

SHINDENGEN

Switching Power Transistor

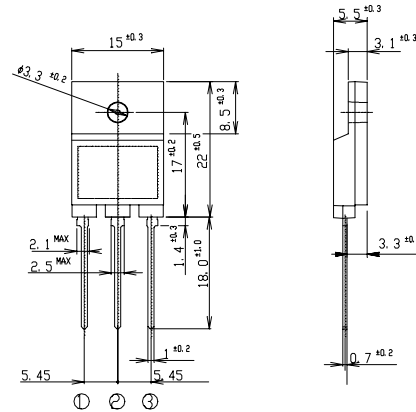
2SC4941

6A NPN

OUTLINE DIMENSIONS

Case : ITO-3P

Unit : mm



①: B
②: C
③: E

RATINGS

● Absolute Maximum Ratings

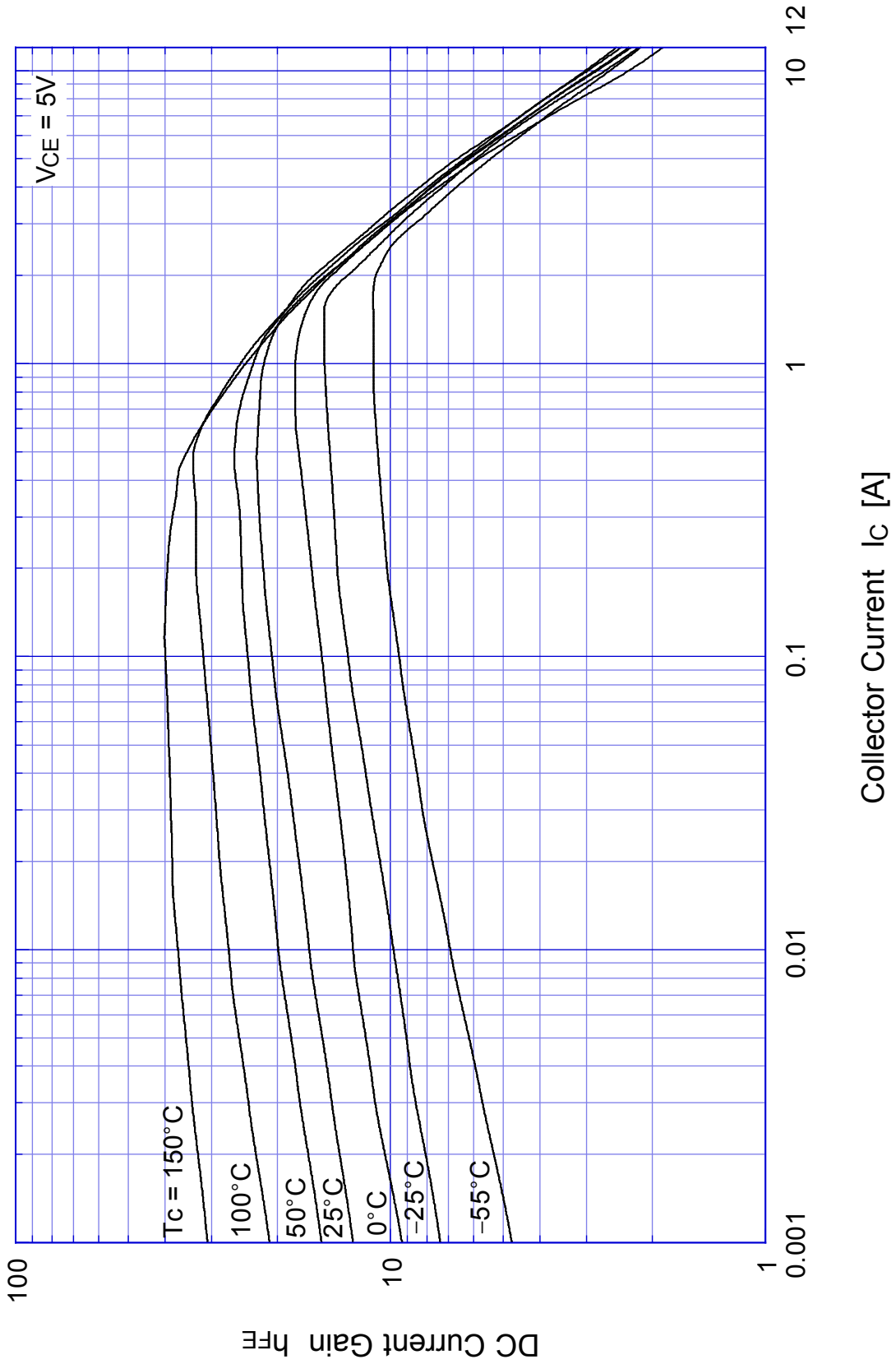
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	°C
Junction Temperature	T _j		150	°C
Collector to Base Voltage	V _{CBO}		1500	V
Collector to Emitter Voltage	V _{CEO}		800	V
Emitter to Base Voltage	V _{EBO}		7	V
Collector Current DC	I _C		6	A
Collector Current Peak	I _{CP}		12	A
Base Current DC	I _B		3	A
Base Current Peak	I _{BP}		6	A
Total Transistor Dissipation	P _T		65	W
Dielectric Strength	V _{dis}	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque)	0.8(0.5)	N·m

● Electrical Characteristics (T_c=25°C)

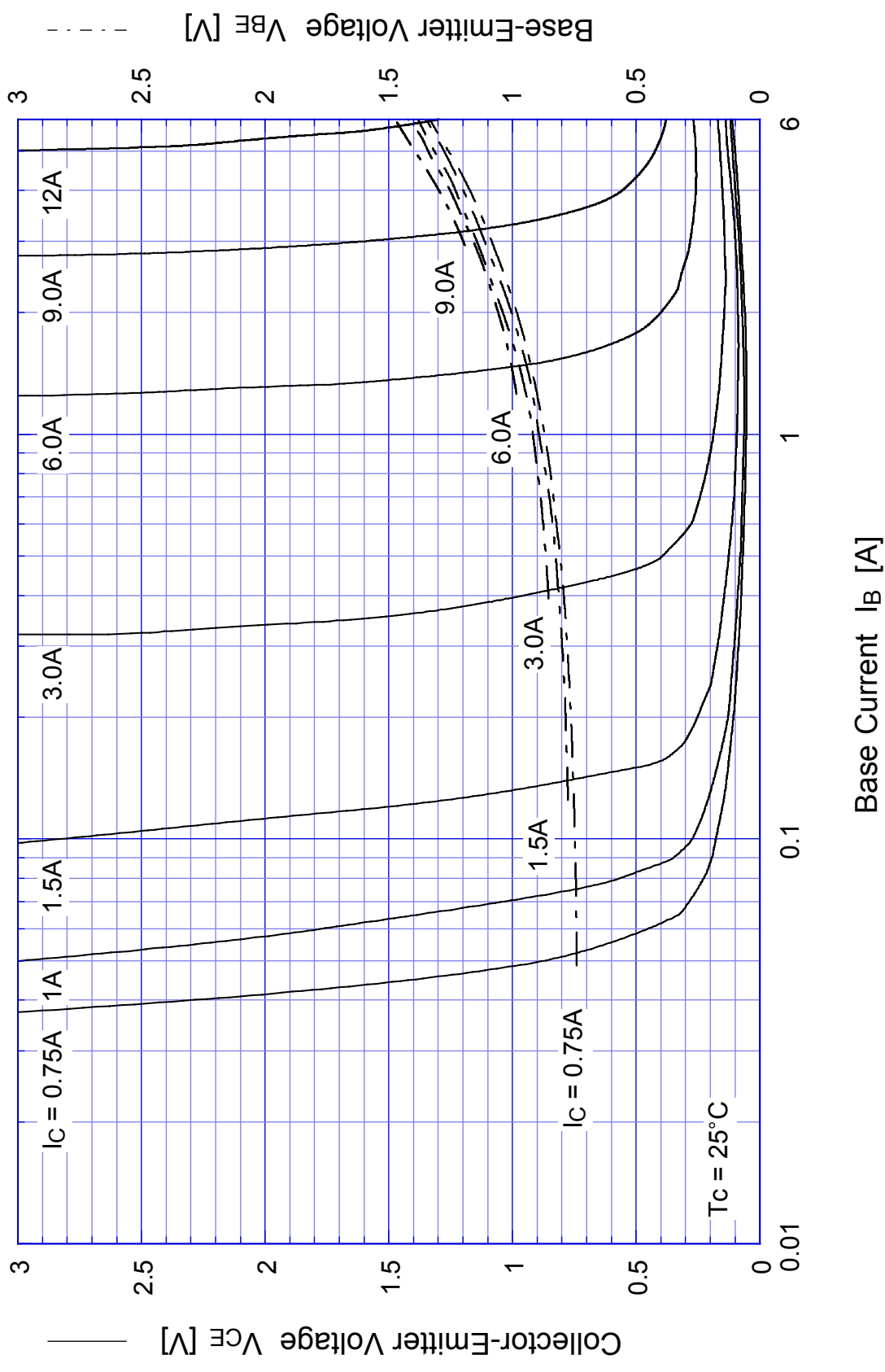
Item	Symbol	Conditions	Ratings	Unit
Collector to Emitter Sustaining Voltage	V _{CEO(sus)}	I _C = 0.2A	Min 800	V
Collector to Base Voltage	V _{CBO}	I _{CB} = 1mA	Min 1500	
Collector Cutoff Current	I _{CBO}	V _{CB} = 1200V	Max 0.1	mA
	I _{CEO}	rated V _{CEO}	Max 0.1	
Emitter Cutoff Current	I _{EBO}	rated V _{EBO}	Max 0.1	mA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 1A	Min 15	
	h _{FEL}	V _{CE} = 5V, I _C = 1mA	Min 7	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = 3A	Max 0.5	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 1.92	°C/W
Transition Frequency	f _T	V _{CE} = 10V, I _C = 0.6A	TYP 8	MHz
Turn on Time	t _{on}	I _C = 3A	Max 0.5	μs
Storage Time	t _s	I _{B1} = 0.6A, I _{B2} = 1.2A	Max 3.5	
Fall Time	t _f	R _L = 85 Ω, V _{BB2} = 4V	Max 0.3	

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$h_{FE} - I_C$

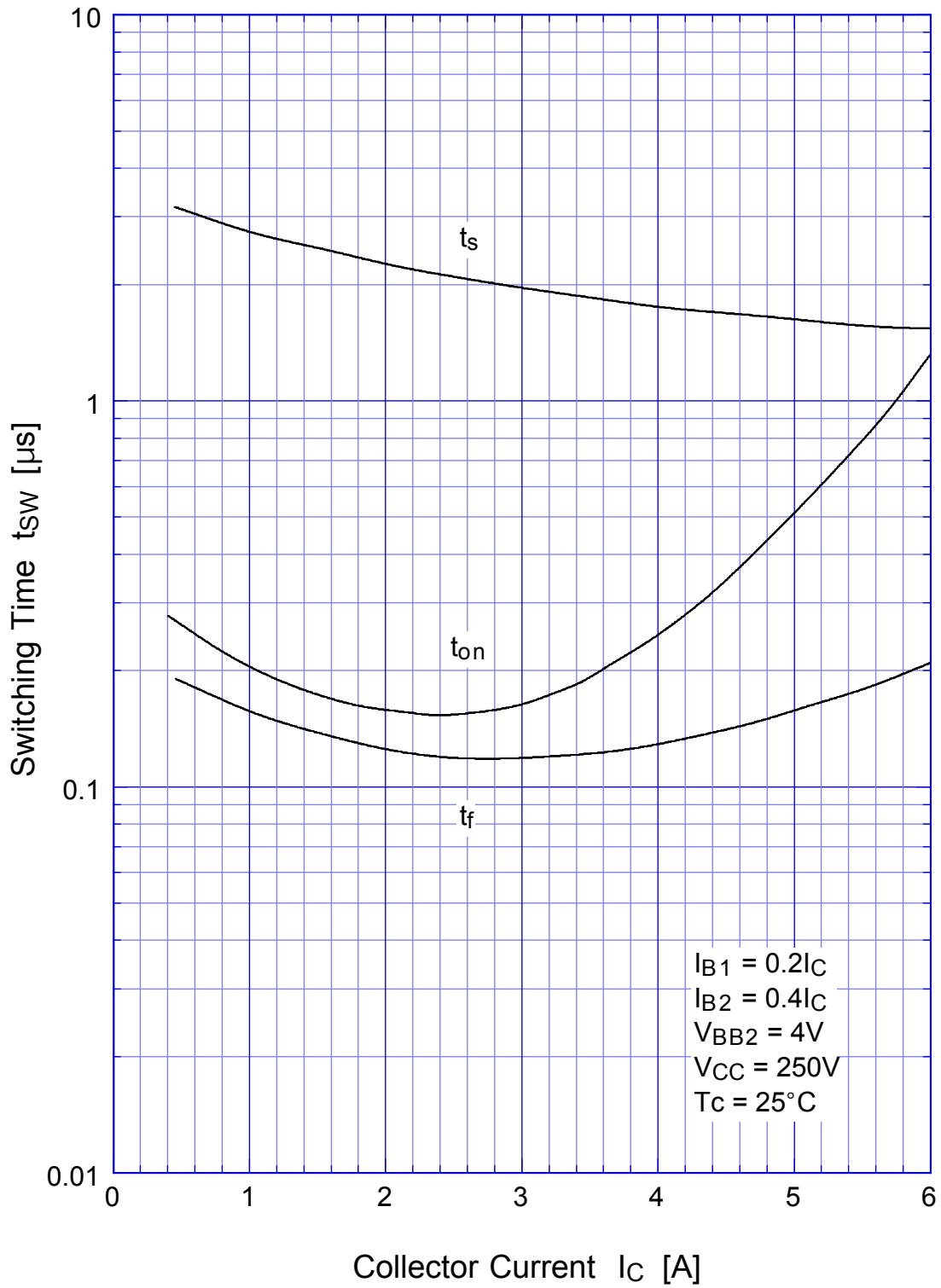


2SC4941 Saturation Voltage



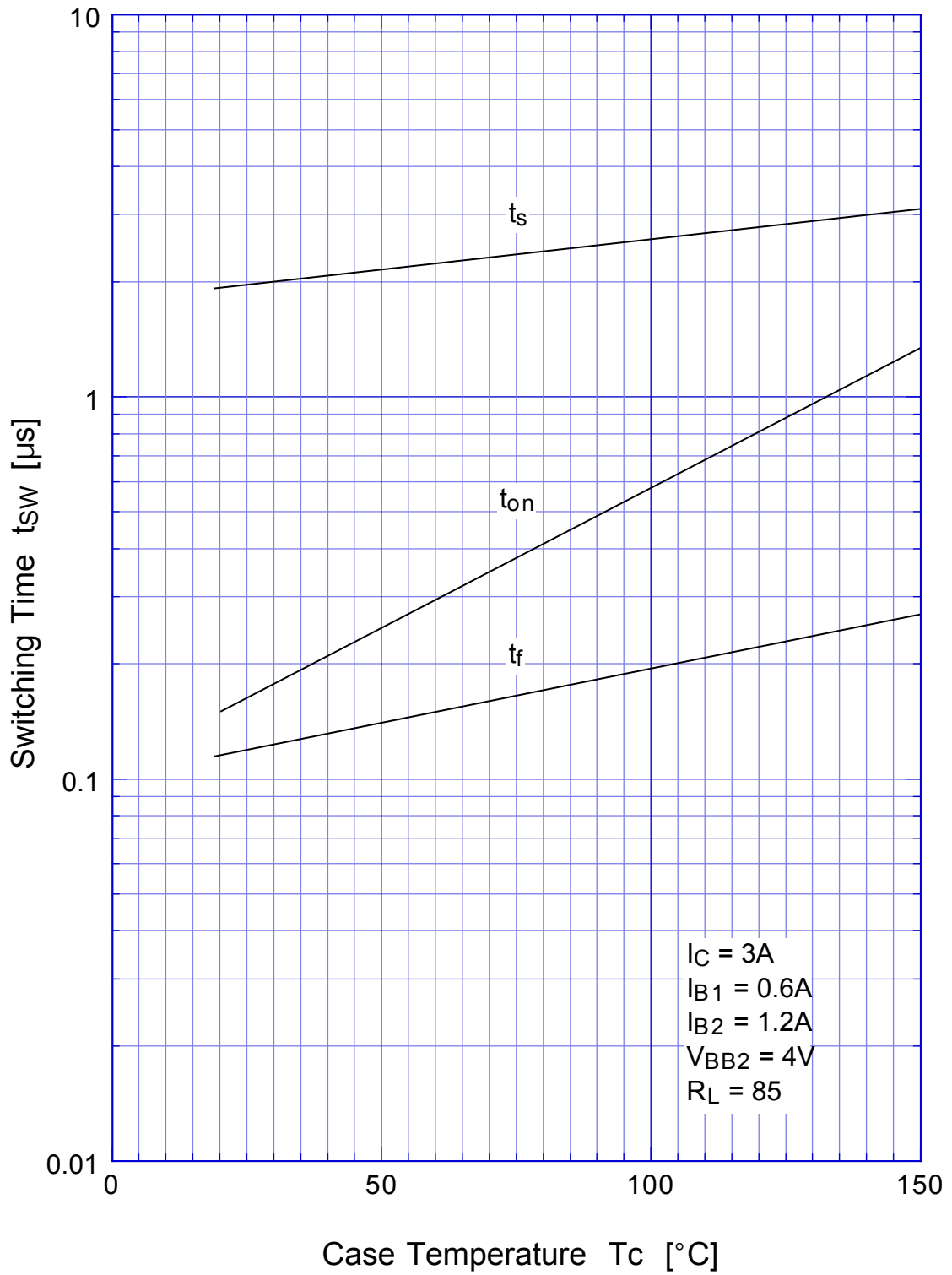
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Switching Time - I_C

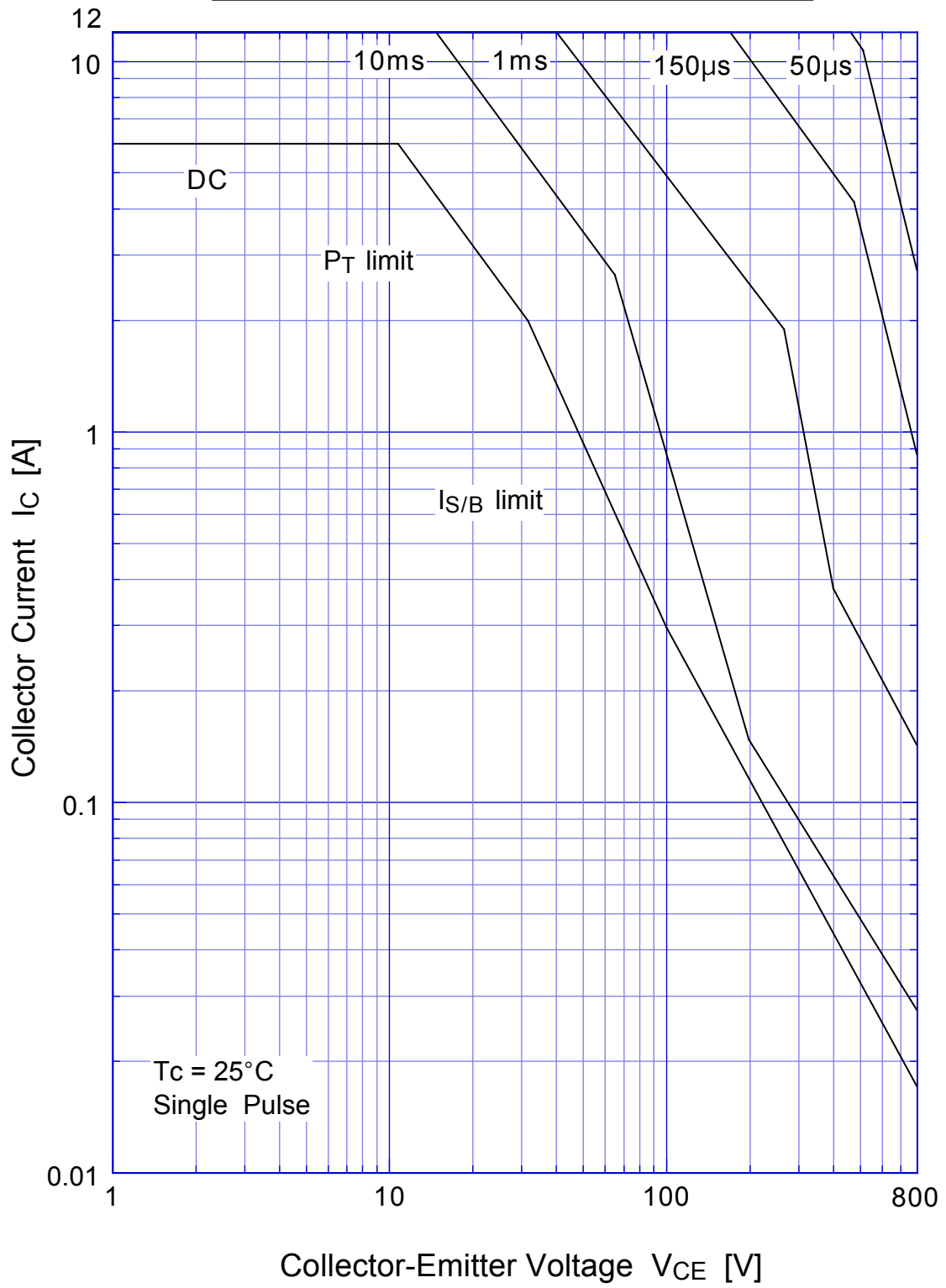


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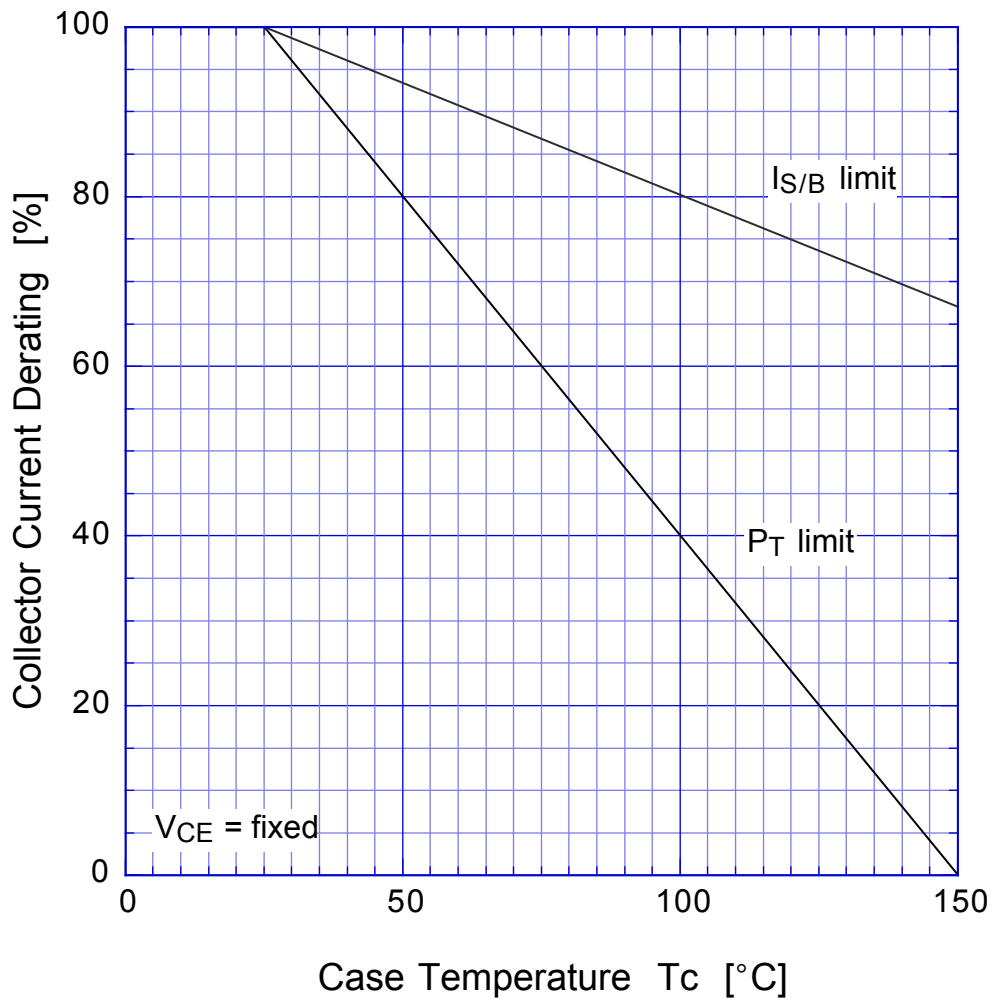
Switching Time - Tc



2SC4941 Forward Bias SOA

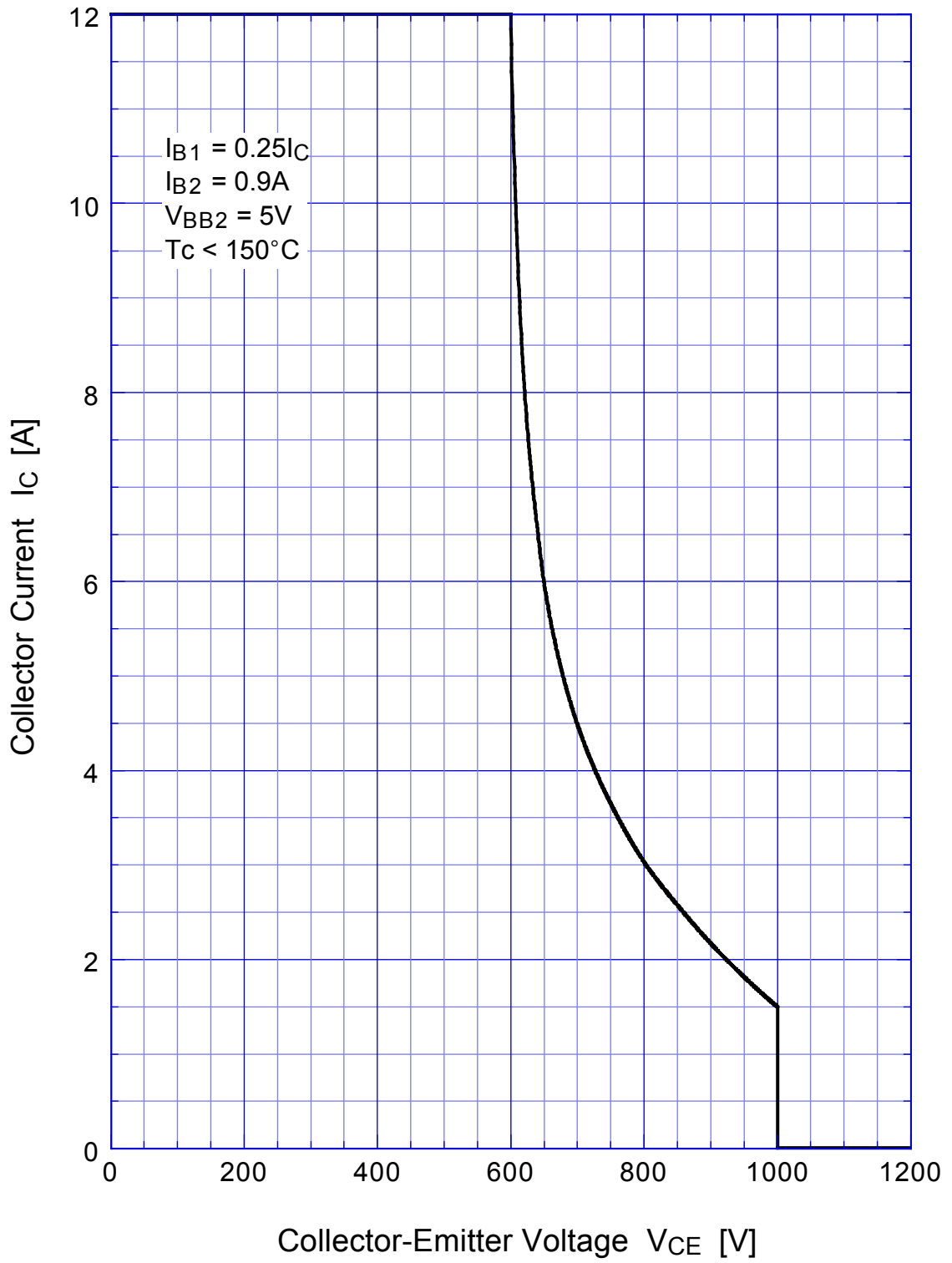


2SC4941 Collector Current Derating



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Reverse Bias SOA



2SC4941 Transient Thermal Impedance

