

Switching Power Transistor

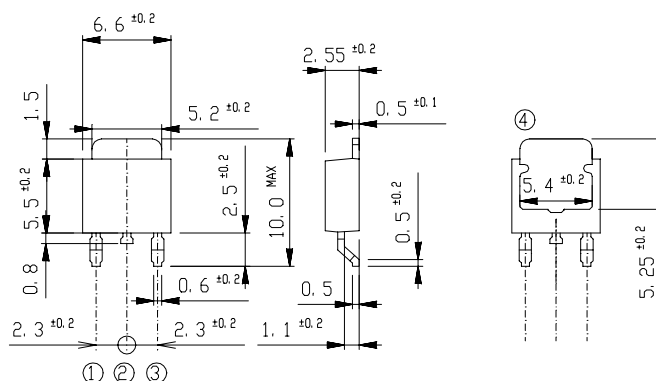
HSV Series

2SA1877
(TE5T8)**-5A PNP**

OUTLINE DIMENSIONS

Case : E-pack

Unit : mm



RATINGS

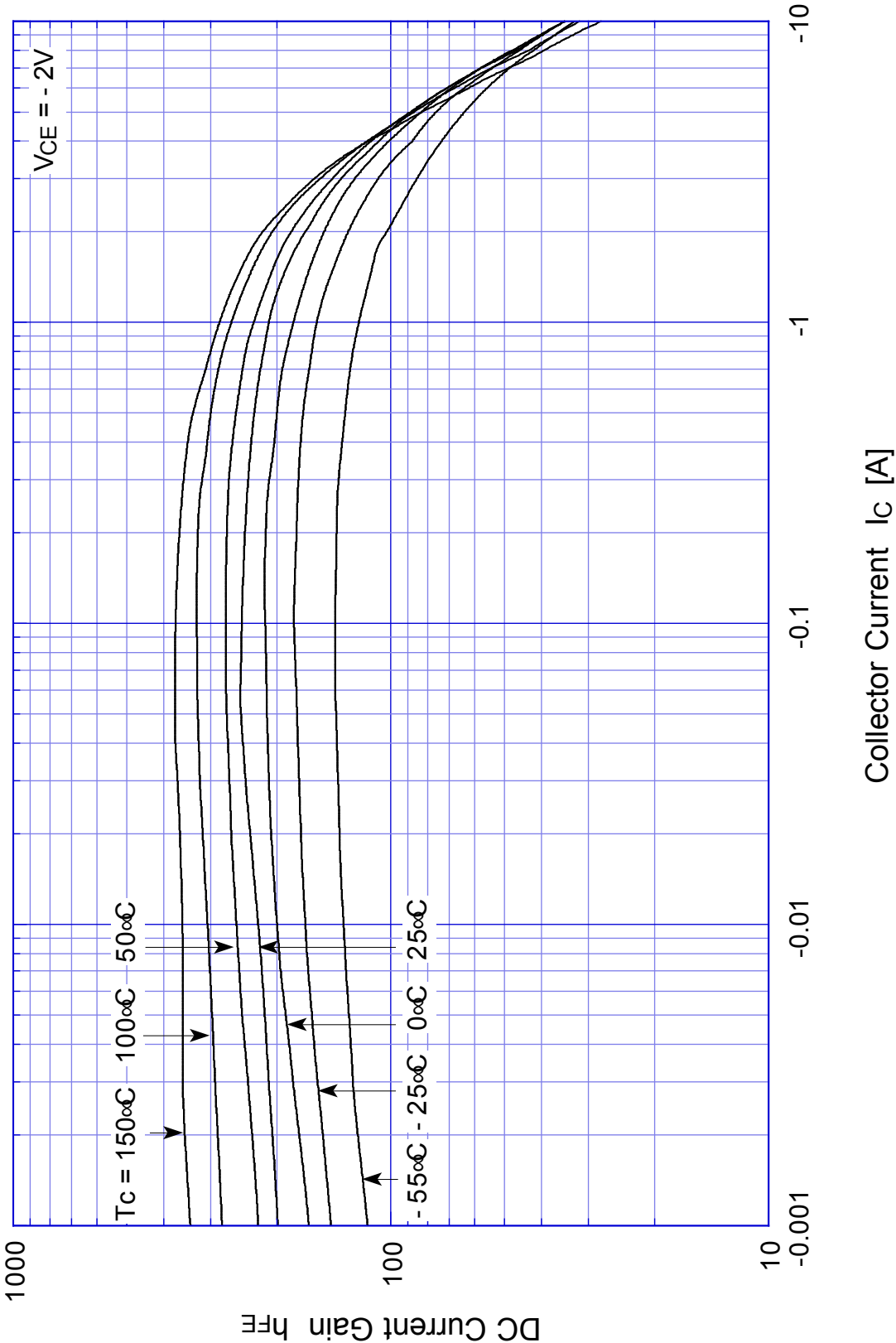
● Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	°C
Junction Temperature	T _j		150	°C
Collector to Base Voltage	V _{CBO}		-80	V
Collector to Emitter Voltage	V _{CEO}		-80	V
Emitter to Base Voltage	V _{EBO}		-7	V
Collector Current DC	I _C		-5	A
Collector Current Peak	I _{CP}		-10	A
Base Current DC	I _B		-1.5	A
Base Current Peak	I _{BP}		-2	A
Total Transistor Dissipation	P _T	T _c = 25°C	10	W

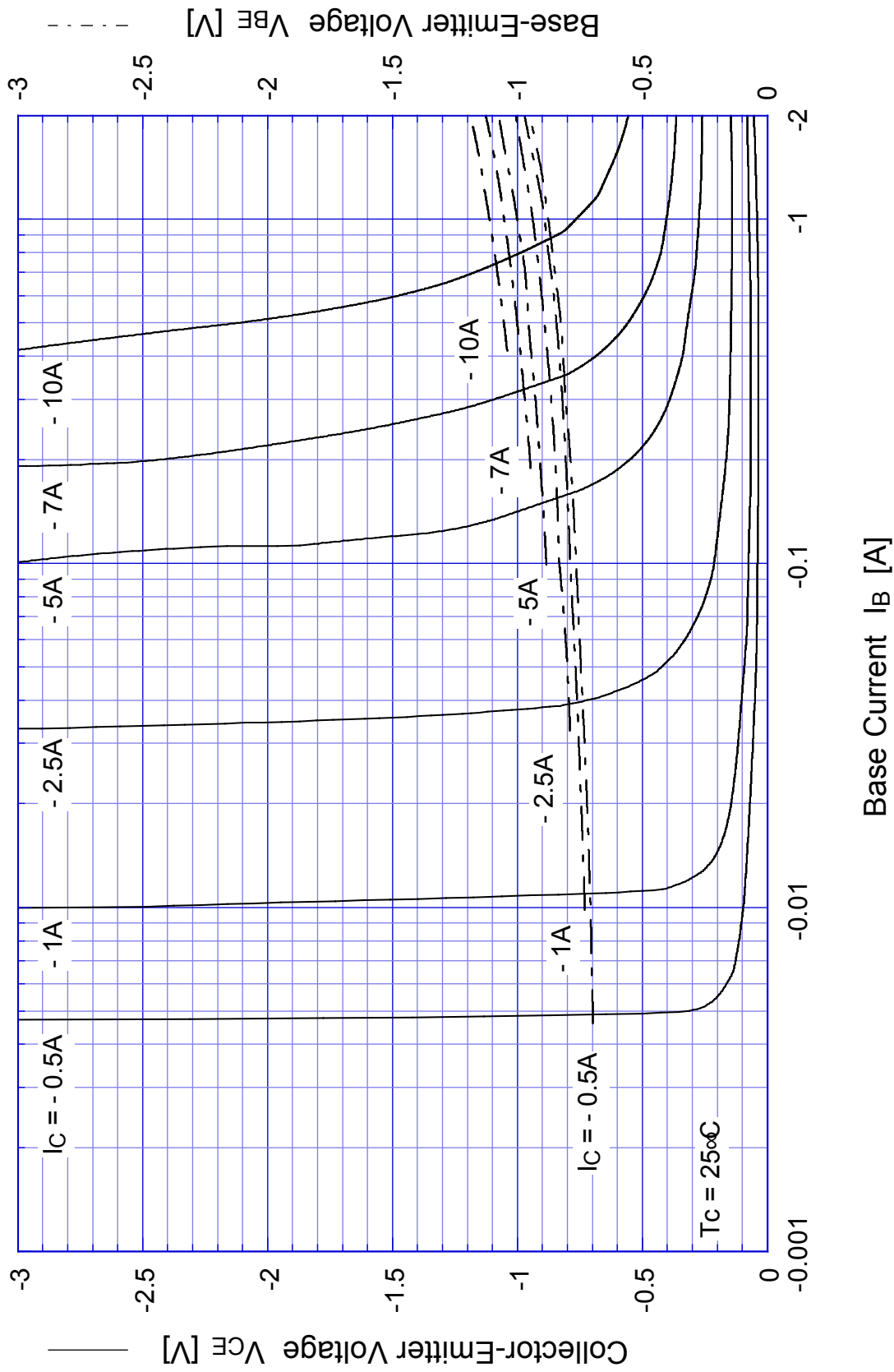
● Electrical Characteristics (T_c=25°C)

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 = -2.5A	Min 70	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = -2.5A	Max -0.3	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _B = -0.25A	Max -1.2	V
Thermal Resistance	θ _{jc}	Junction to case	Max 12.5	°C/W
Transition Frequency	f _T	V _{CE} = -10V, I _C = -0.5A	TYP 50	MHz
Turn on Time	ton	I _C = -2.5A I _{B1} = -0.25A, I _{B2} = -0.25A R _L = 12 Ω, V _{BB2} = -4V	Max 0.3	μs
Storage Time	ts		Max 1.5	
Fall Time	tf		Max 0.2	

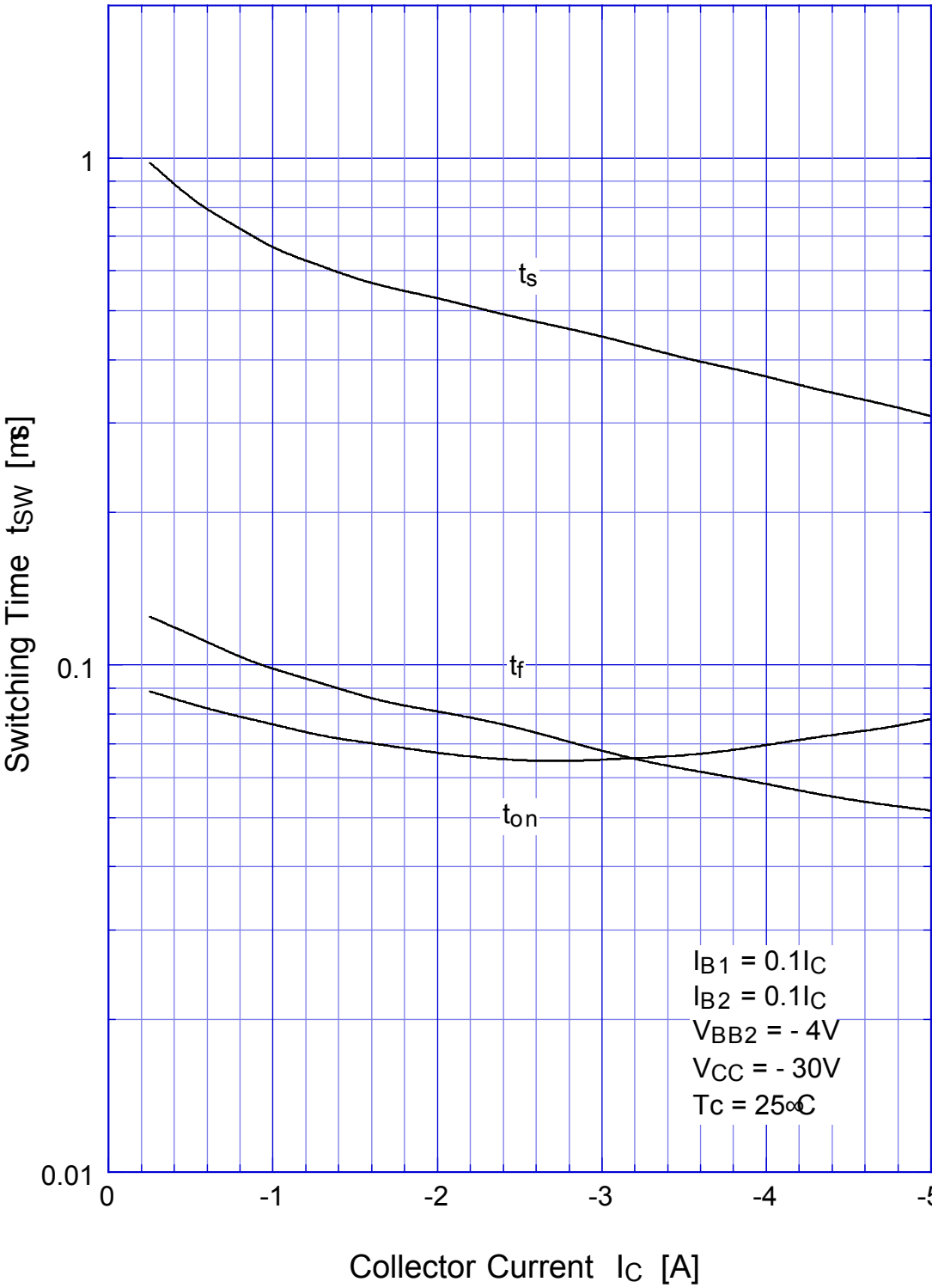
2SA1877 $h_{FE} - I_C$

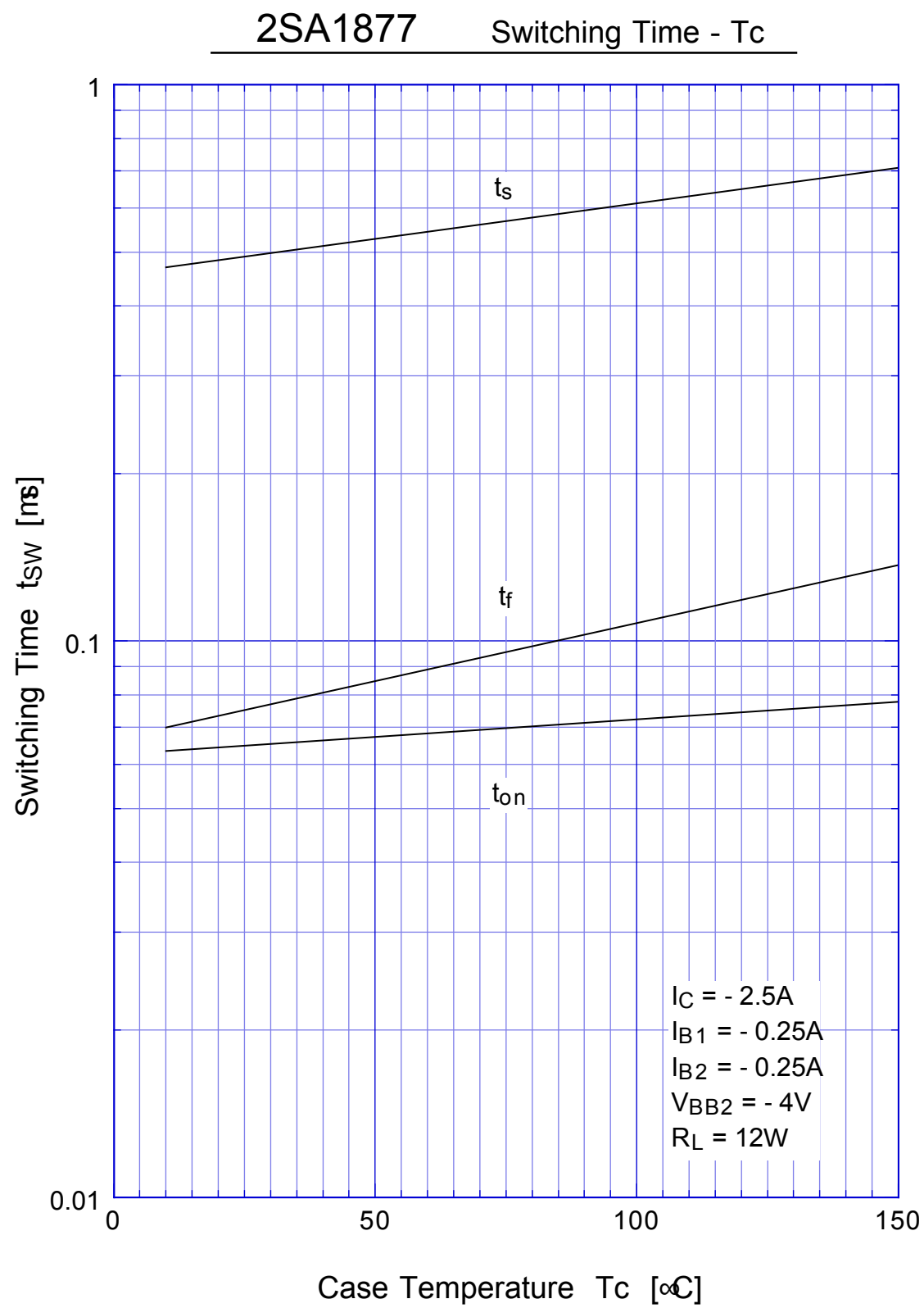


2SA1877 Saturation Voltage

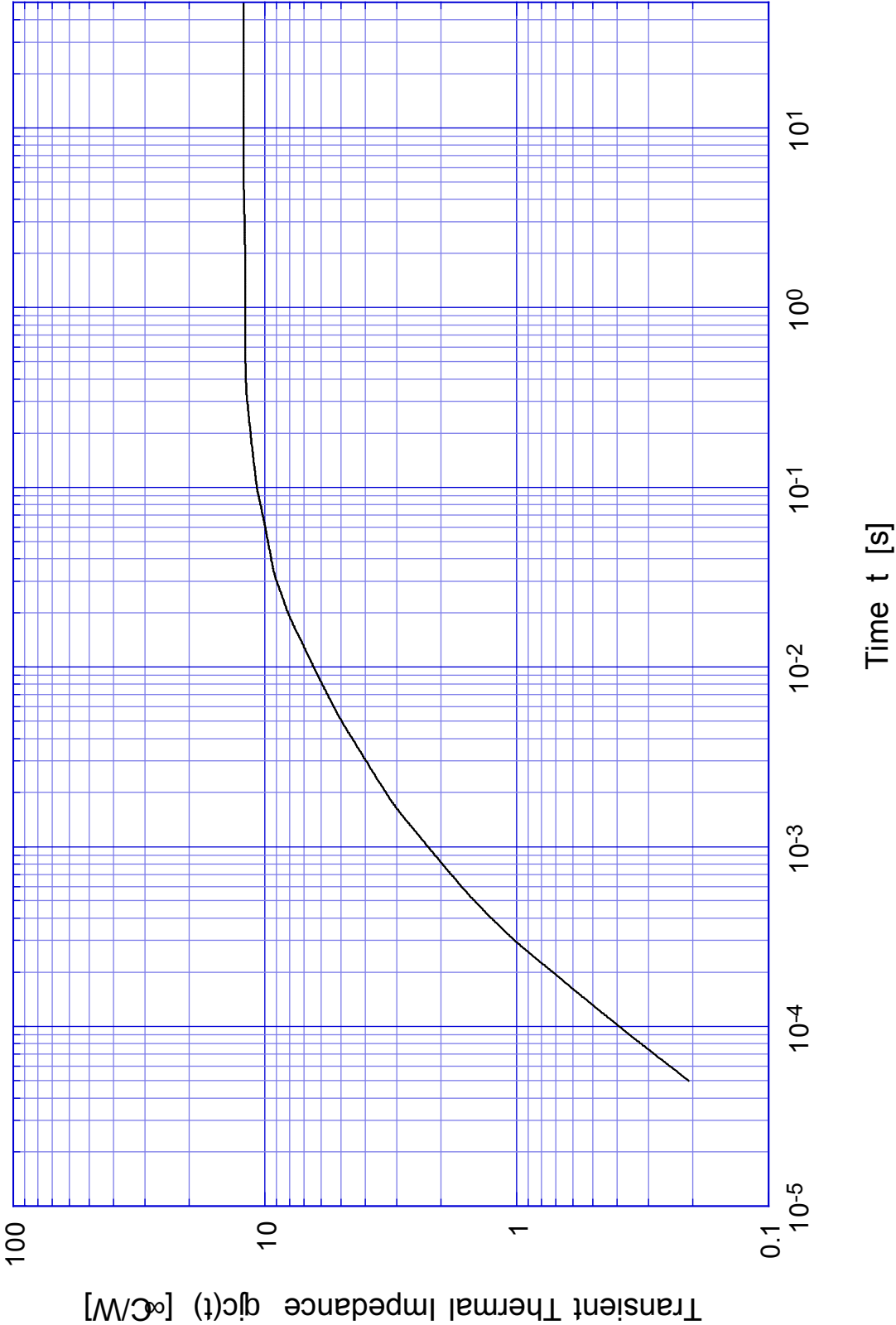


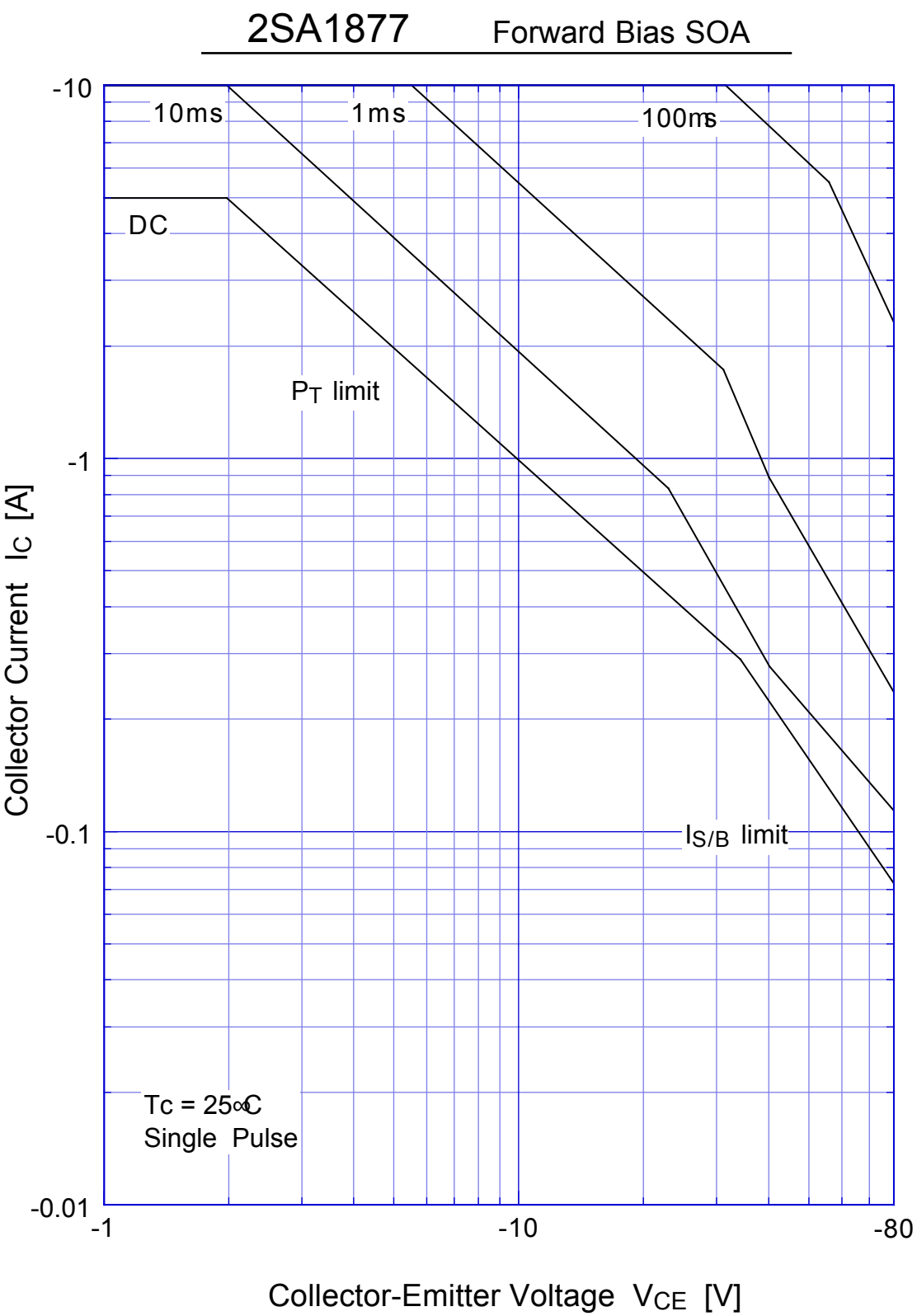
2SA1877 Switching Time - I_C





2SA1877 Transient Thermal Impedance





2SA1877 Collector Current Derating

