

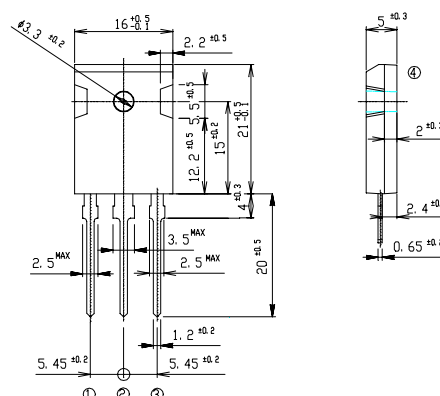
2SC4058
(T10W45FX)

10A NPN

OUTLINE DIMENSIONS

Case : MTO-3P

Unit : mm



① : B

② : C

③ : E

④ : C

RATINGS

● Absolute Maximum Ratings

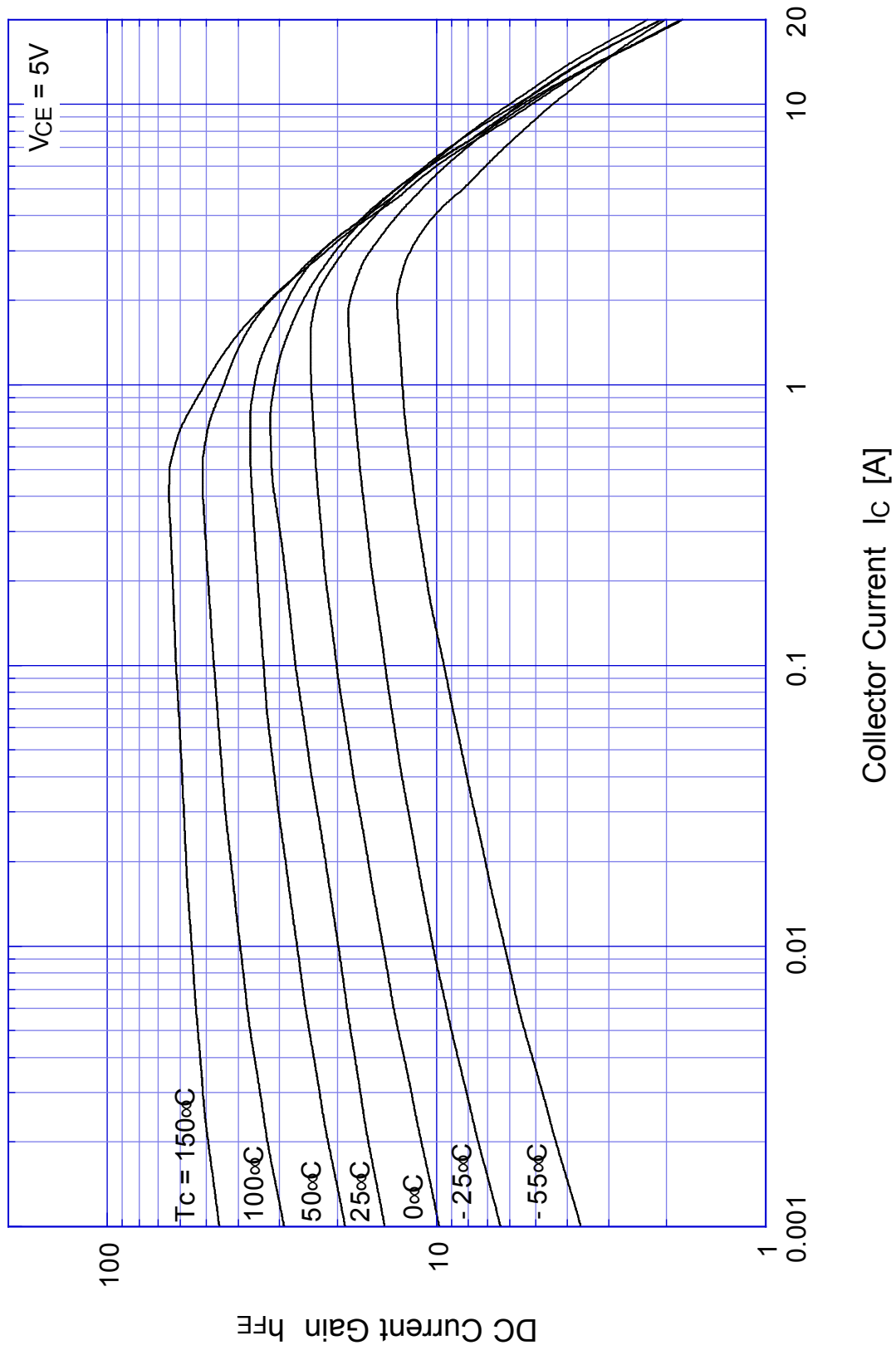
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	°C
Junction Temperature	T _j		150	°C
Collector to Base Voltage	V _{CBO}		600	V
Collector to Emitter Voltage	V _{CEO}	V _{EB} = 5V	450	V
	V _{CEX}		600	
Emitter to Base Voltage	V _{EBO}		7	V
Collector Current DC	I _C		10	A
Collector Current Peak	I _{CP}		20	
Base Current DC	I _B		4	
Base Current Peak	I _{BP}		8	A
Total Transistor Dissipation	P _T	T _c = 25°C	100	W
Mounting Torque	TOR		0.8	N·m

● Electrical Characteristics (T_c=25°C)

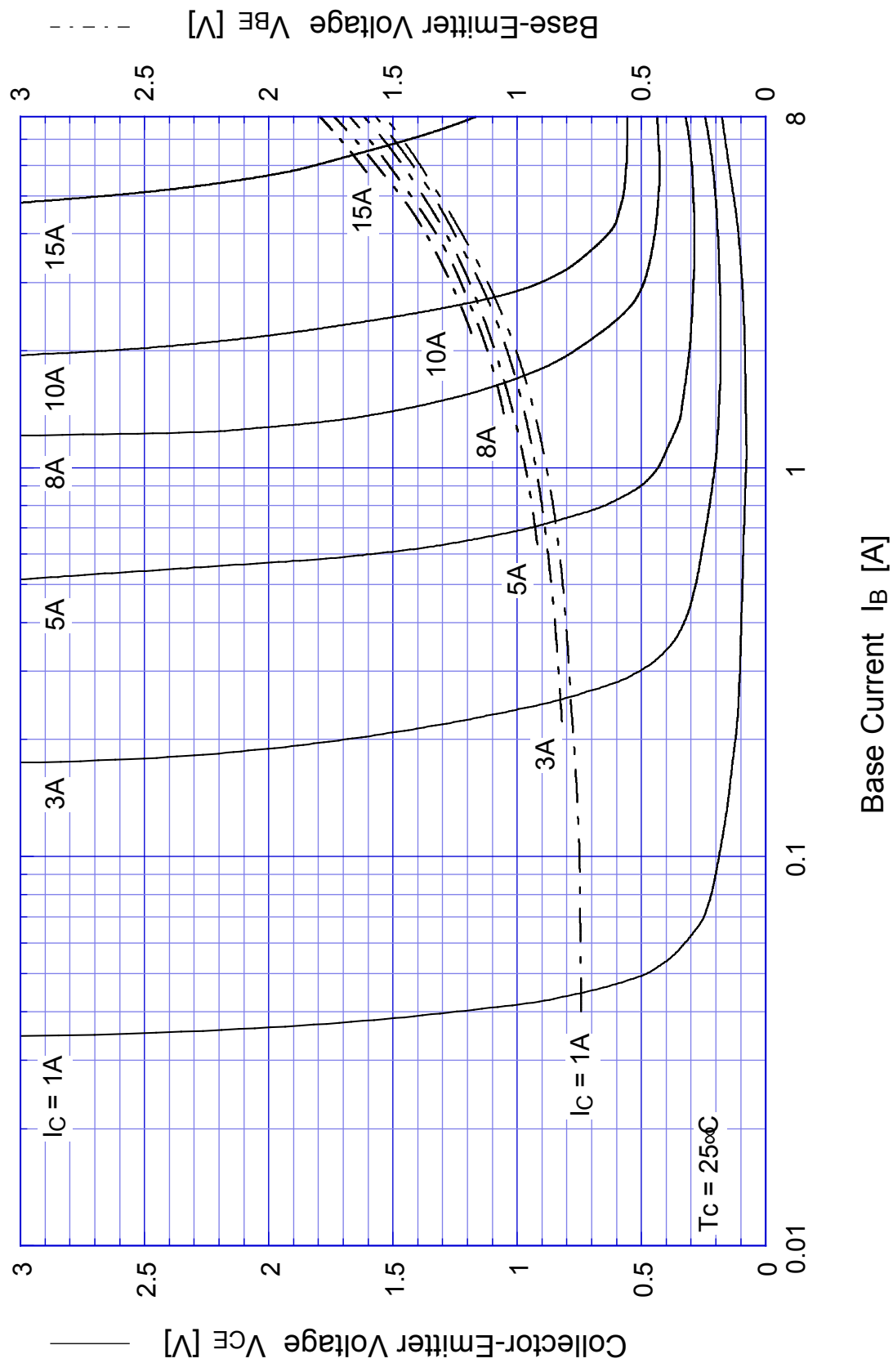
Item	Symbol	Conditions	Ratings	Unit
Collector to Emitter Sustaining Voltage	V _{CEO(sus)}	I _C = 0.2A	Min 450	V
Collector Cutoff Current	I _{CBO}	At rated Voltage	Max 0.1	mA
	I _{CEO}		Max 0.1	
Emitter Cutoff Current	I _{EBO}	At rated Voltage	Max 0.1	mA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 5A	Min 10	
	h _{FEL}	V _{CE} = 5V, I _C = 1mA	Min 5	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = 5A	Max 1.0	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _B = 1A	Max 1.5	V
Thermal Resistance	θ _{jc}	Junction to case	Max 1.25	°C/W
Transition Frequency	f _T	V _{CE} = 10V, I _C = 1A	STD 20	MHz
Turn on Time	ton	I _C = 5A	Max 0.5	μs
Storage Time	ts	I _{B1} = 1A, I _{B2} = 2A	Max 2.0	
Fall Time	tf	R _L = 30 Ω, V _{BB2} = 4V	Max 0.2	

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$h_{FE} - I_C$

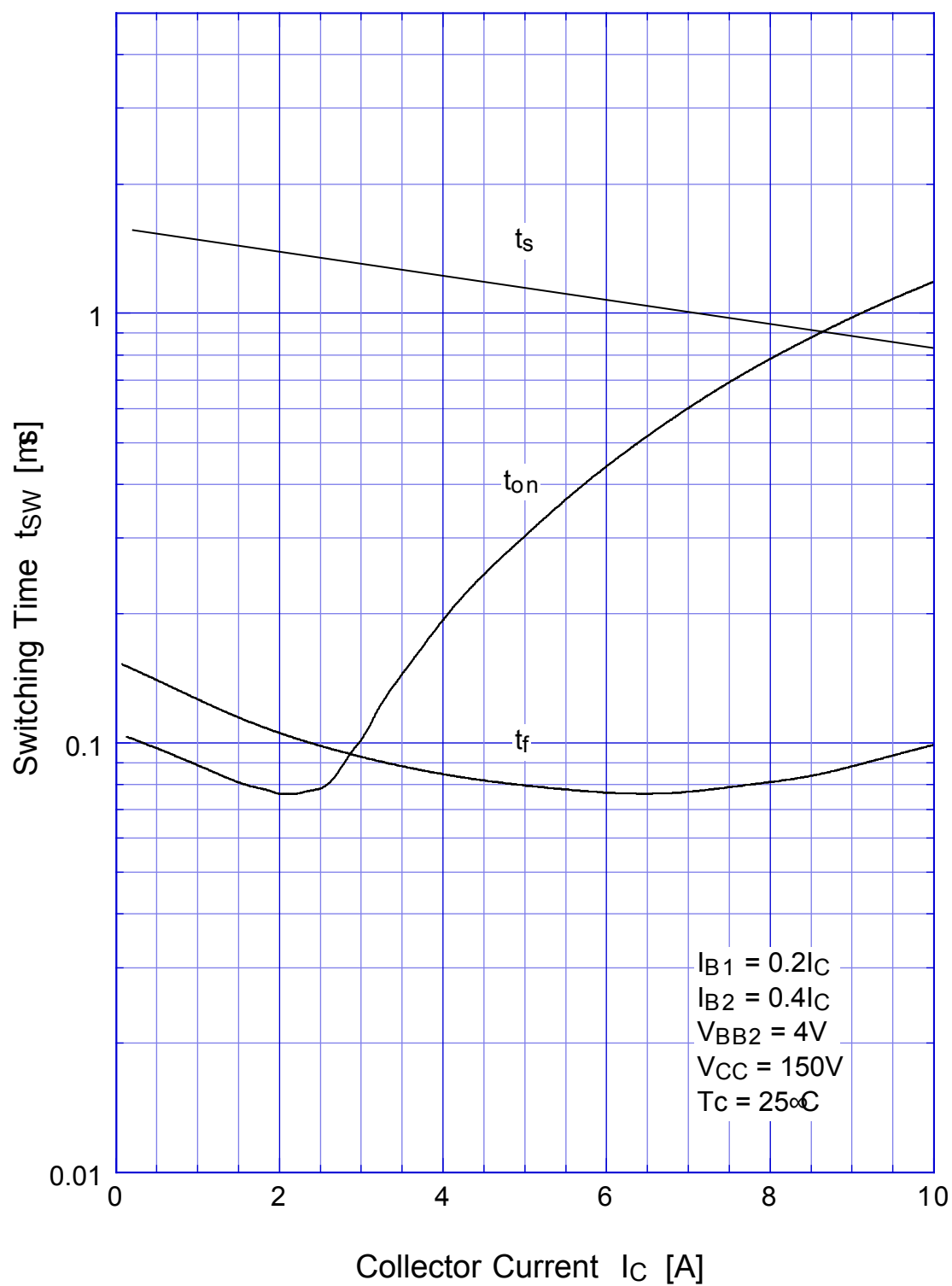


2SC4058 Saturation Voltage



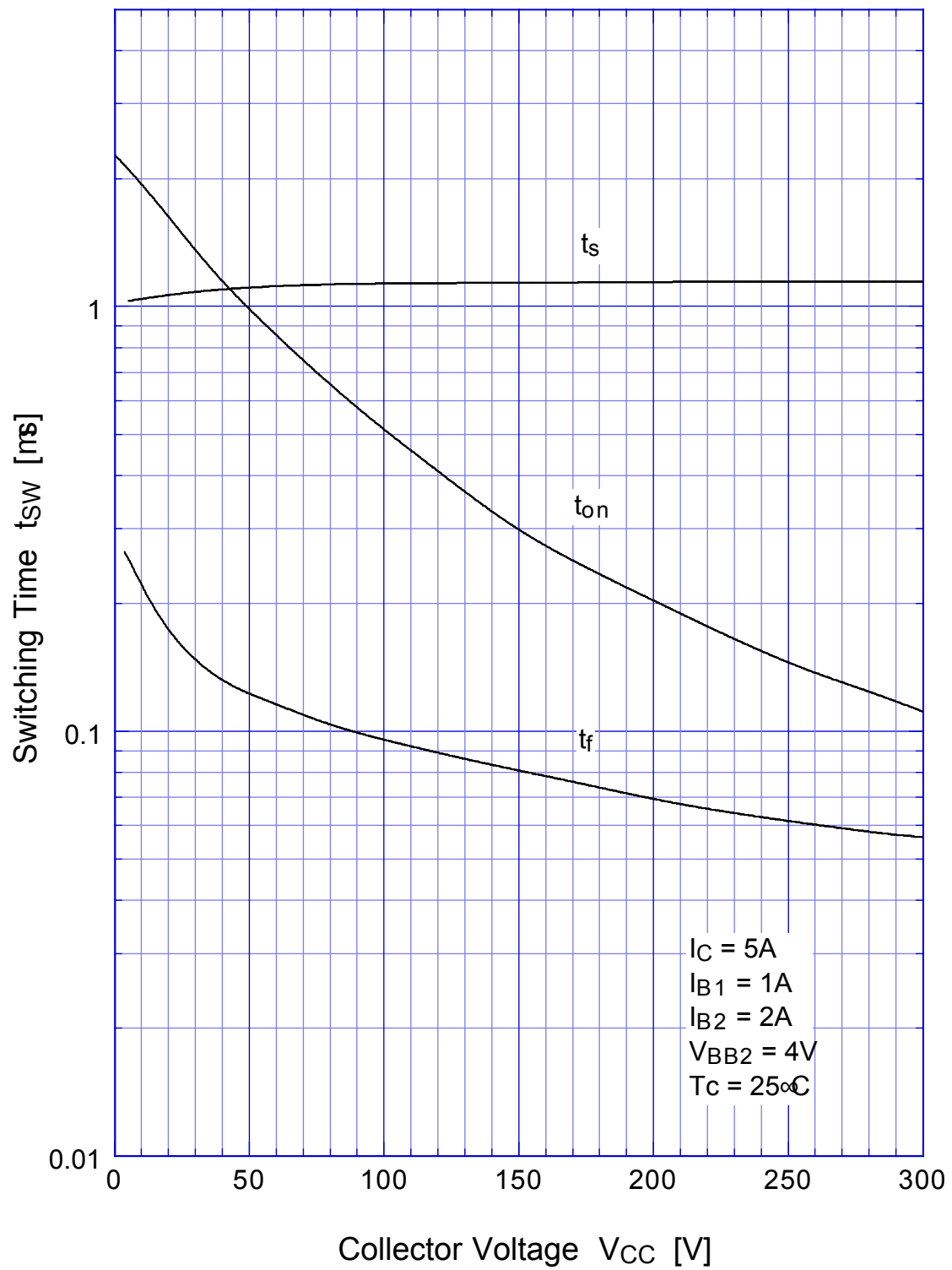
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Switching Time - I_C



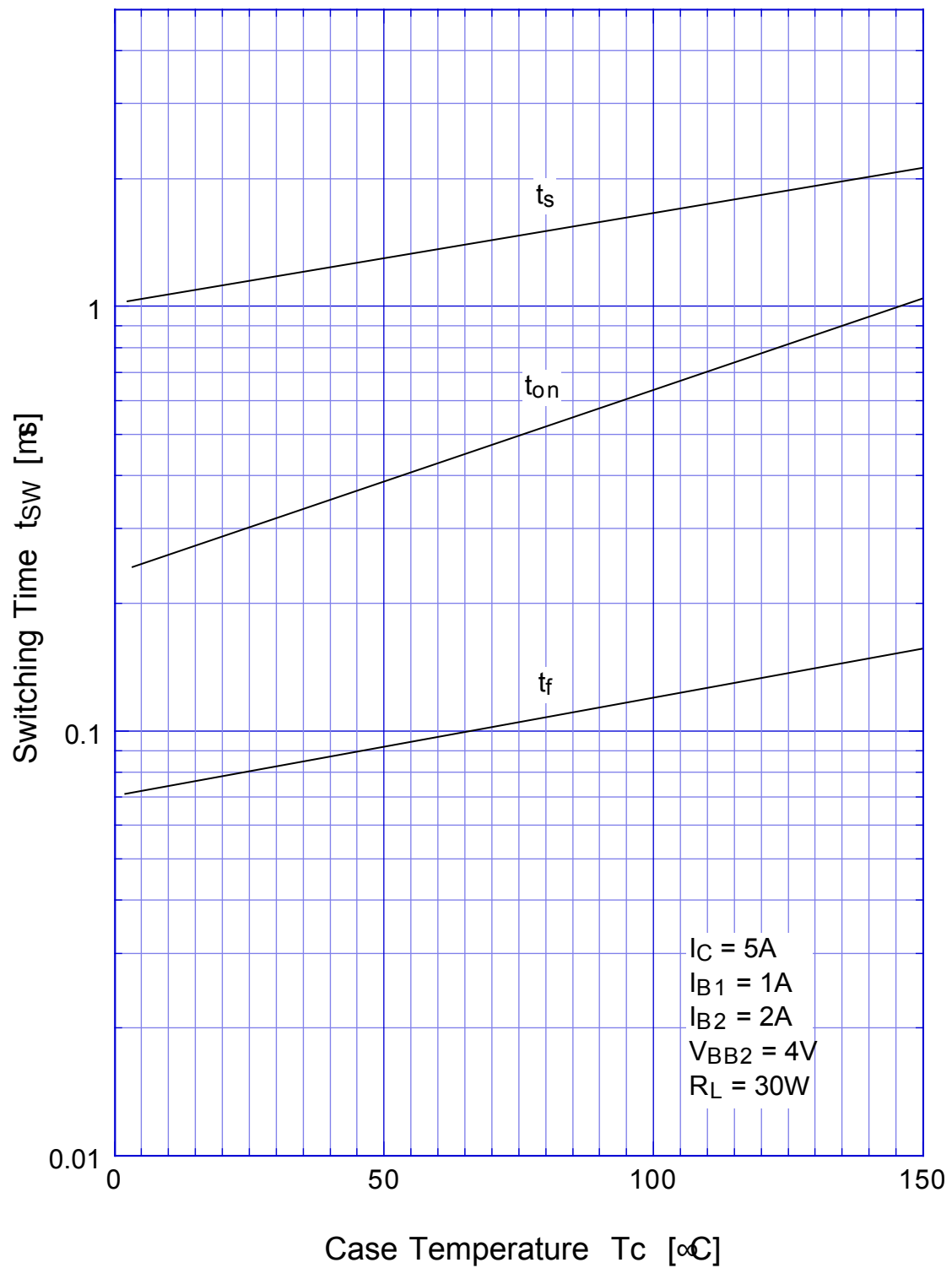
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Switching Time - V_{CC}

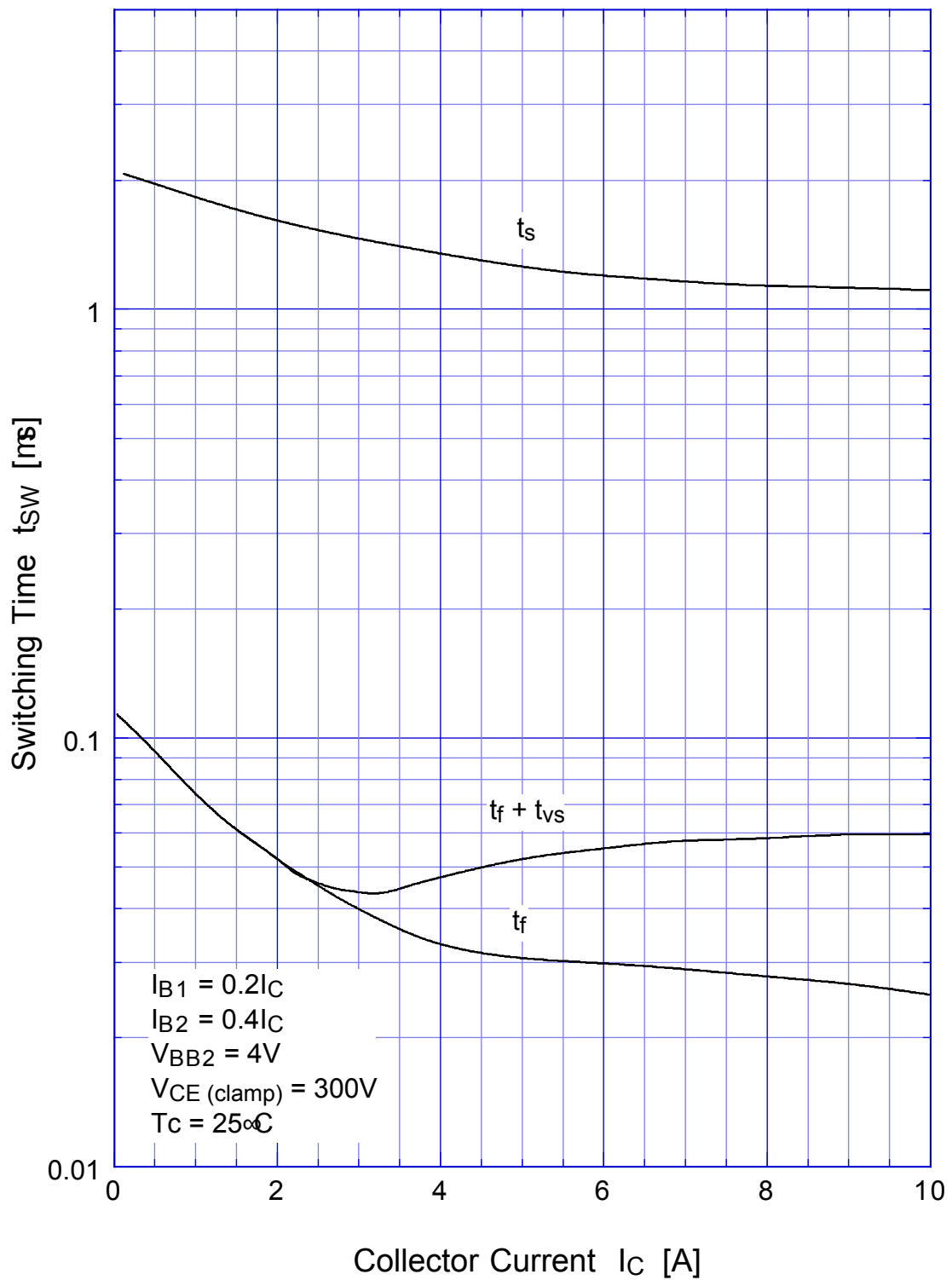


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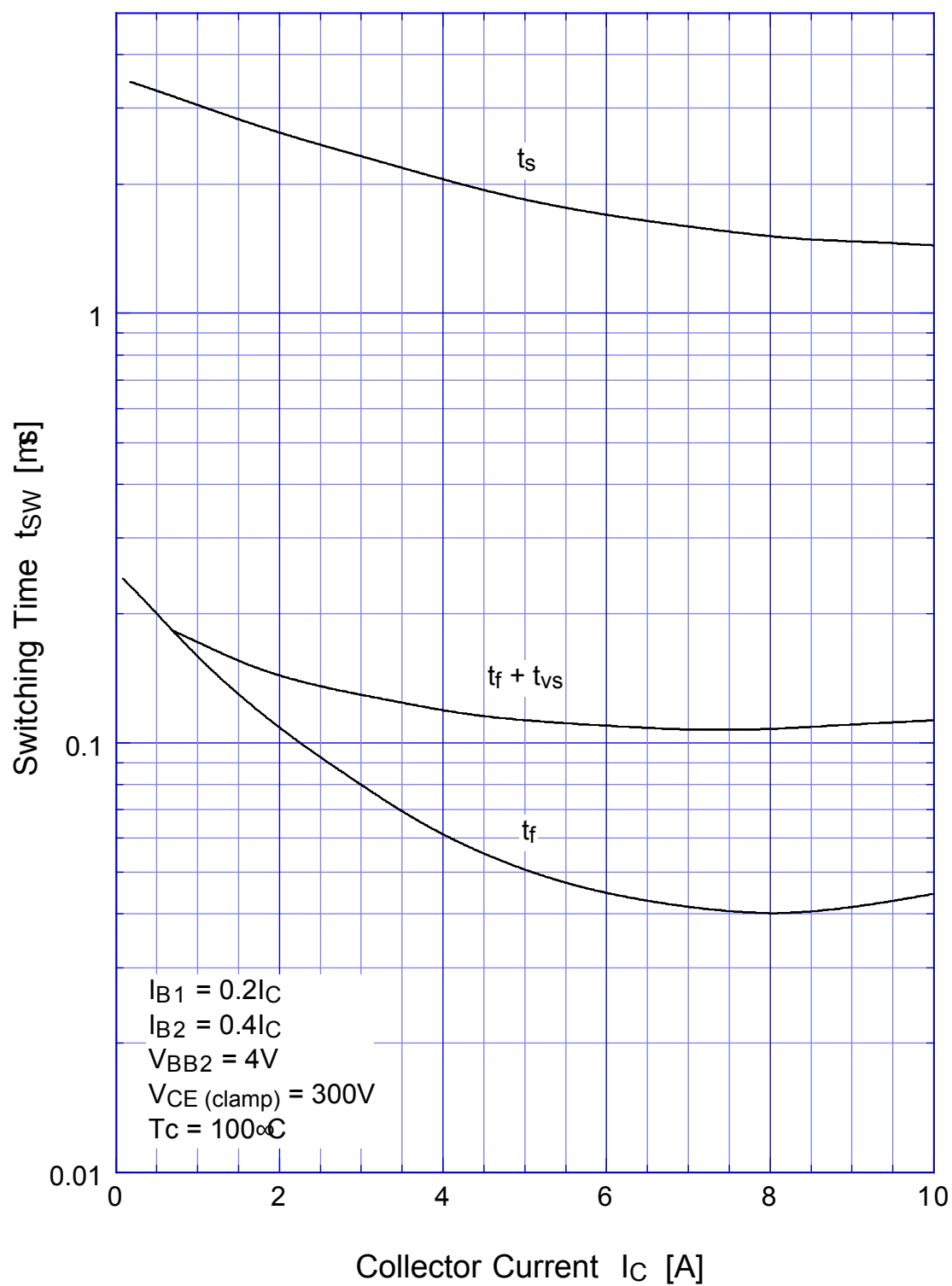
Switching Time - T_c



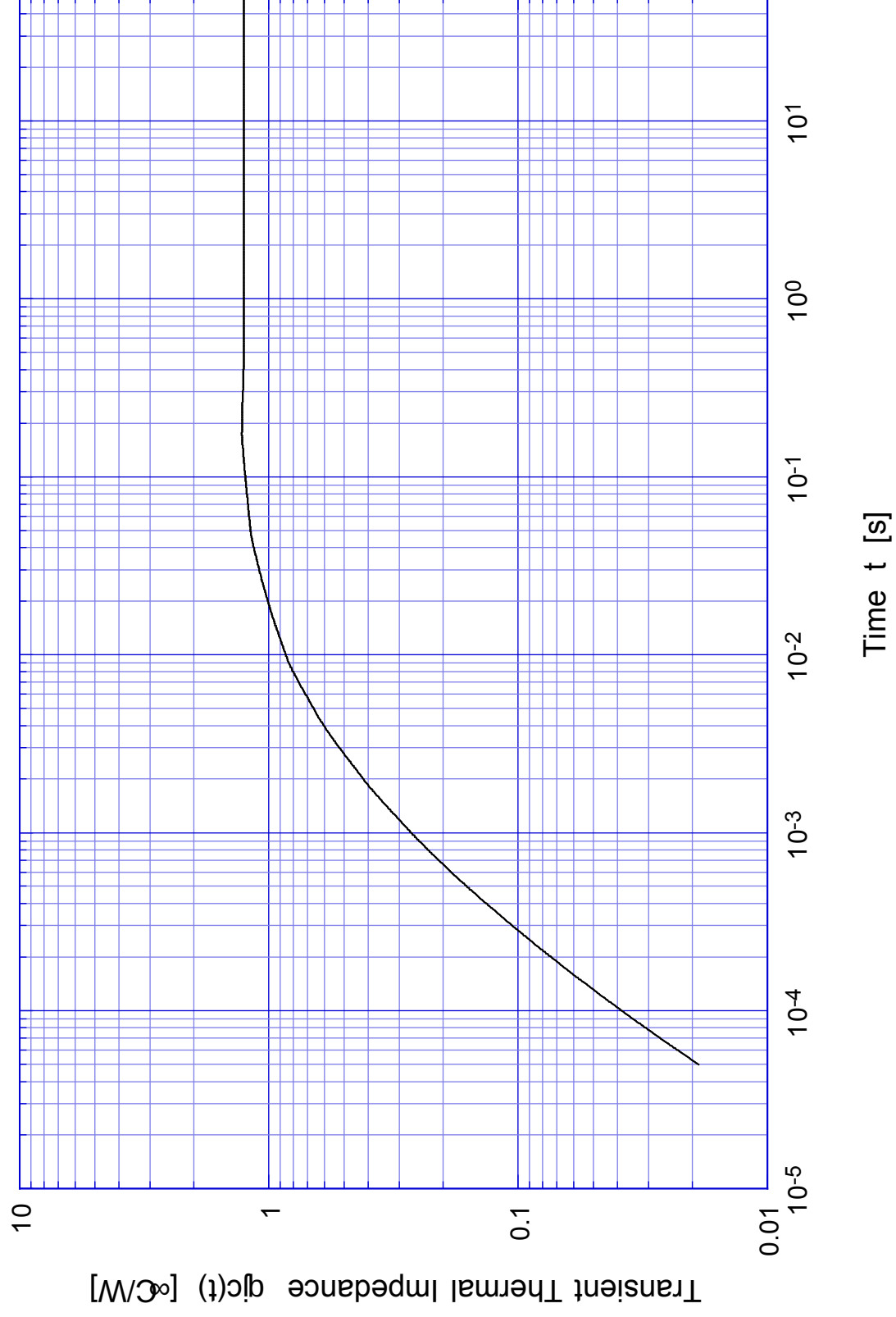
2SC4058 L-Load Switching Time - I_C



2SC4058 L-Load Switching Time - I_C (At High Temperature)

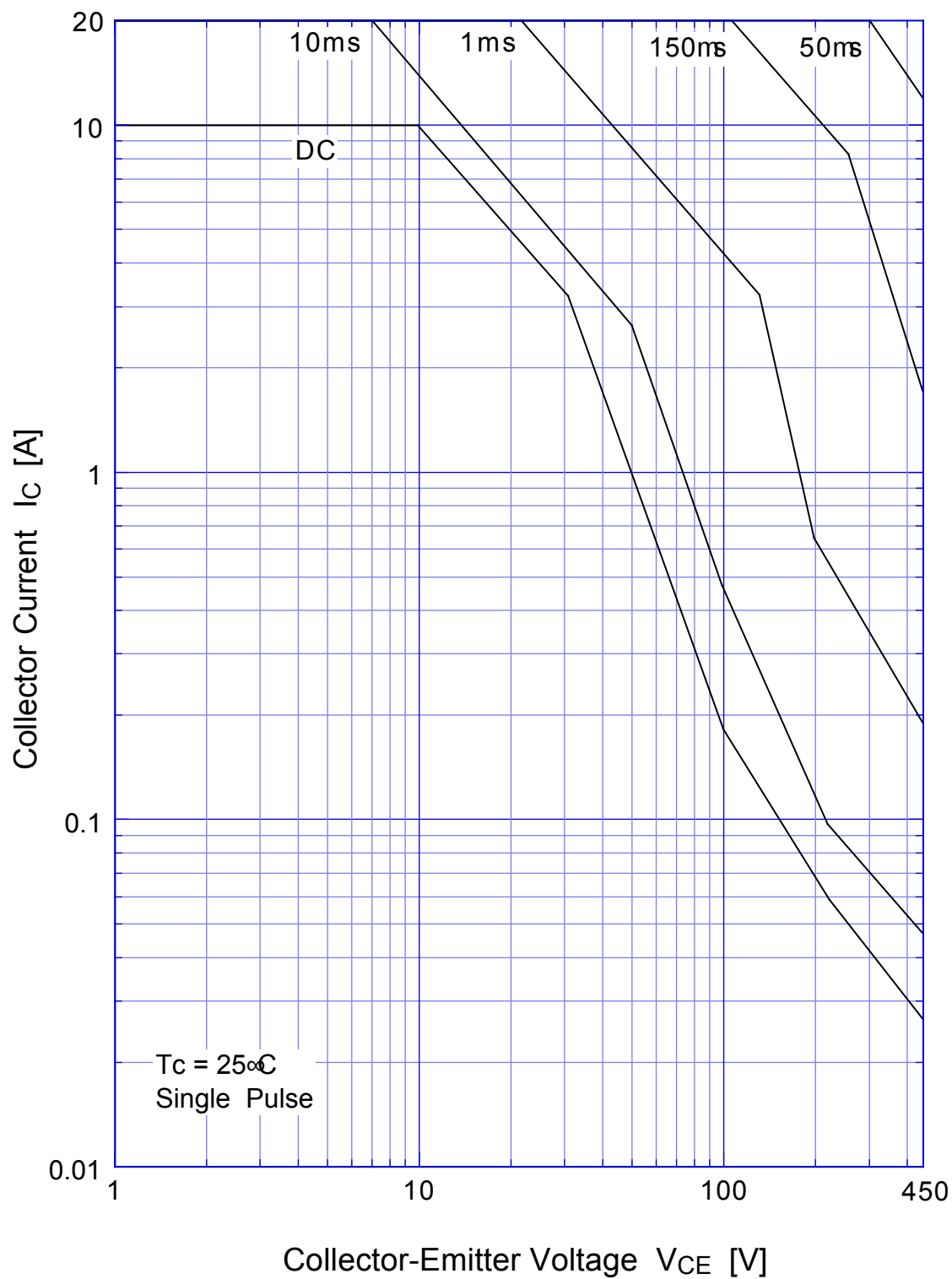


2SC4058 Transient Thermal Impedance



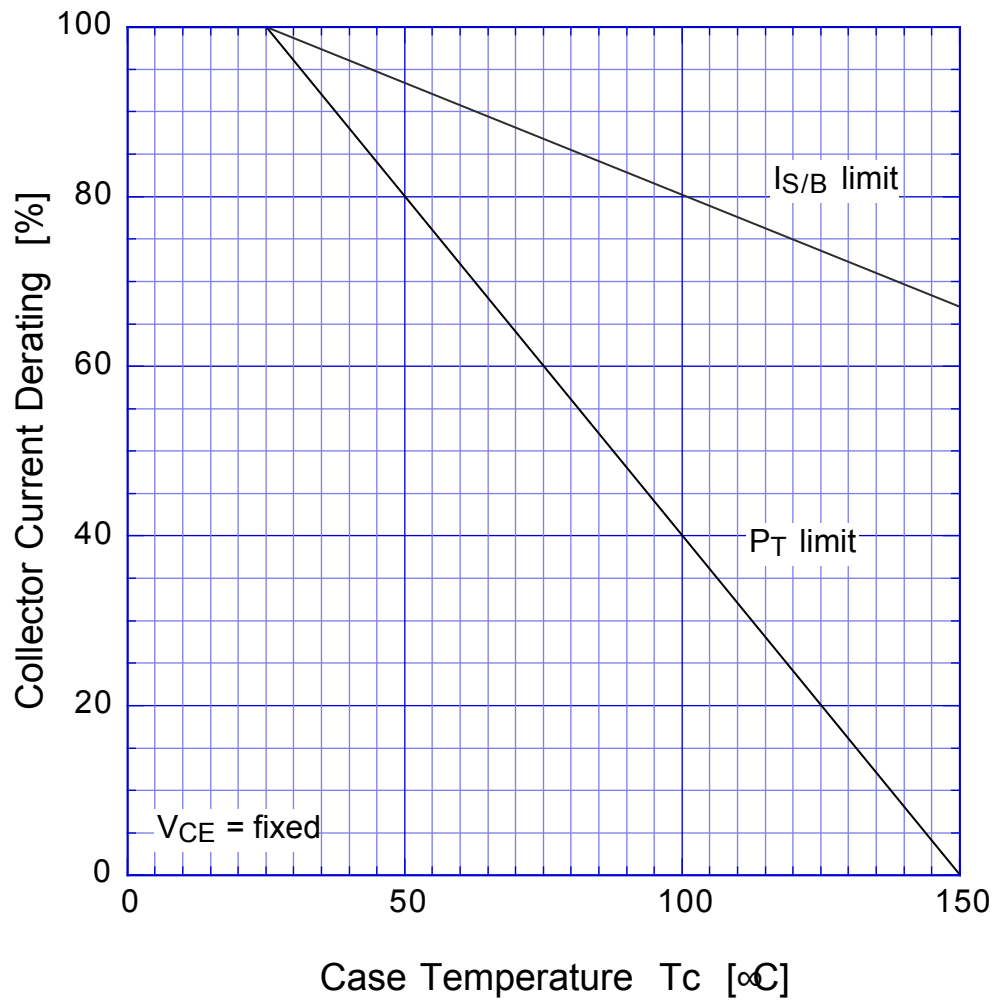
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Forward Bias SOA



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Collector Current Derating



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Reverse Bias SOA

