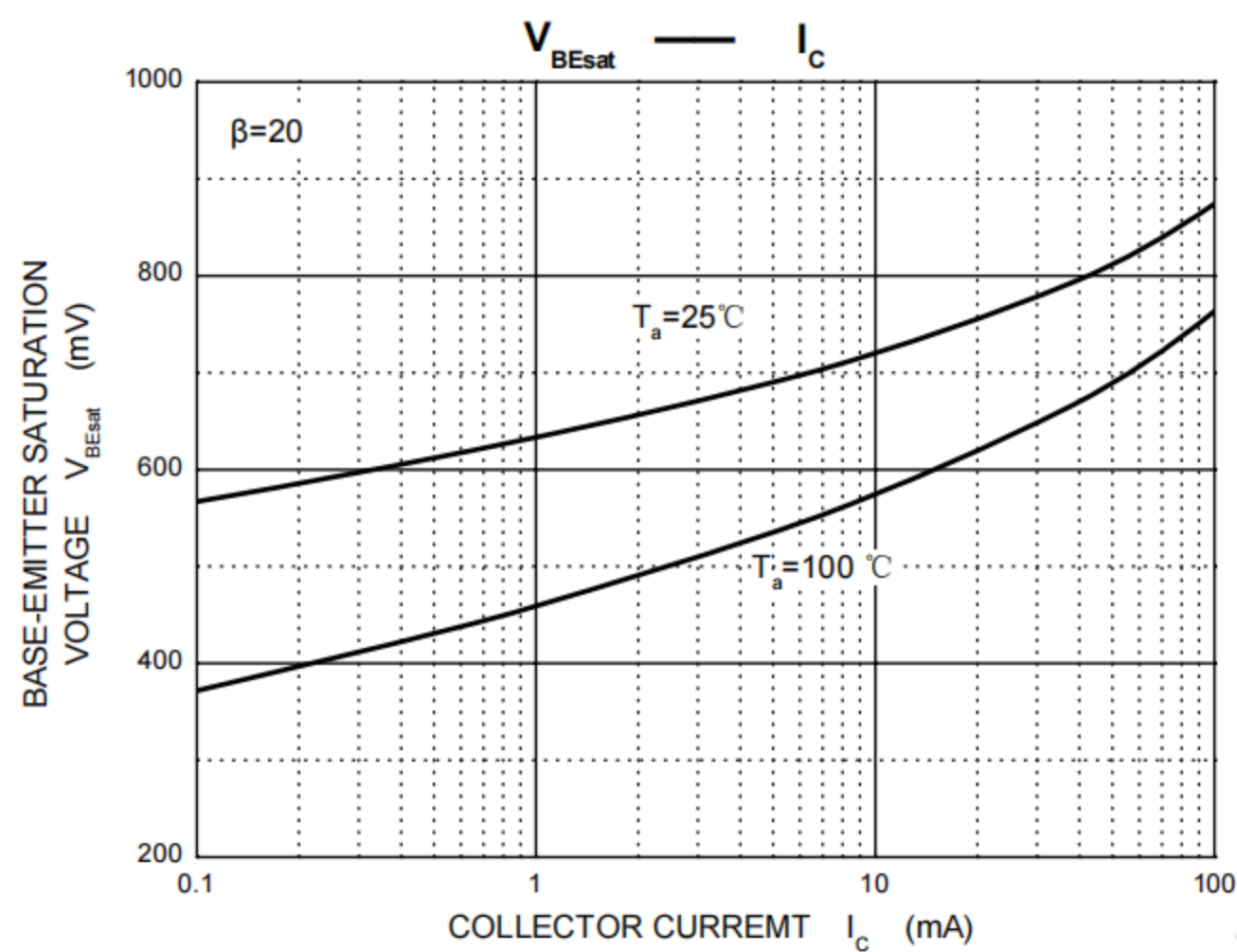
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\mu A, I_C = 0$	6			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30V$			15	nA
DC current gain	h_{FE}	$V_{CE} = 5V, I_C = 2mA$	110 200 420		220 450 800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 0.5mA$ $I_C = 100mA, I_B = 5mA$			0.25 0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 0.5mA$ $I_C = 100mA, I_B = 5mA$		0.7 0.9		V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 2mA$ $V_{CE} = 5V, I_C = 10mA$	580	660	700 770	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$			4.5	pF
Noise figure	NF	$V_{CE} = 5V, f = 1kHz$, $R_S = 2k\Omega, BW = 200Hz$			10 4	dB

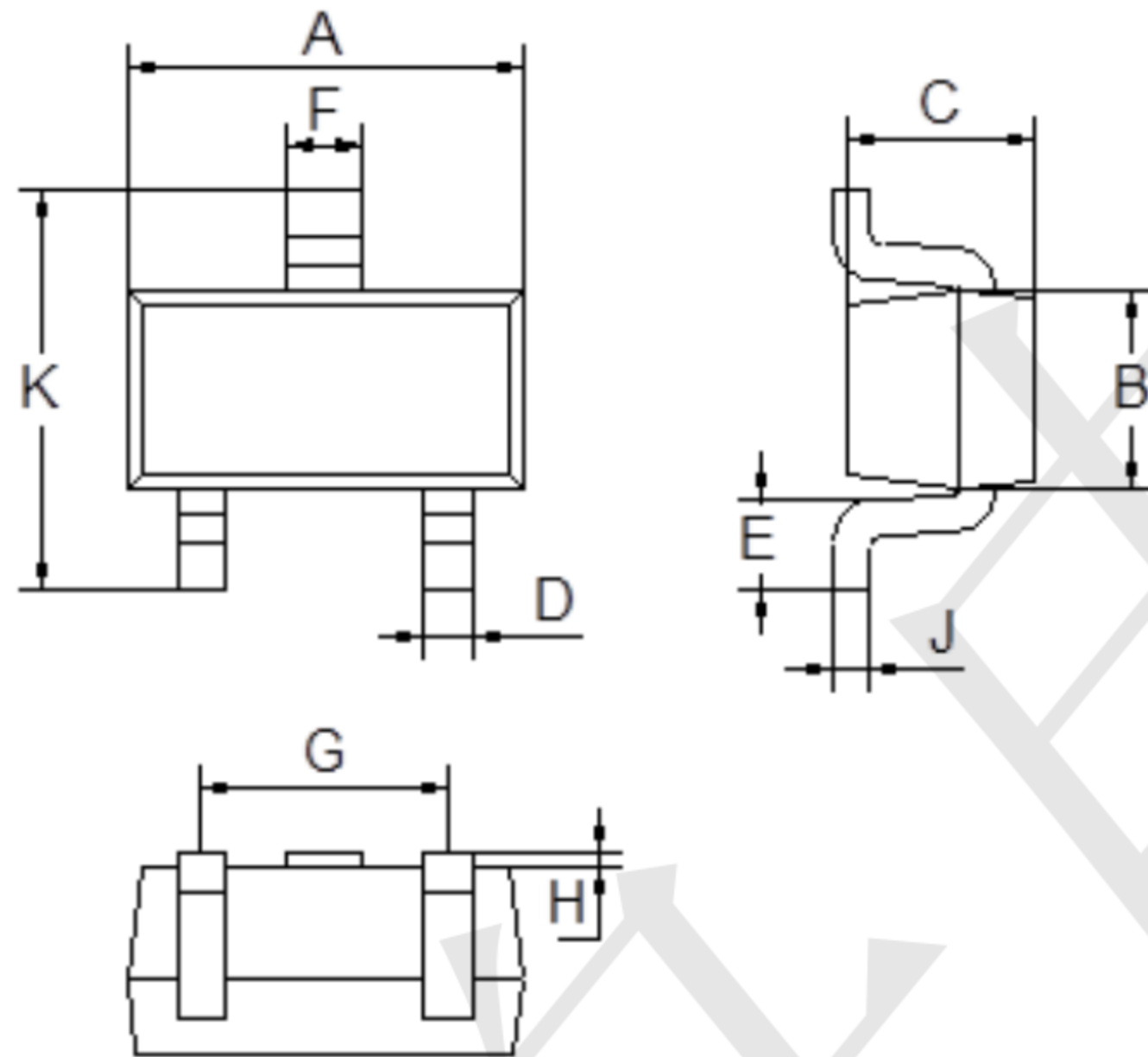
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



Outline Drawing - SOT523 (unit: mm)



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (unit: mm)

