

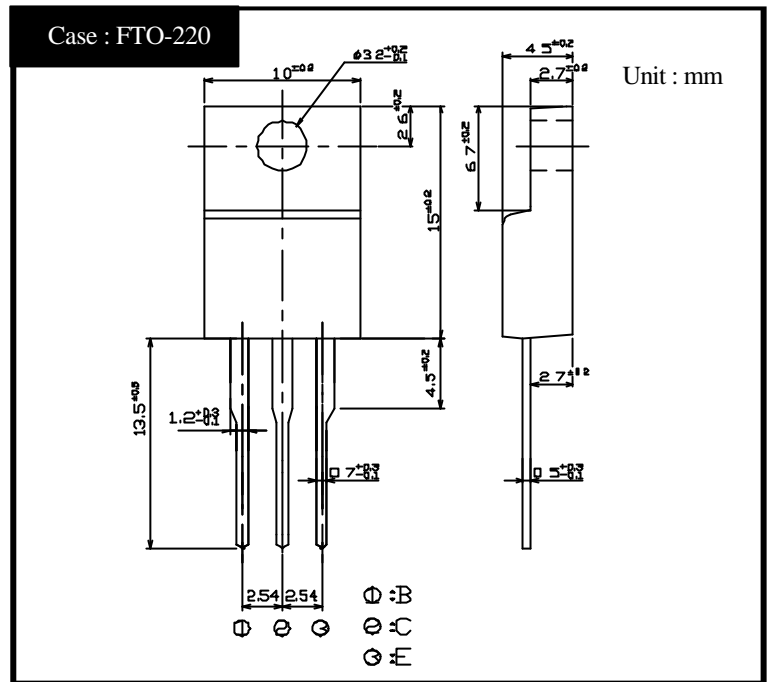
SHINDENGEN

Switching Power Transistor

2SC5382

6A NPN

OUTLINE DIMENSIONS



RATINGS

Absolute Maximum Ratings

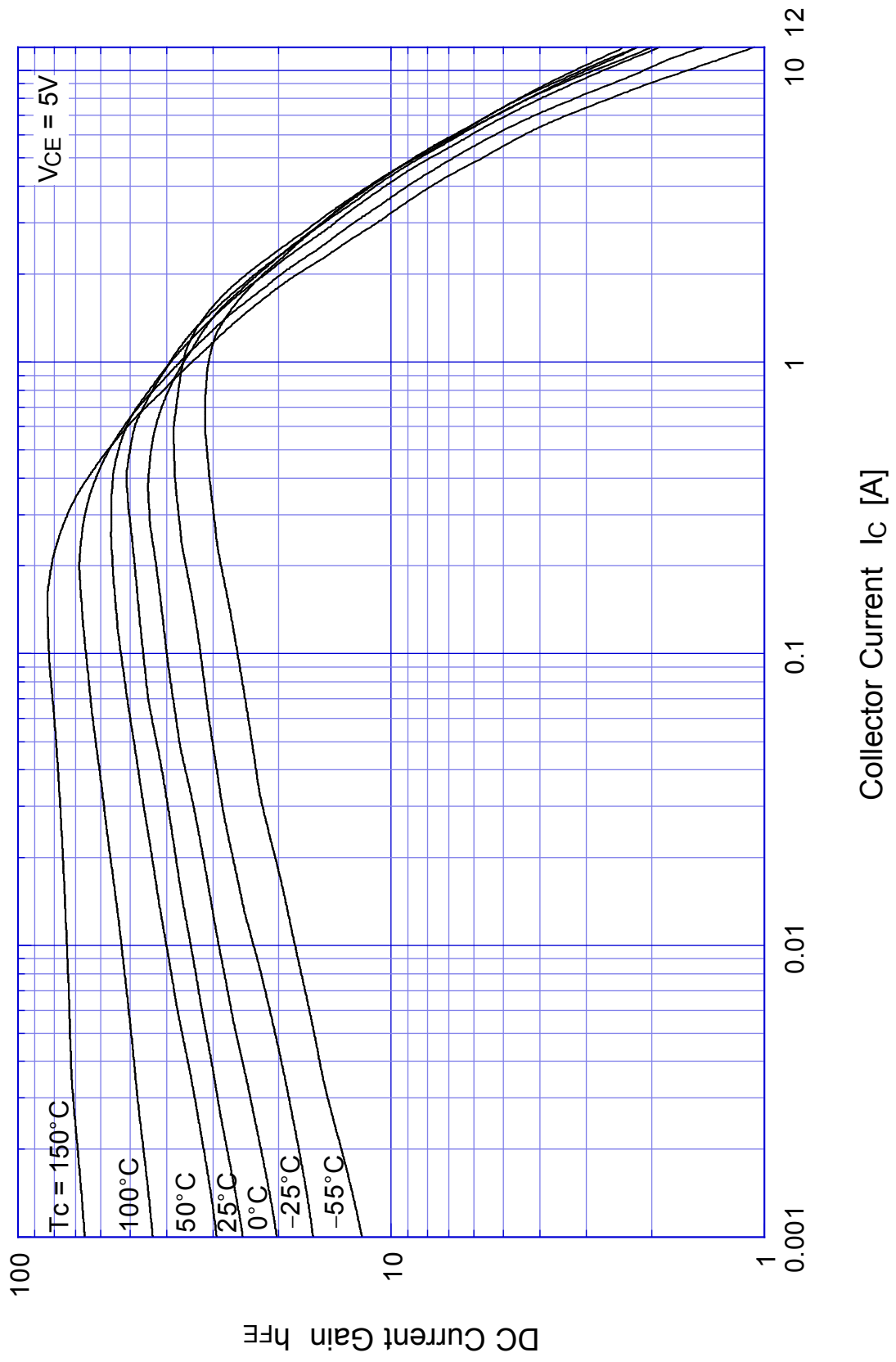
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55 ~ 150	
Junction Temperature	T _j		150	
Collector to Base Voltage	V _{CBO}		1200	V
Collector to Emitter Voltage	V _{CEO}		550	V
Emitter to Base Voltage	V _{EBO}		9	V
Collector Current DC	I _C		6	A
Collector Current Peak	I _{CP}		12	
Base Current DC	I _B		3	A
Base Current Peak	I _{BP}		6	
Total Transistor Dissipation	P _T		40	W
Dielectric Strength	V _{dis}	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque)	0.5(0.3)	N·m

Electrical Characteristics (T_c=25 °C)

Item	Symbol	Conditions	Ratings	Unit
Collector to Emitter Sustaining Voltage	V _{CEO(sus)}	I _C = 0.1A	Min 550	V
Collector Cutoff Current	I _{CBO}	V _{CB} = 1200V	Max 0.1	mA
	I _{CEO}	V _{CE} = 550V	Max 0.1	
Emitter Cutoff Current	I _{EBO}	V _{EB} = 9V	Max 0.1	mA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 3A	Min 10	
	h _{FEL}	V _{CE} = 5V, I _C = 1mA	Min 10	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = 3A	Max 1.0	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _B = 0.6A	Max 1.5	V
Thermal Resistance	θ _{jc}	Junction to case	Max 3.13	/W
Turn on Time	t _{on}	I _C = 3A	Max 1.3	μs
Storage Time	t _s	I _{B1} = 0.6A, I _{B2} = 1.2A	Max 4.0	
Fall Time	t _f	R _L = 50 Ω, V _{BB2} = 4V	Max 0.3	

2SC5382

$h_{FE} - I_C$



$V_{CE} = 5V$

$T_C = 150^\circ C$

100°C

50°C

25°C

0°C

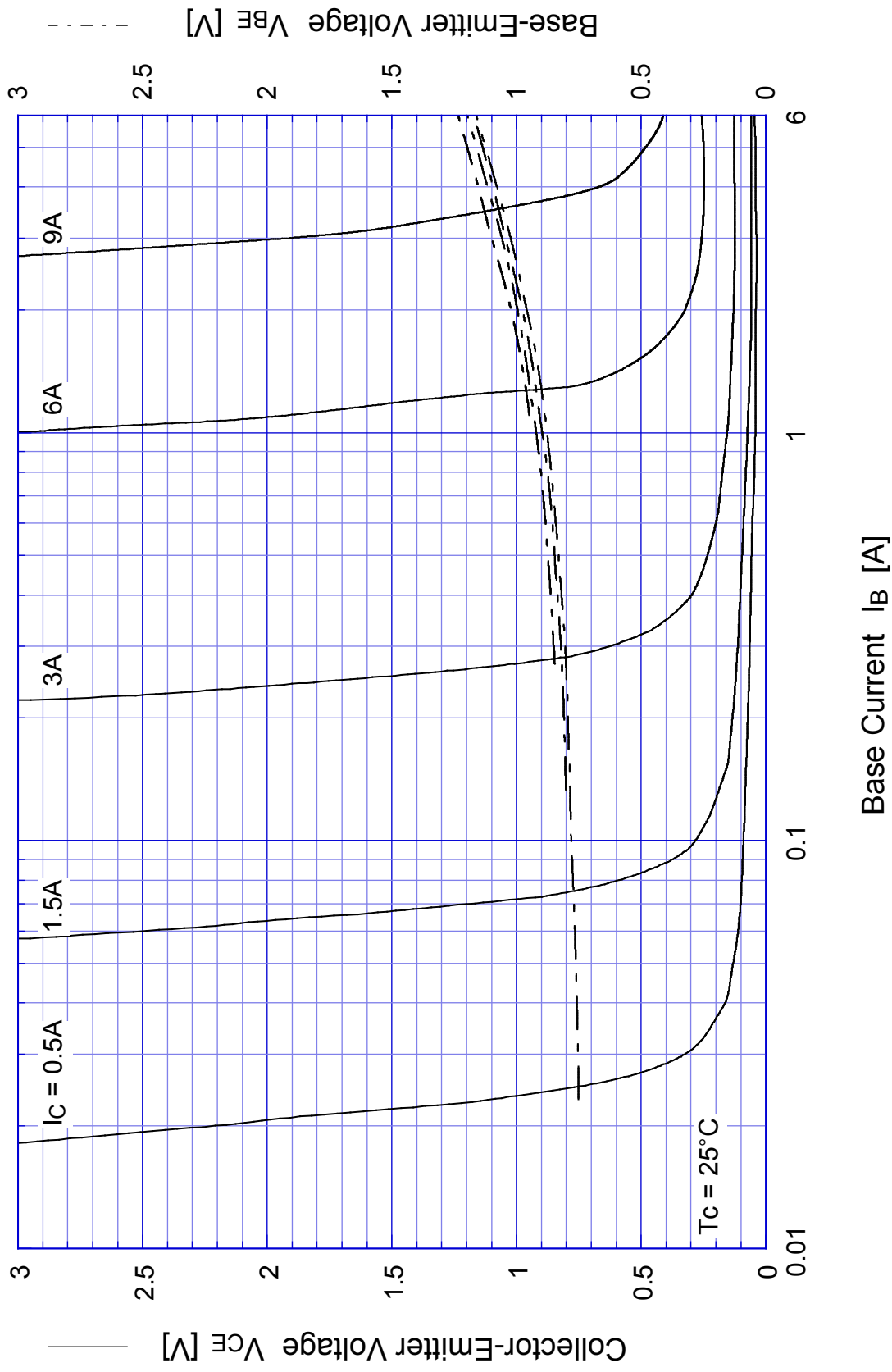
-25°C

-55°C

DC Current Gain h_{FE}

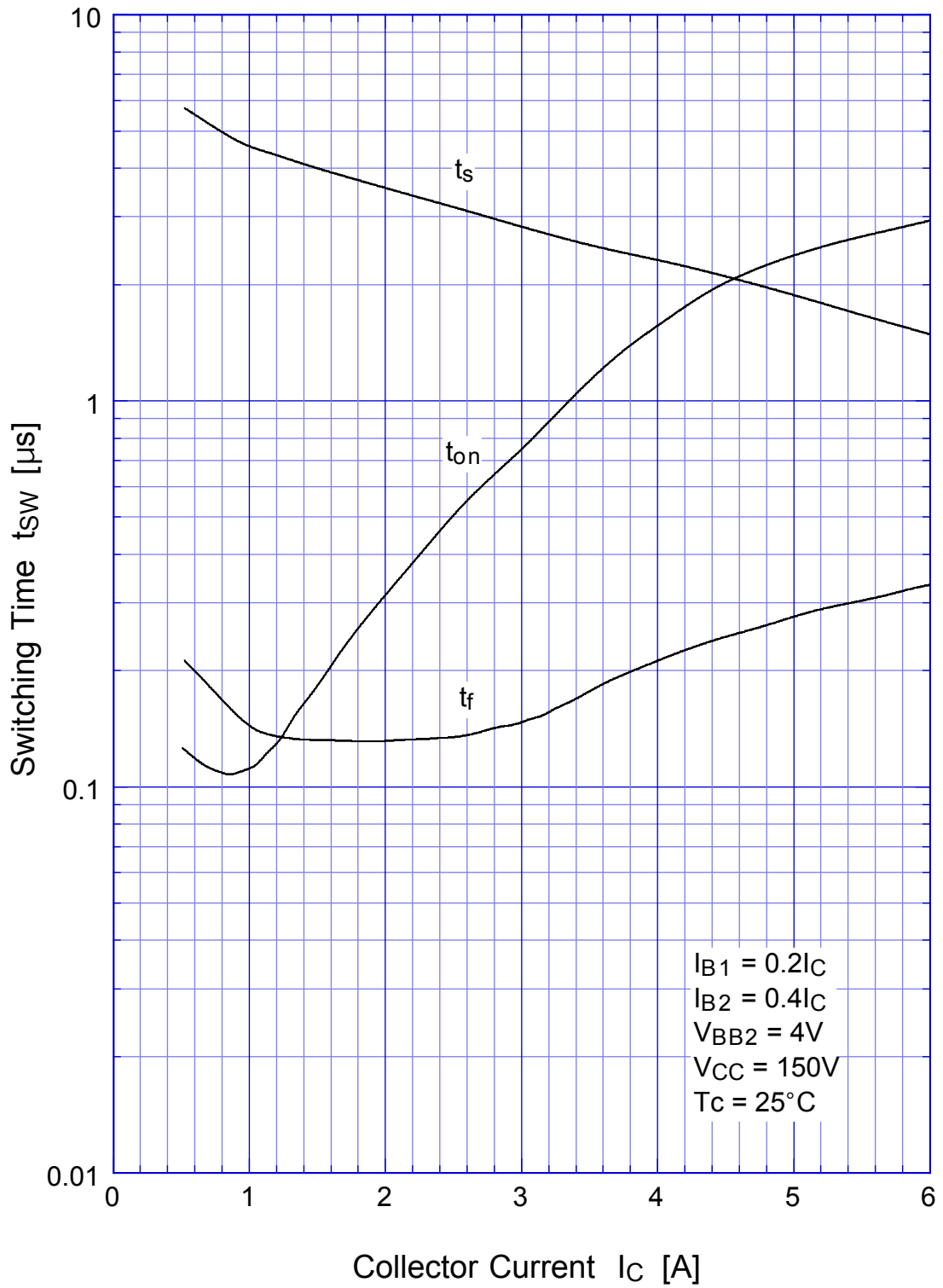
Collector Current I_C [A]

2SC5382 Saturation Voltage

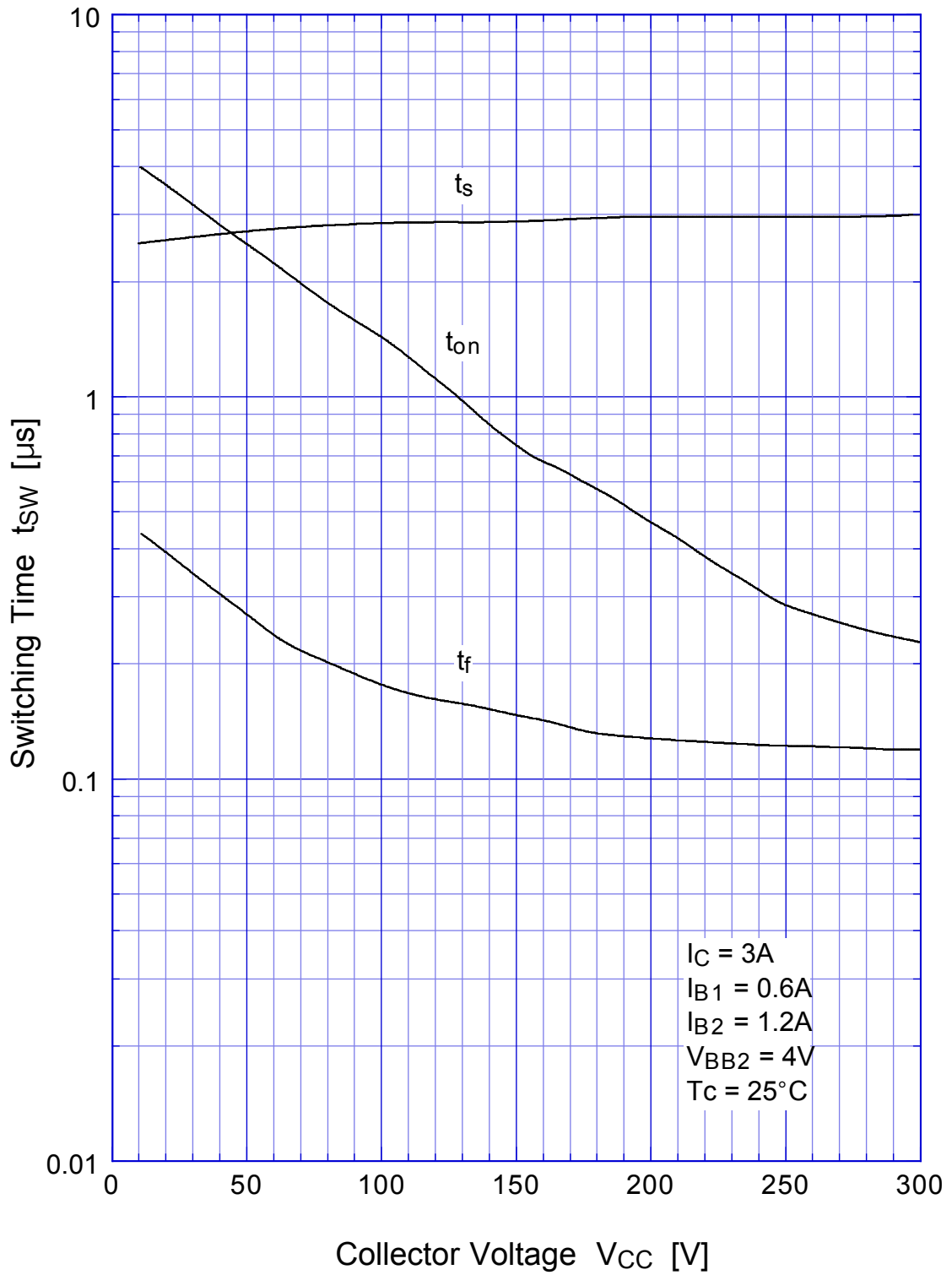


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Switching Time - I_C

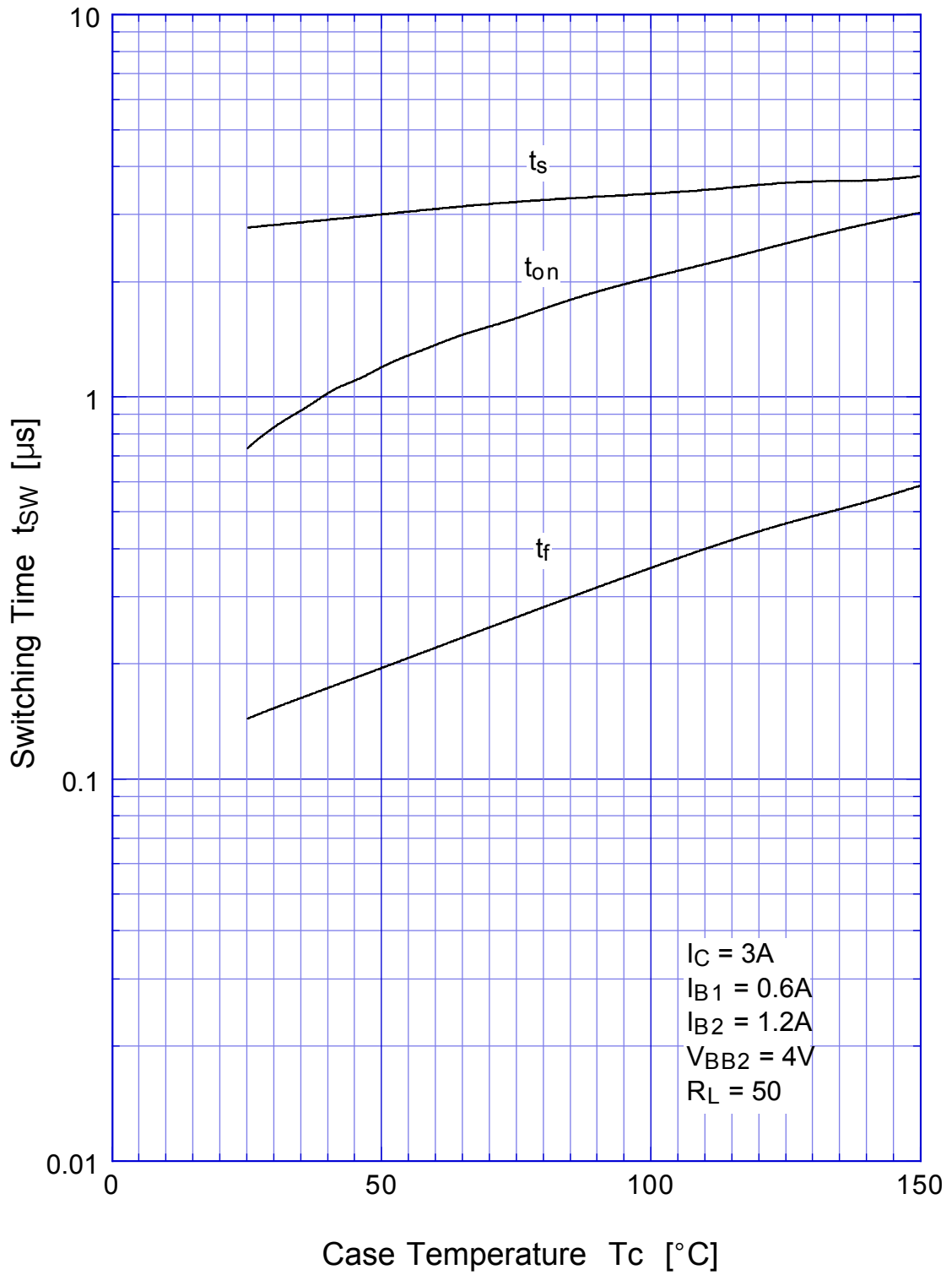


2SC5382 Switching Time - V_{CC}

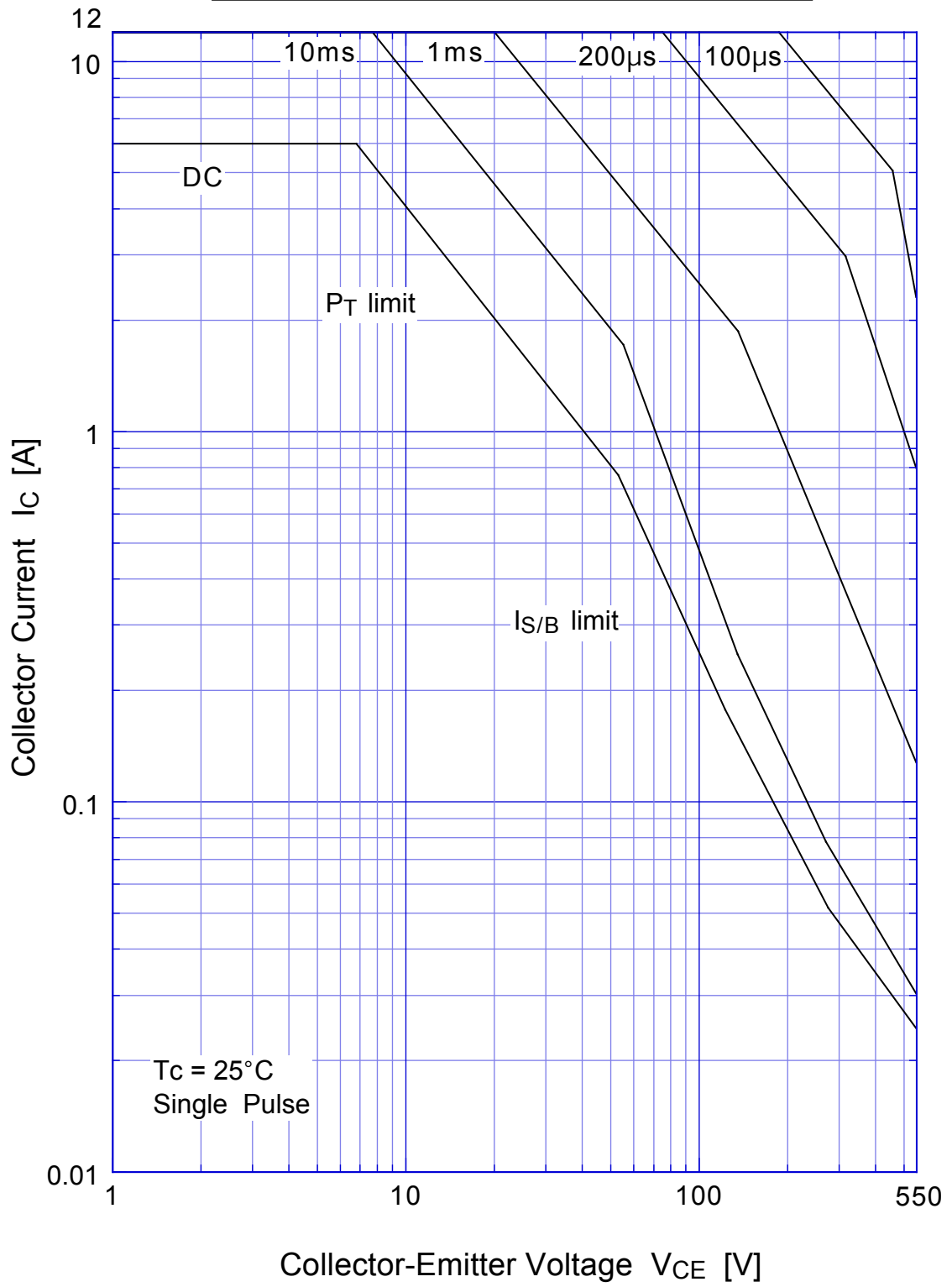


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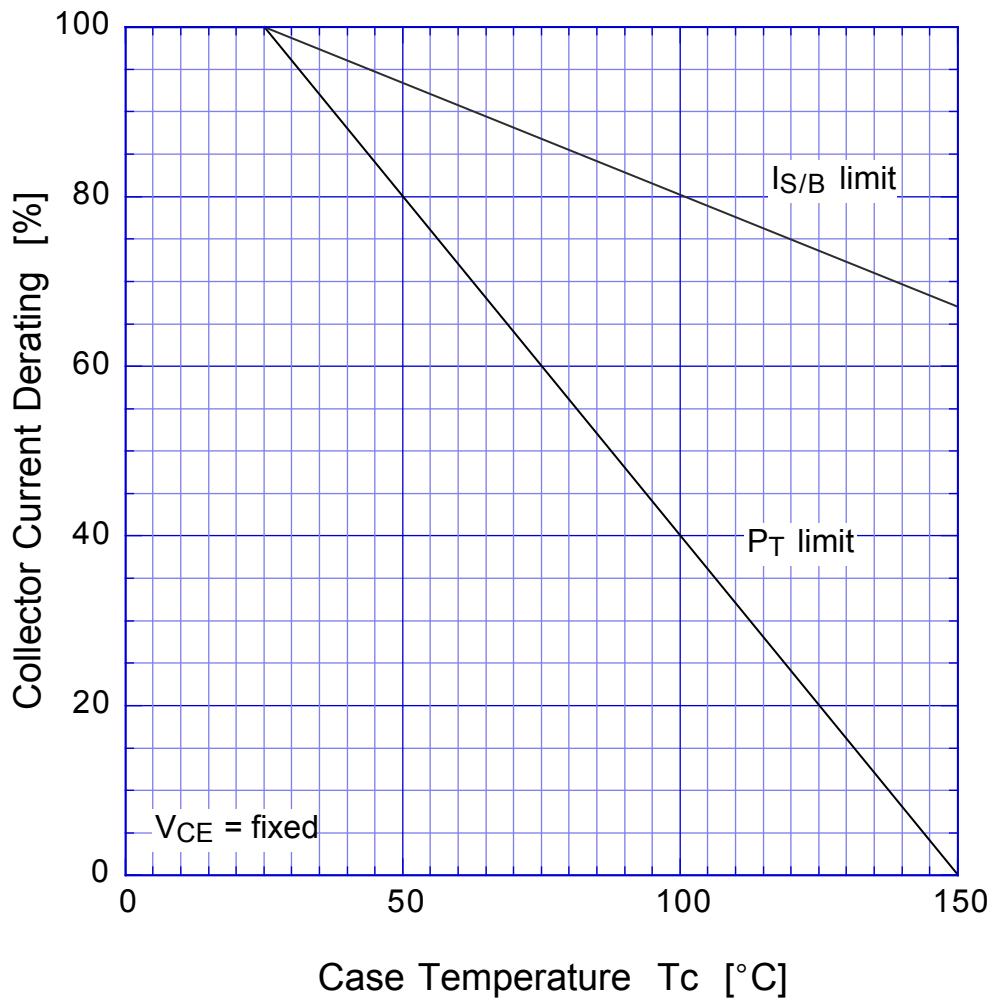
Switching Time - Tc



2SC5382 Forward Bias SOA

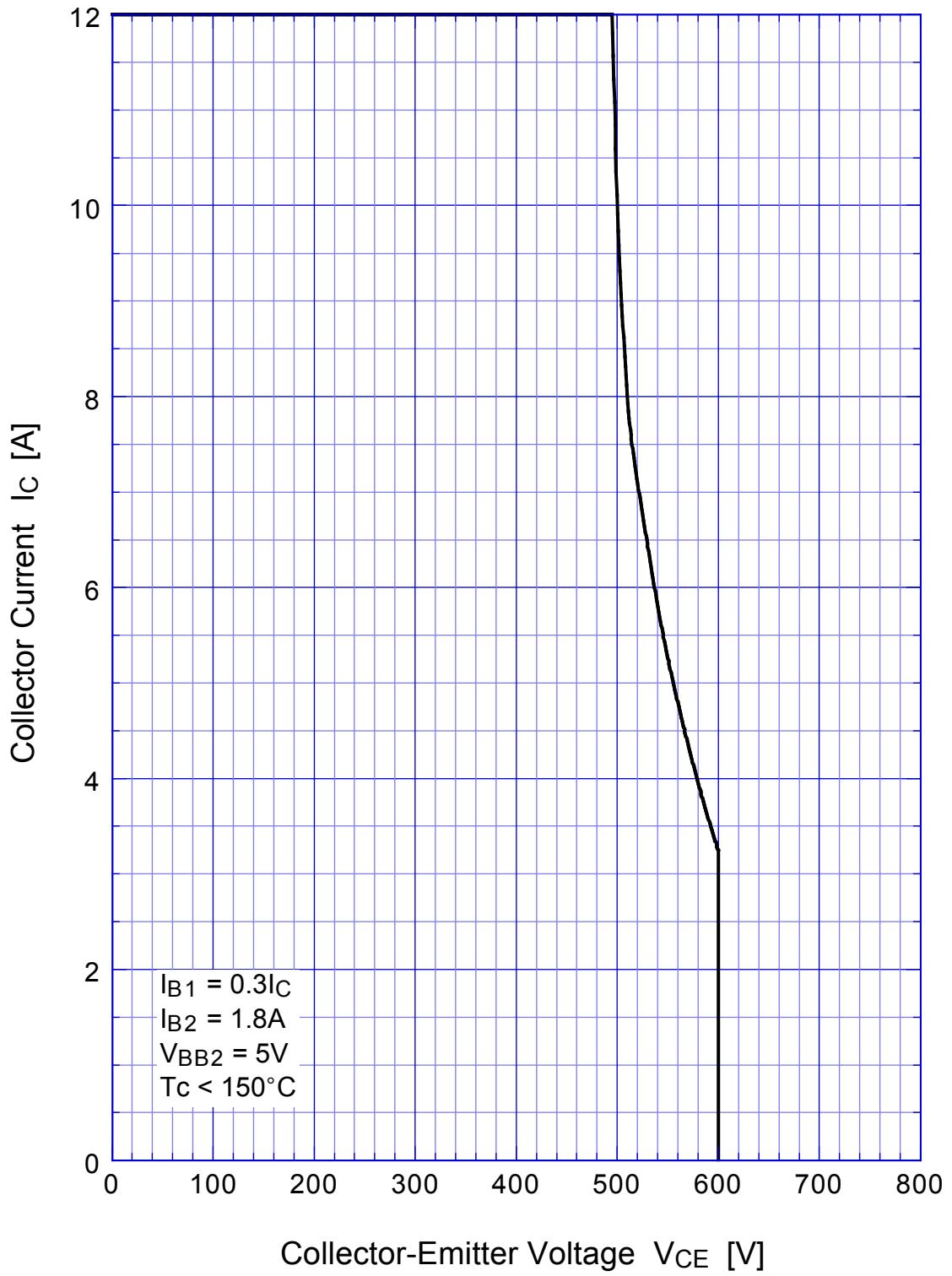


2SC5382 Collector Current Derating



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Reverse Bias SOA



2SC5382 Transient Thermal Impedance

