



### Features

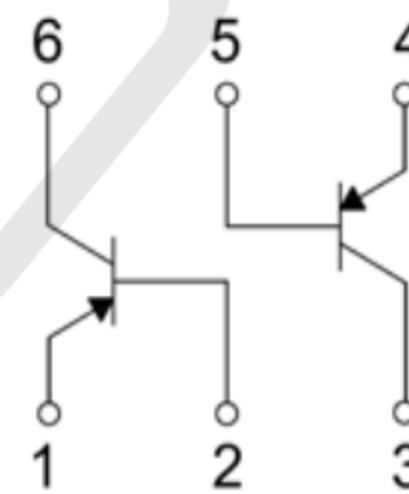
- Complementary NPN Type available TPMMDT2222A

### Ordering Information

- Shipping Qty:3000/7inch Tape& Reel



### Circuit Diagram



### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-60	V
V <sub>CE0</sub>	Collector-Emitter Voltage	-60	V
V <sub>EB0</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-600	mA
P <sub>C</sub>	Collector Power Dissipation	200	mW
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

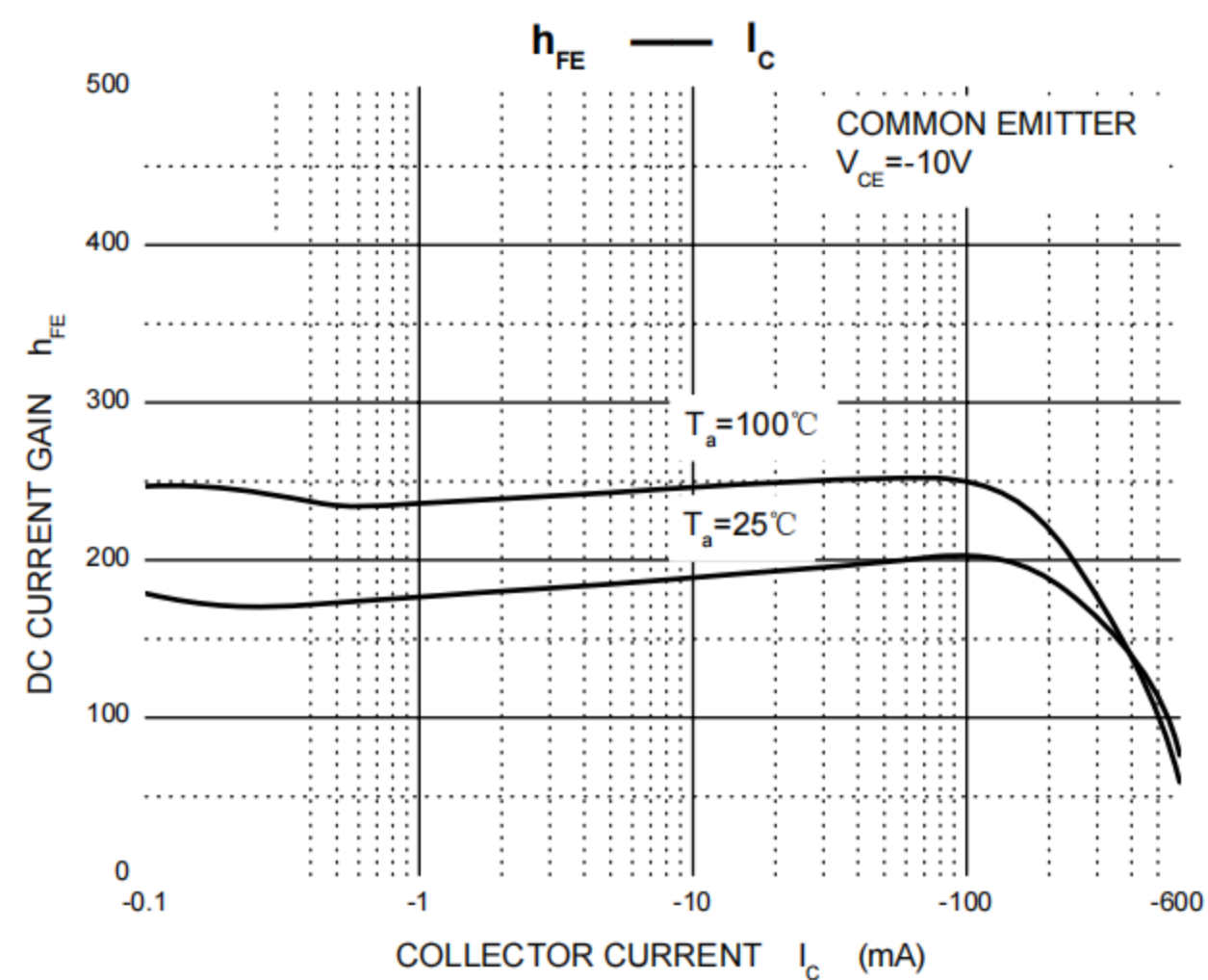
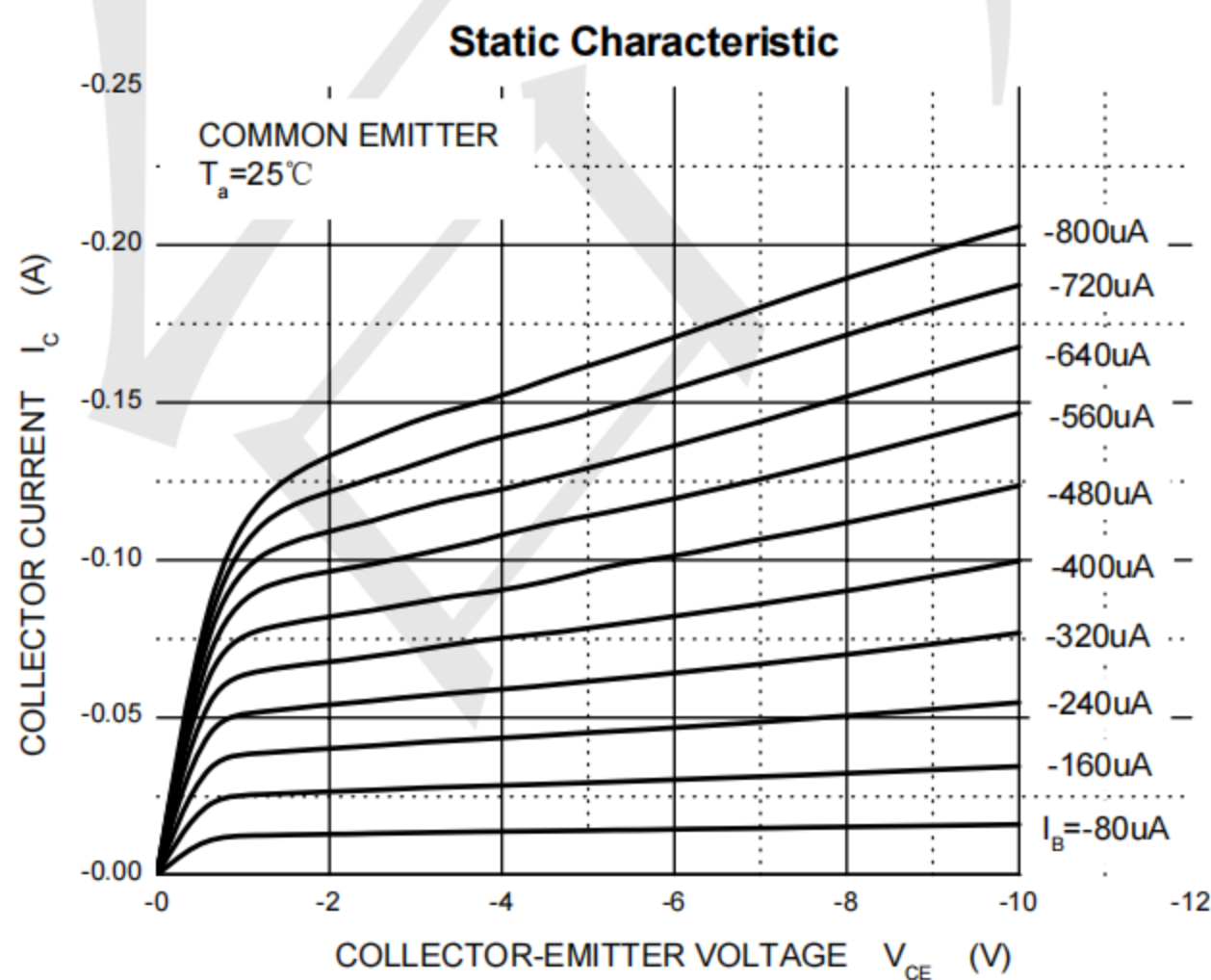


Electrical Characteristics (TA=25°C unless otherwise specified)

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Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$		-10	nA
Collector cut-off current	$I_{CEX}$	$V_{CE} = -30V, V_{EB(off)} = -0.5V$		-50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$		-10	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -10V, I_C = -0.1mA$	75		
	$h_{FE(2)}$	$V_{CE} = -10V, I_C = -1mA$	100		
	$h_{FE(3)}$	$V_{CE} = -10V, I_C = -10mA$	100		
	$h_{FE(4)}$	$V_{CE} = -10V, I_C = -150mA$	100	300	
	$h_{FE(5)}$	$V_{CE} = -10V, I_C = -500mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -150mA, I_B = -15mA$		-0.4	V
	$V_{CE(sat)2}$	$I_C = -500mA, I_B = -50mA$		-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -150mA, I_B = -15mA$		-1.3	V
	$V_{BE(sat)2}$	$I_C = -500mA, I_B = -50mA$		-2.6	V
Transition frequency	$f_T$	$V_{CE} = -20V, I_C = -50mA, f = 100MHz$	200		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		8	pF
Input Capacitance	$C_{ib}$	$V_{EB} = -2V, I_C = 0, f = 1MHz$		30	pF
Delay time	$t_d$	$V_{CC} = -30V, I_C = -150mA, I_{B1} = -15mA$		10	ns
Rise time	$t_r$			40	ns
Storage time	$t_s$		$V_{CC} = -6V, I_C = -150mA,$		225
Fall time	$t_f$	$I_{B1} = I_{B2} = -15mA$		60	ns

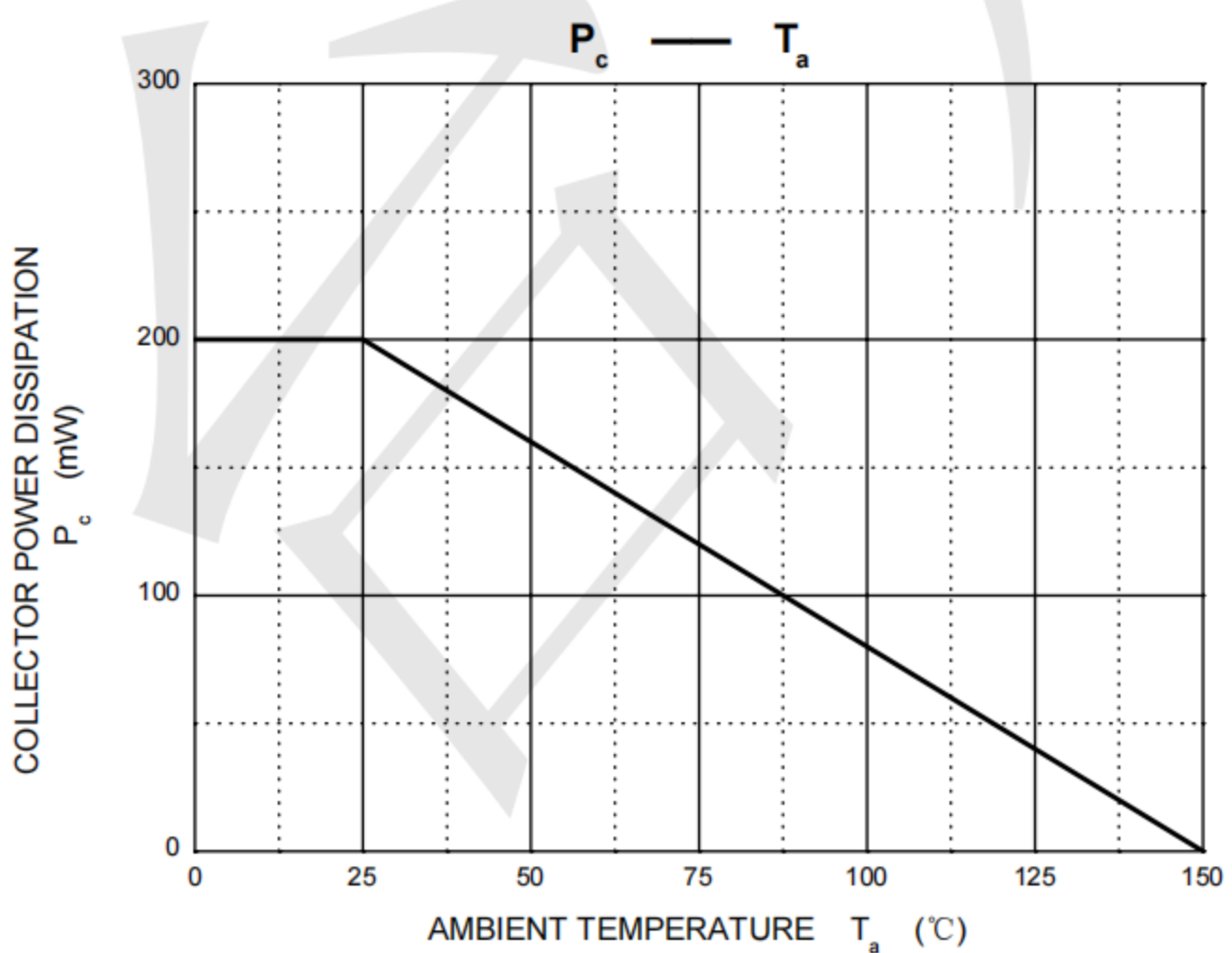
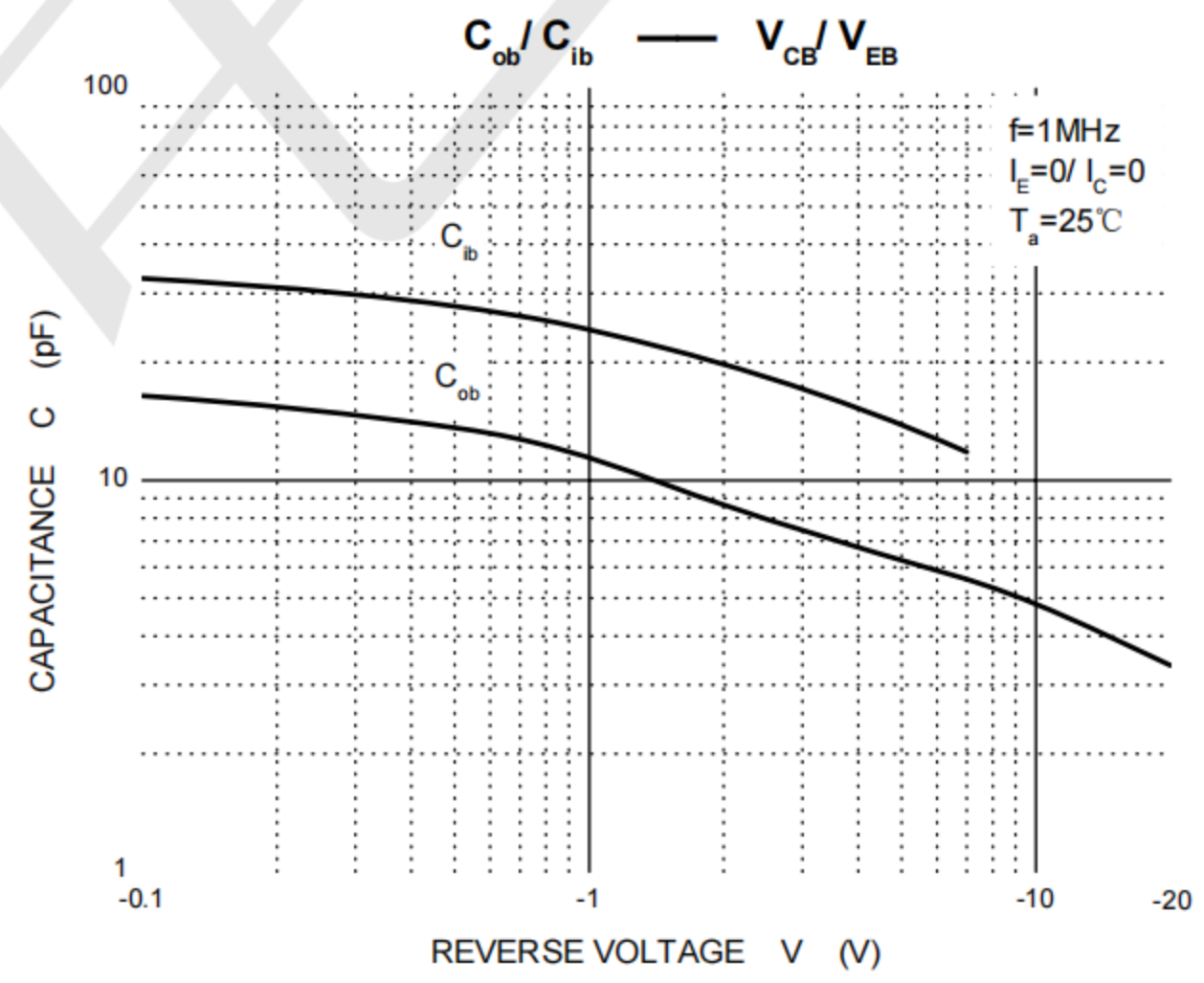
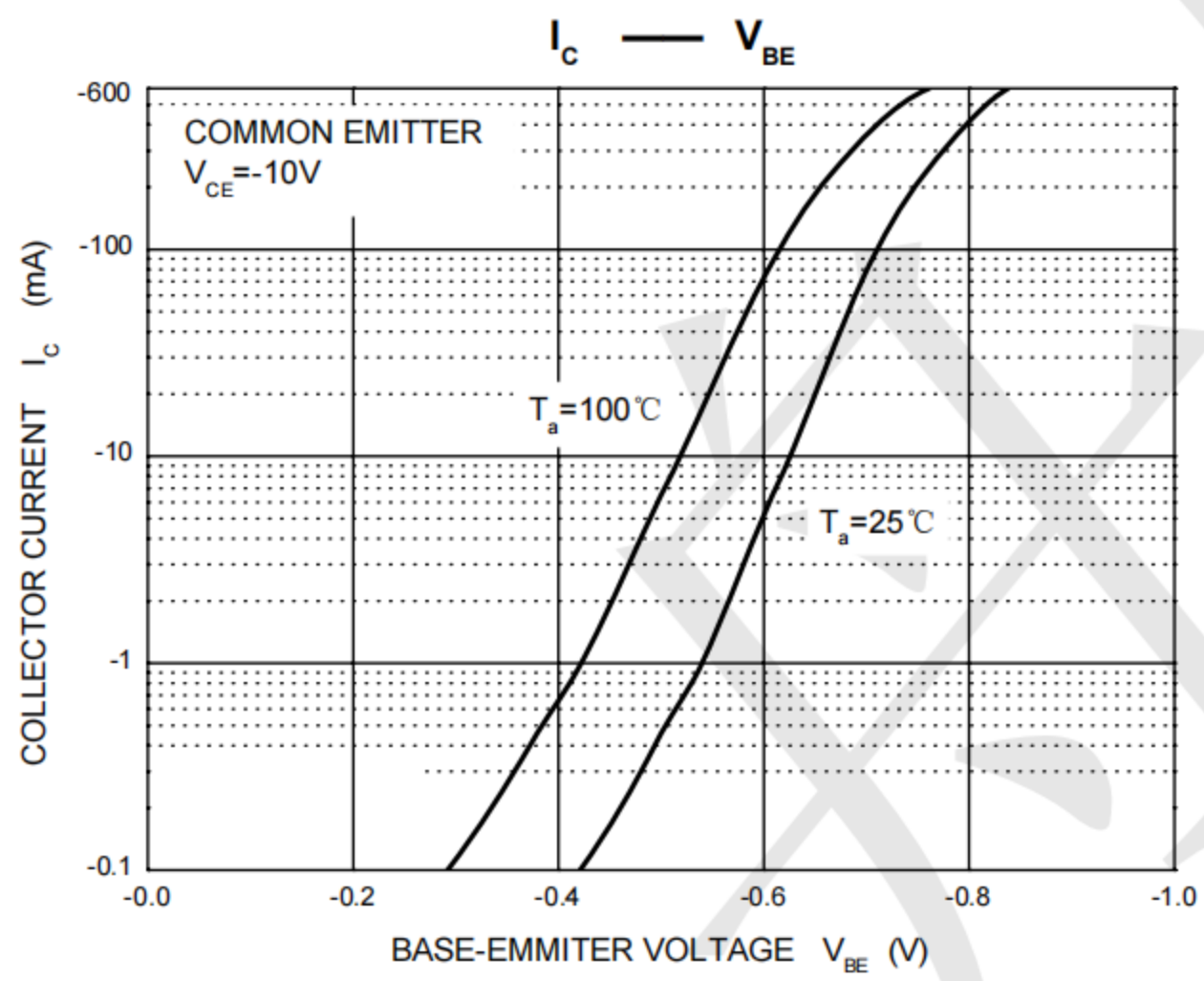
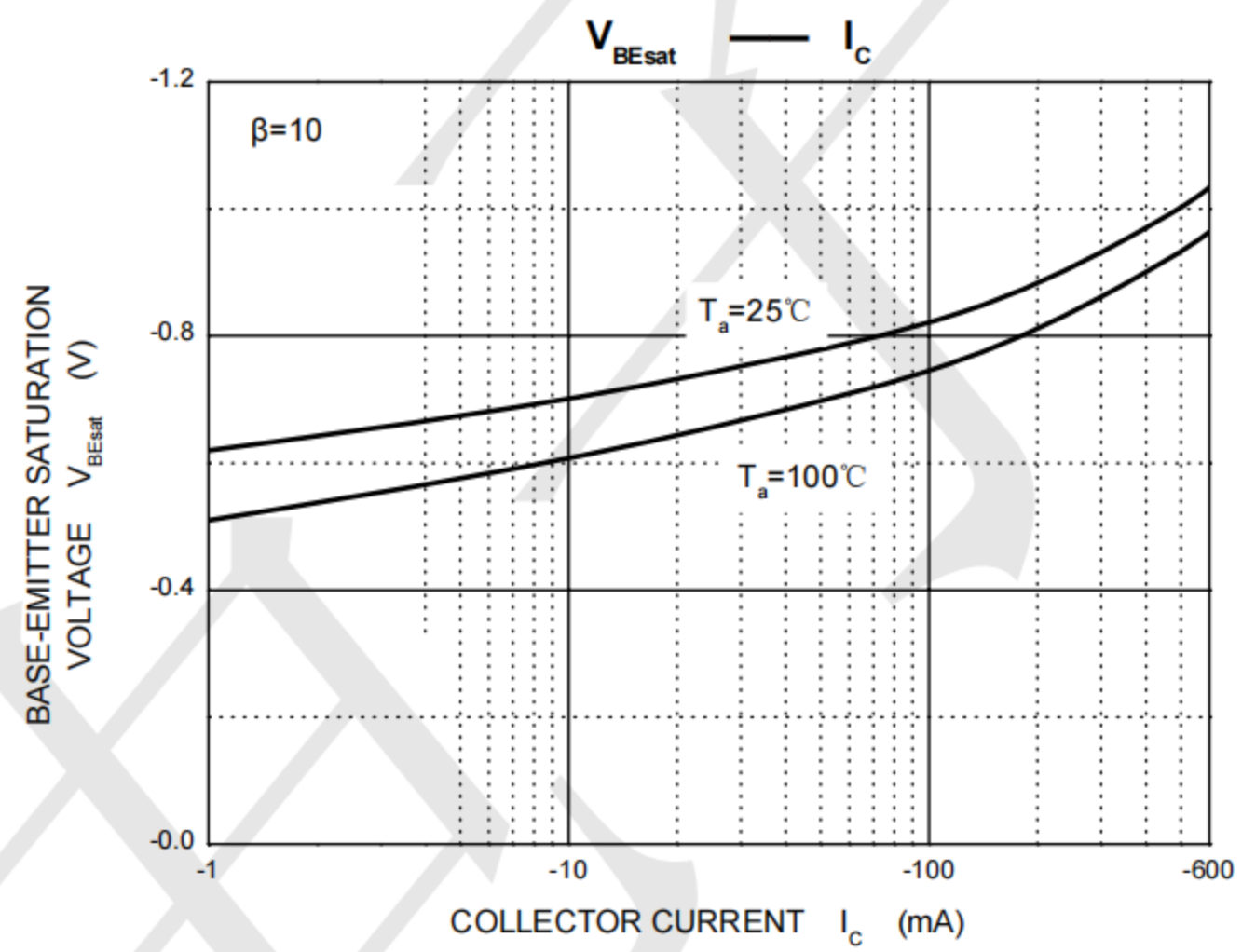
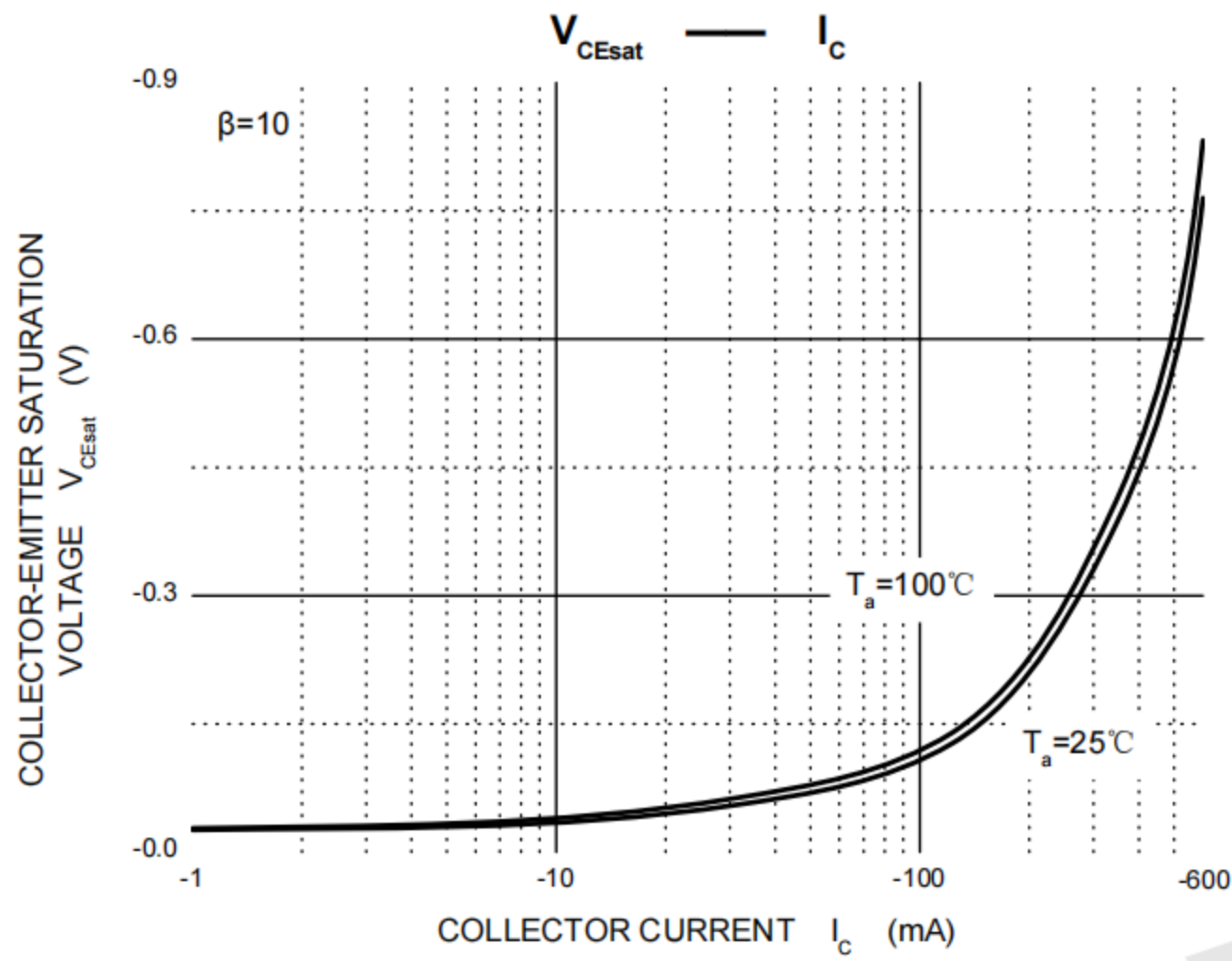
Typical Performance Characteristics (TA=25°C unless otherwise Specified)





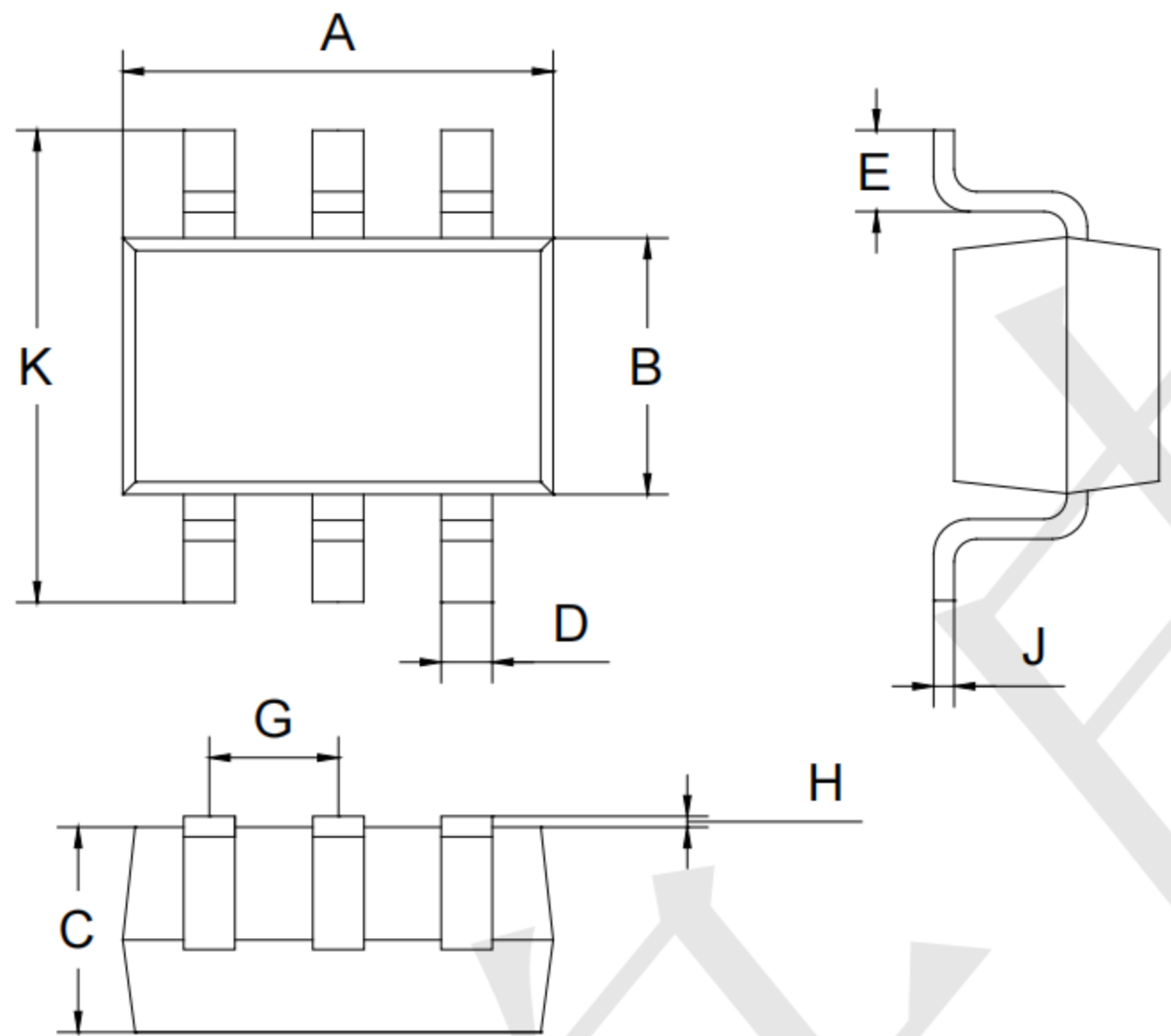
Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)

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Outline Drawing - SOT363 (unit: mm)



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout-SOT363 (unit: mm)

