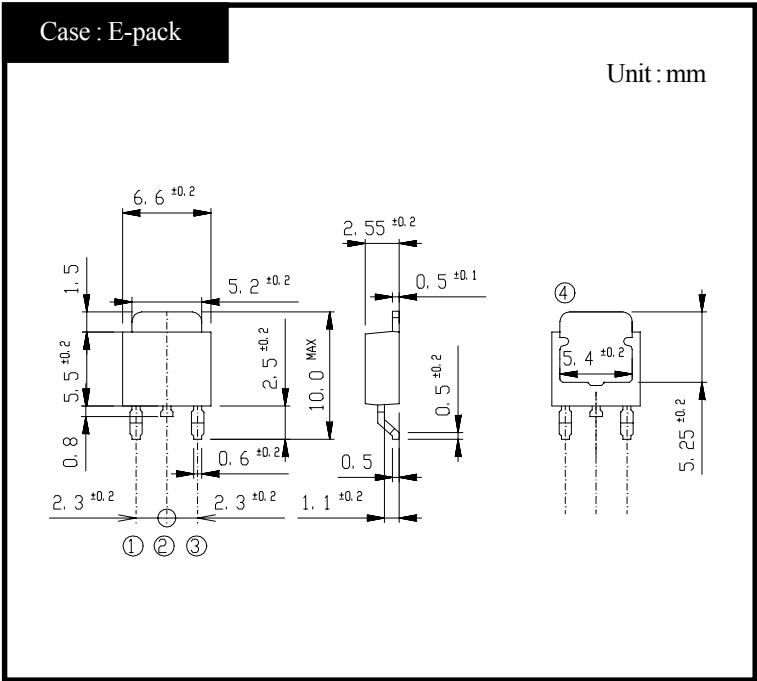


2SC4978
(TE3S8)

3A NPN

OUTLINE DIMENSIONS



RATINGS

●Absolute Maximum Ratings

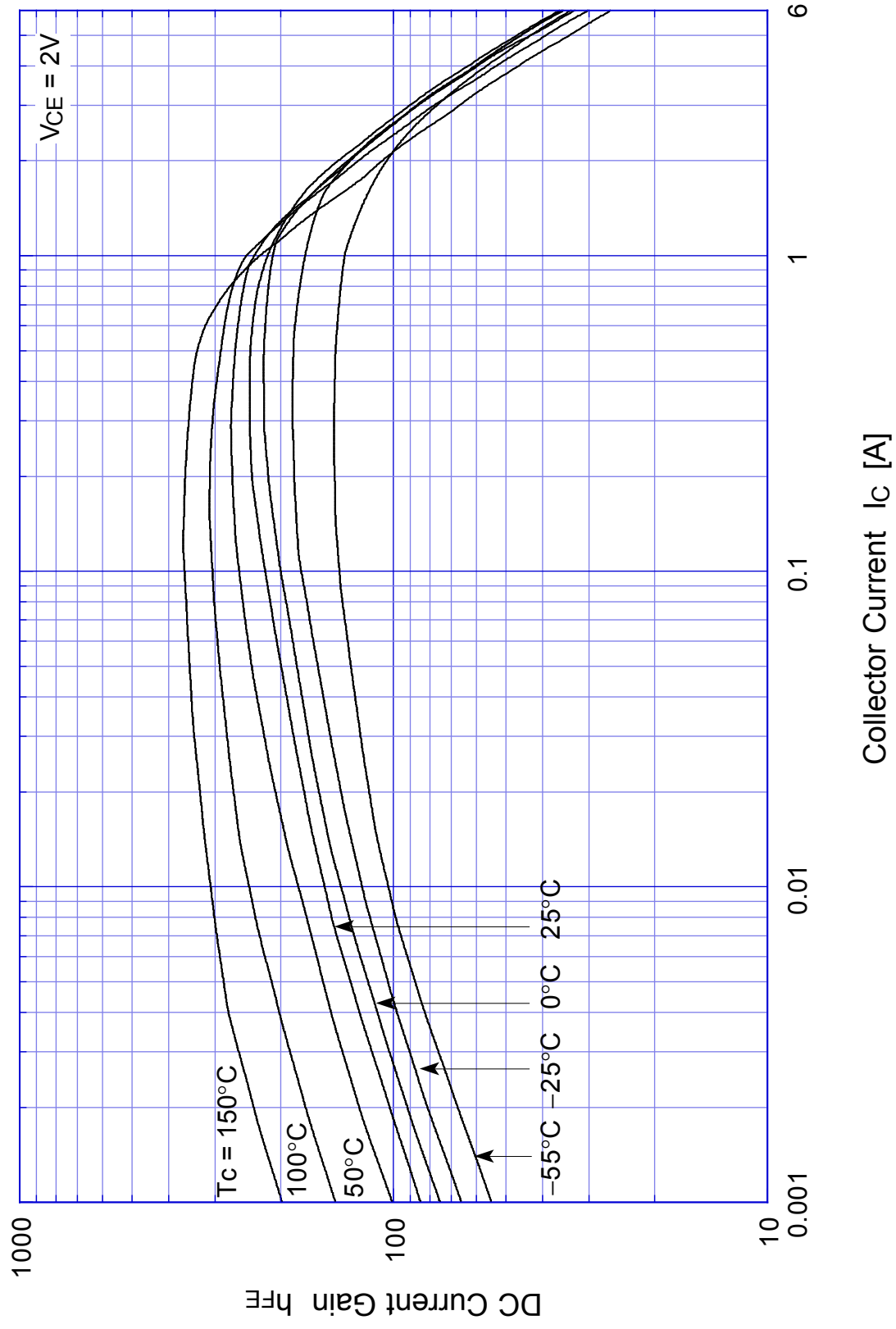
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	℃
Junction Temperature	T _j		150	℃
Collector to Base Voltage	V _{CBO}		100	V
Collector to Emitter Voltage	V _{CEO}		80	V
Emitter to Base Voltage	V _{EBO}		7	V
Collector Current DC	I _C		3	A
Collector Current Peak	I _{CP}		6	A
Base Current DC	I _B		1	A
Base Current Peak	I _{BP}		1.5	A
Total Transistor Dissipation	P _T	T _c = 25℃	10	W

●Electrical Characteristics (T_c=25℃)

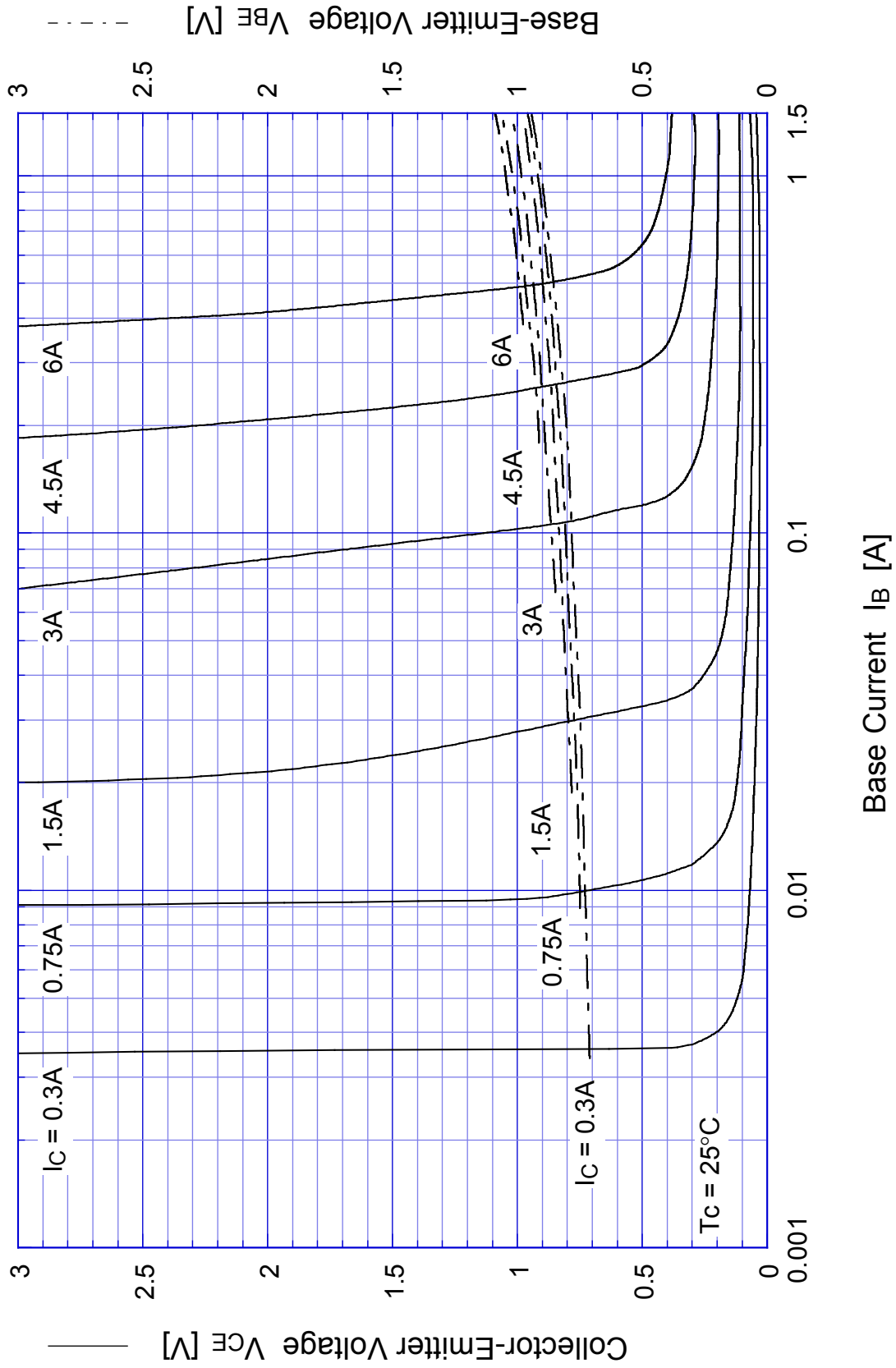
Item	Symbol	Conditions	Ratings	Unit
Collector to Emitter Sustaining Voltage	V _{CEO(sus)}	I _C = 0.05A	Min 80	V
Collector Cutoff Current	I _{CBO}	At rated Voltage	Max 0.1	mA
	I _{CEO}		Max 0.1	
Emitter Cutoff Current	I _{EBO}	At rated Voltage	Max 0.1	mA
DC Current Gain	h _{FE}	V _{CE} = 2V, I _C = 1.5A	Min 70	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = 1.5A	Max 0.3	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _B = 0.08A	Max 1.2	V
Thermal Resistance	θ _{jc}	Junction to case	Max 12.5	℃/W
Transition Frequency	f _T	V _{CE} = 10V, I _C = 0.3A	TYP 50	MHz
Turn on Time	ton	I _C = 1.5A I _{B1} = 0.15A, I _{B2} = 0.15A R _L = 20 Ω, V _{BB2} = 4V	Max 0.3	μ s
Storage Time	ts		Max 1.5	
Fall Time	tf		Max 0.2	

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$h_{FE} - I_C$

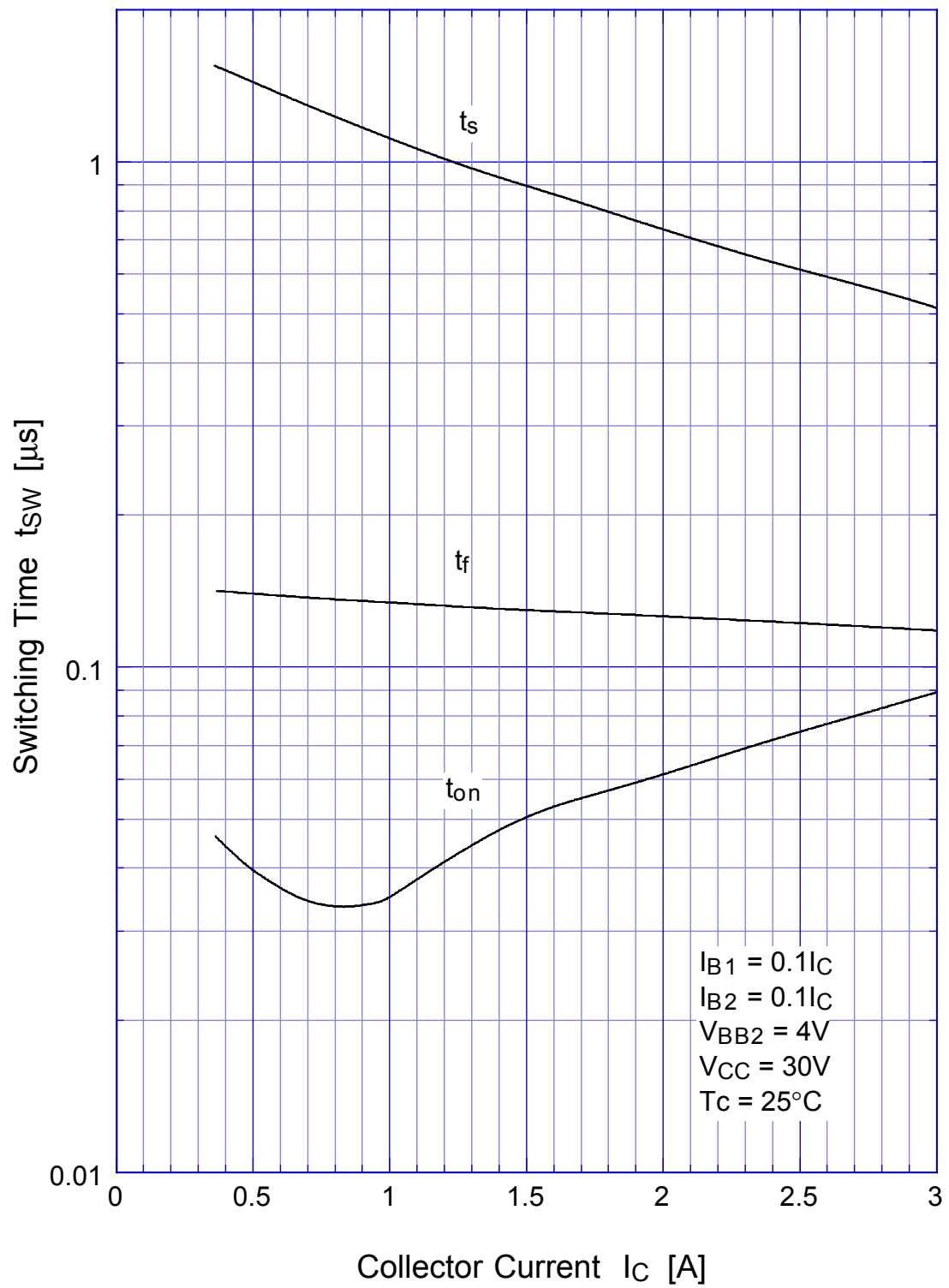


2SC4978 Saturation Voltage



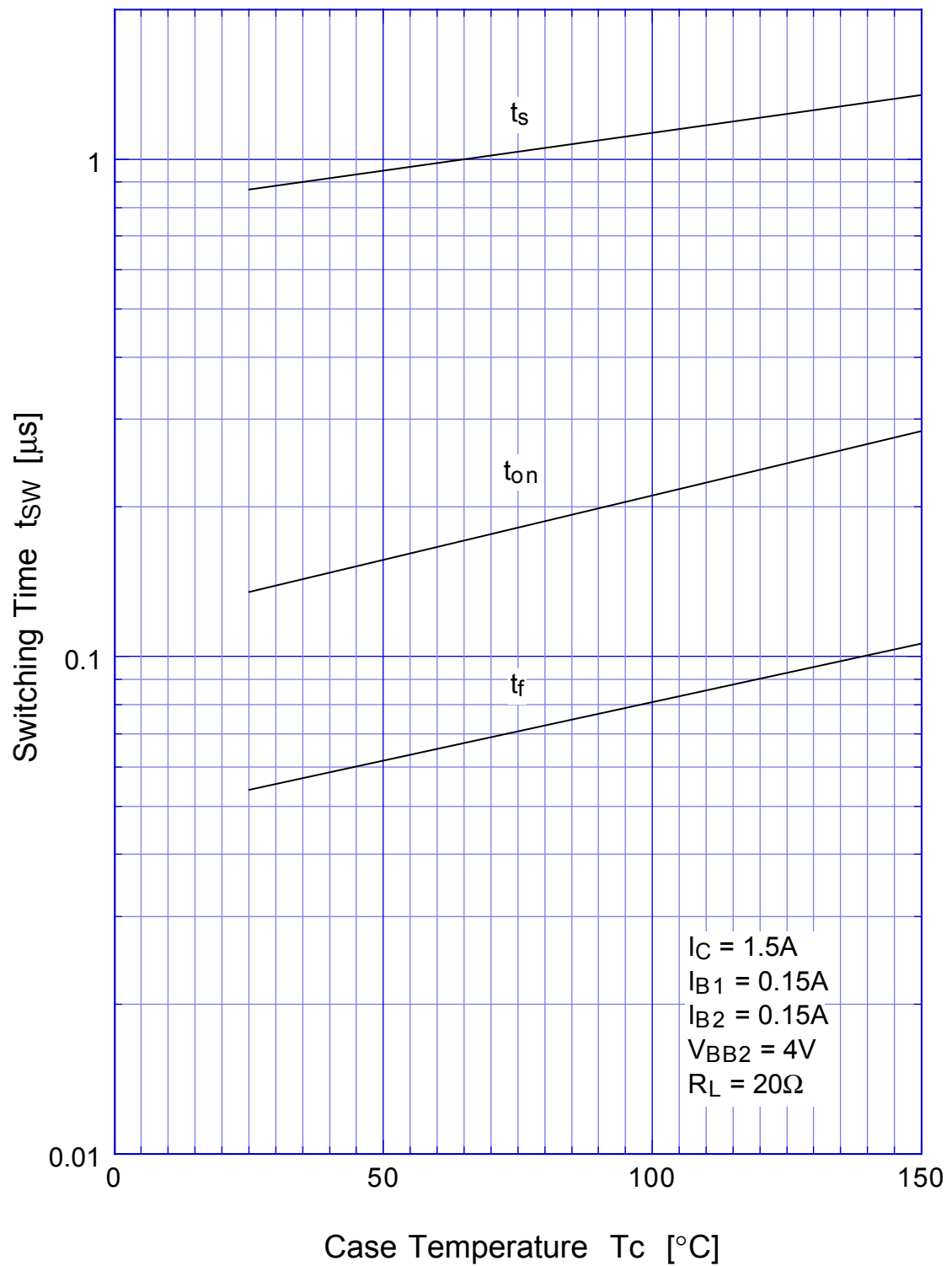
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Switching Time - I_C

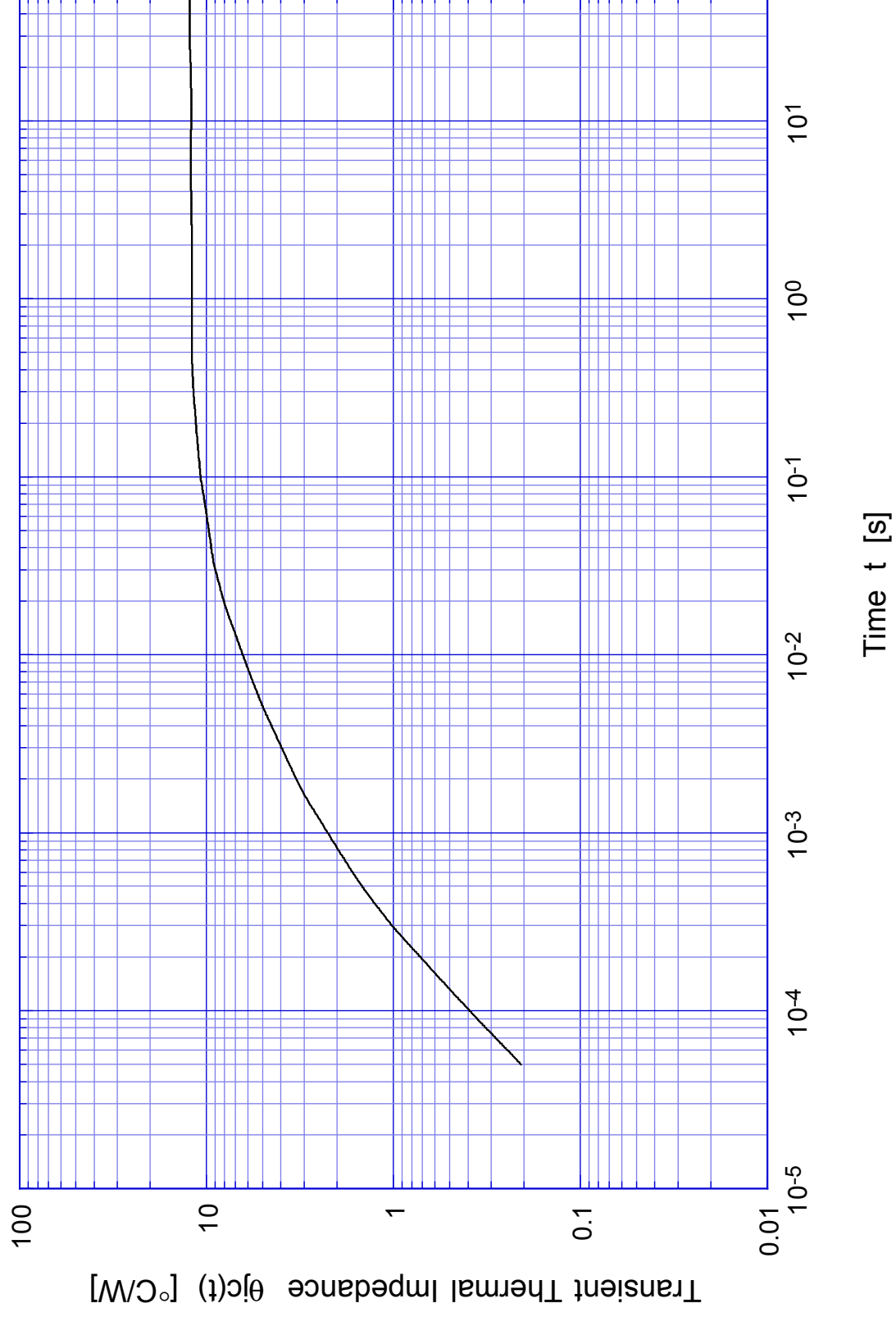


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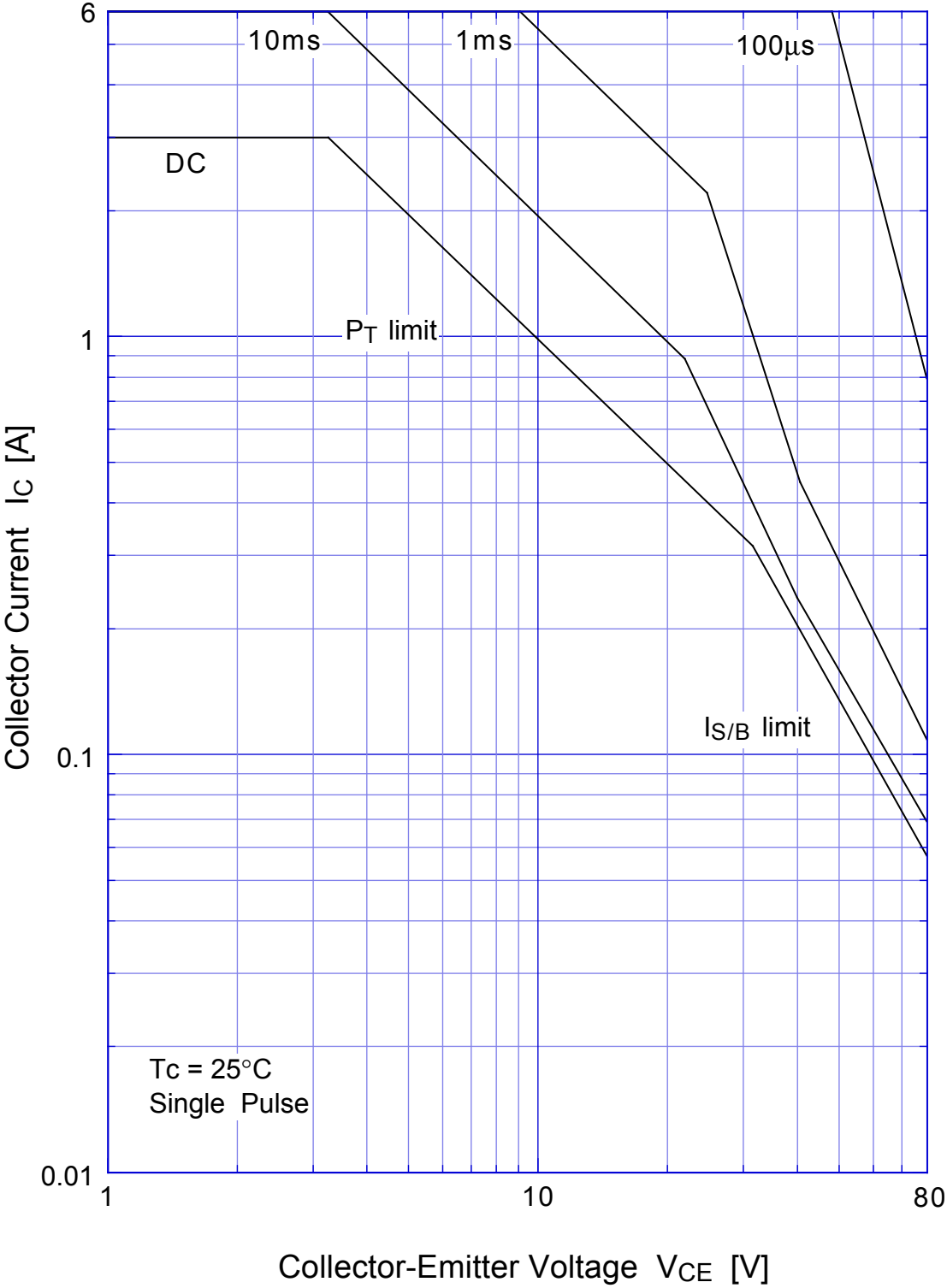
Switching Time - T_c



2SC4978 Transient Thermal Impedance



2SC4978 Forward Bias SOA



2SC4978 Collector Current Derating

