

# SHINDENGEN

## Darlington Transistor

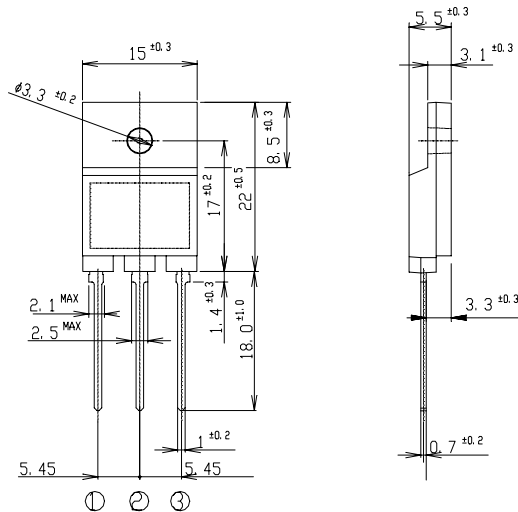
**2SB1448**  
(TP15J10)

**-15A PNP**

### OUTLINE DIMENSIONS

Case : ITO-3P

Unit : mm



### RATINGS

#### ● Absolute Maximum Ratings

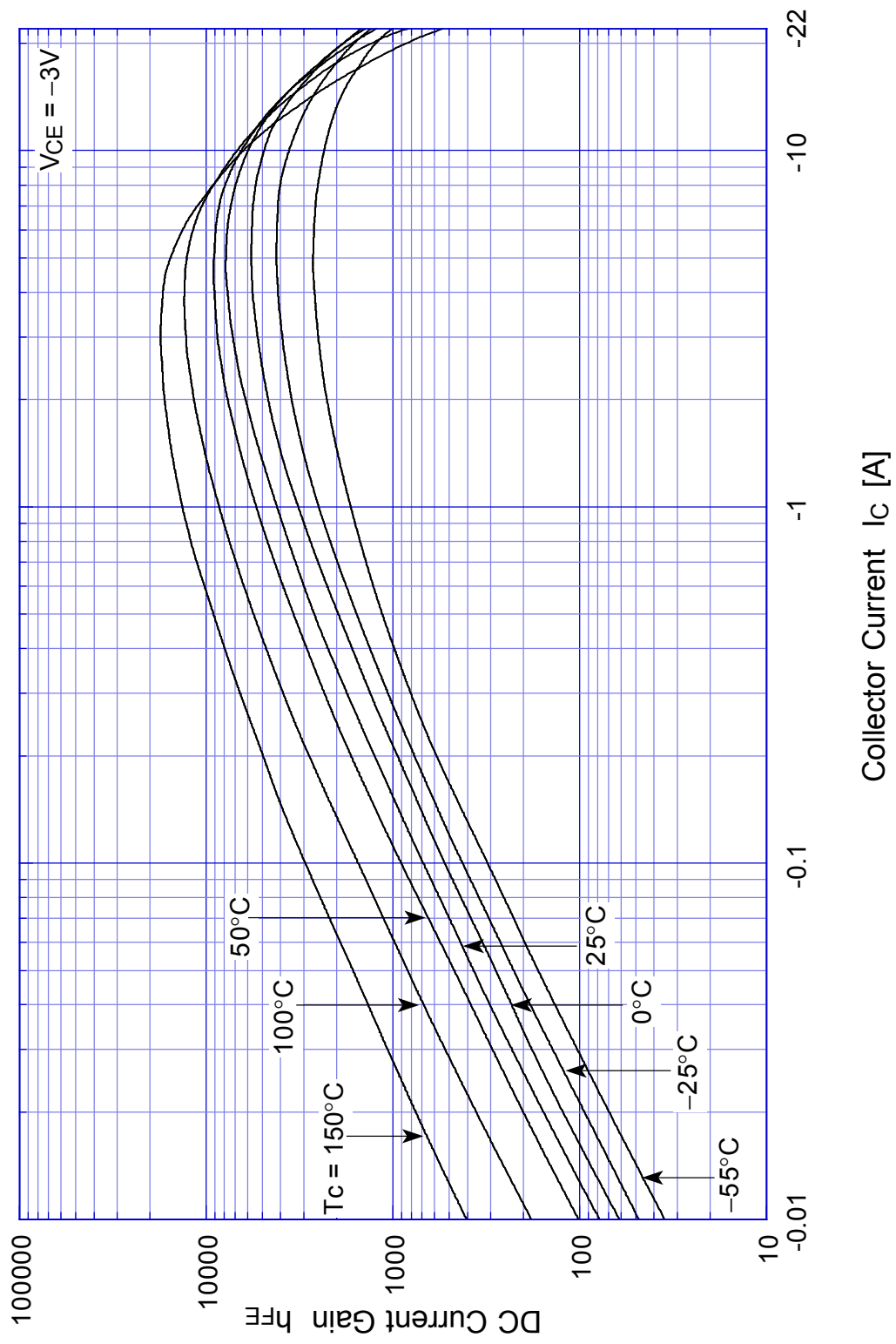
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T <sub>stg</sub>		-55~+150	°C
Junction Temperature	T <sub>j</sub>		+150	°C
Collector to Base Voltage	V <sub>CB0</sub>		-100	V
Collector to Emitter Voltage	V <sub>CEO</sub>		-100	V
Emitter to Base Voltage	V <sub>EBO</sub>		-7	V
Collector Current DC	I <sub>C</sub>		-15	A
Collector Current Peak	I <sub>CP</sub>		-22	A
Base Current DC	I <sub>B</sub>		-1	A
Base Current Peak	I <sub>BP</sub>		-2	A
Total Transistor Dissipation	P <sub>T</sub>	T <sub>c</sub> = 25°C	65	W
Dielectric Strength	V <sub>dis</sub>	Terminals to case AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

#### ● Electrical Characteristics (T<sub>c</sub>=25°C)

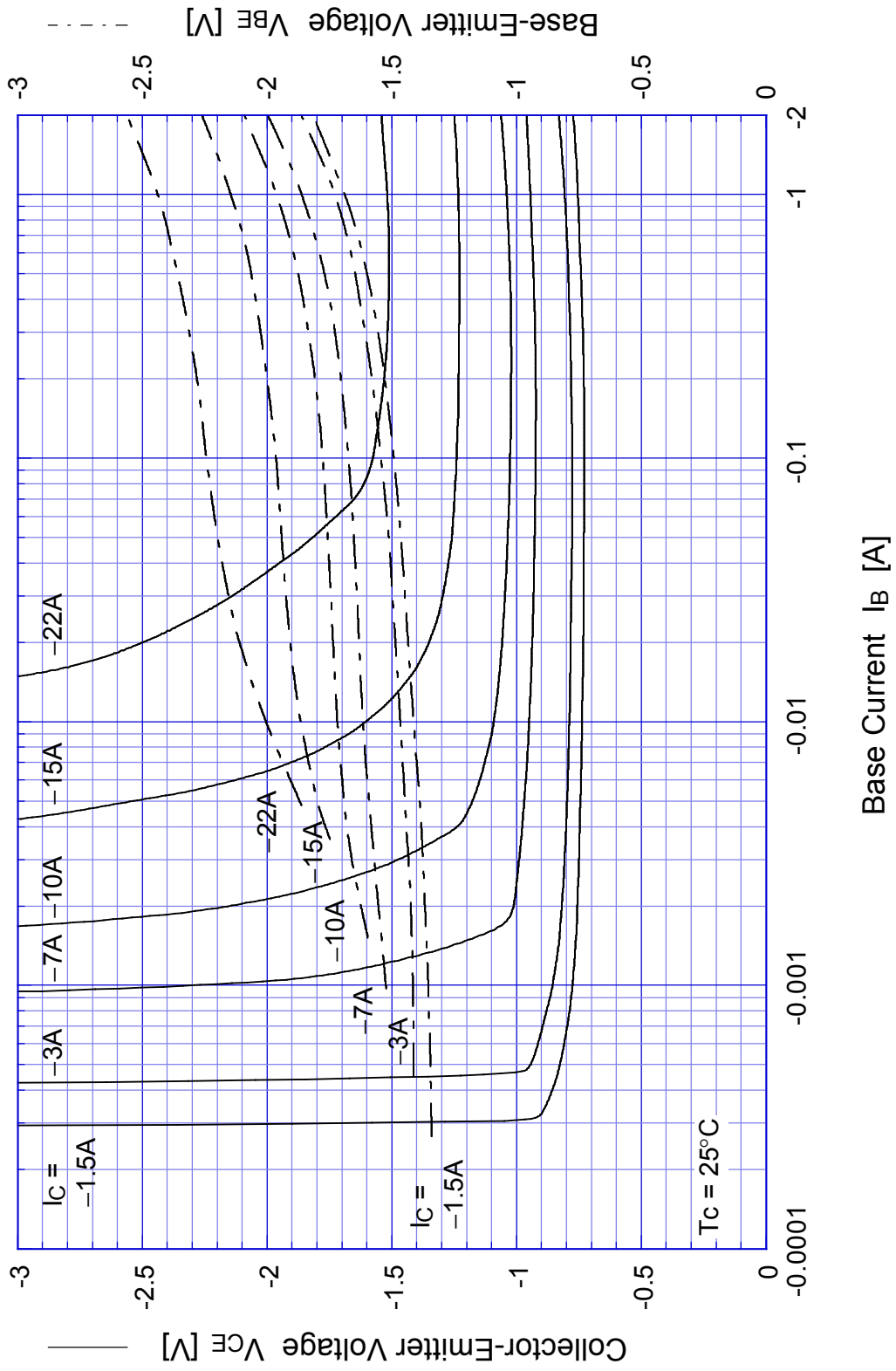
Item	Symbol	Conditions	Ratings	Unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = -100V	Max -0.1	mA
	I <sub>CEO</sub>	V <sub>CE</sub> = -100V	Max -0.1	
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = -7V	Max -5	mA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -3V, I <sub>C</sub> = -10A	Min 1,500	
			Max 15,000	
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -10A	Max -1.5	V
Base to Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>B</sub> = -20mA	Max -2.0	V
Thermal Resistance	θ <sub>jc</sub>	Junction to case	Max 1.92	°C/W
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -1.5A	TYP 20	MHz
Turn on Time	ton	I <sub>C</sub> = -15A I <sub>B1</sub> = I <sub>B2</sub> = -20mA R <sub>L</sub> = 2 Ω	Max 1	μs
Storage Time	ts		Max 4	
Fall Time	tf		V <sub>BB2</sub> = -4V	

# 2SB1448

$h_{FE} - I_C$

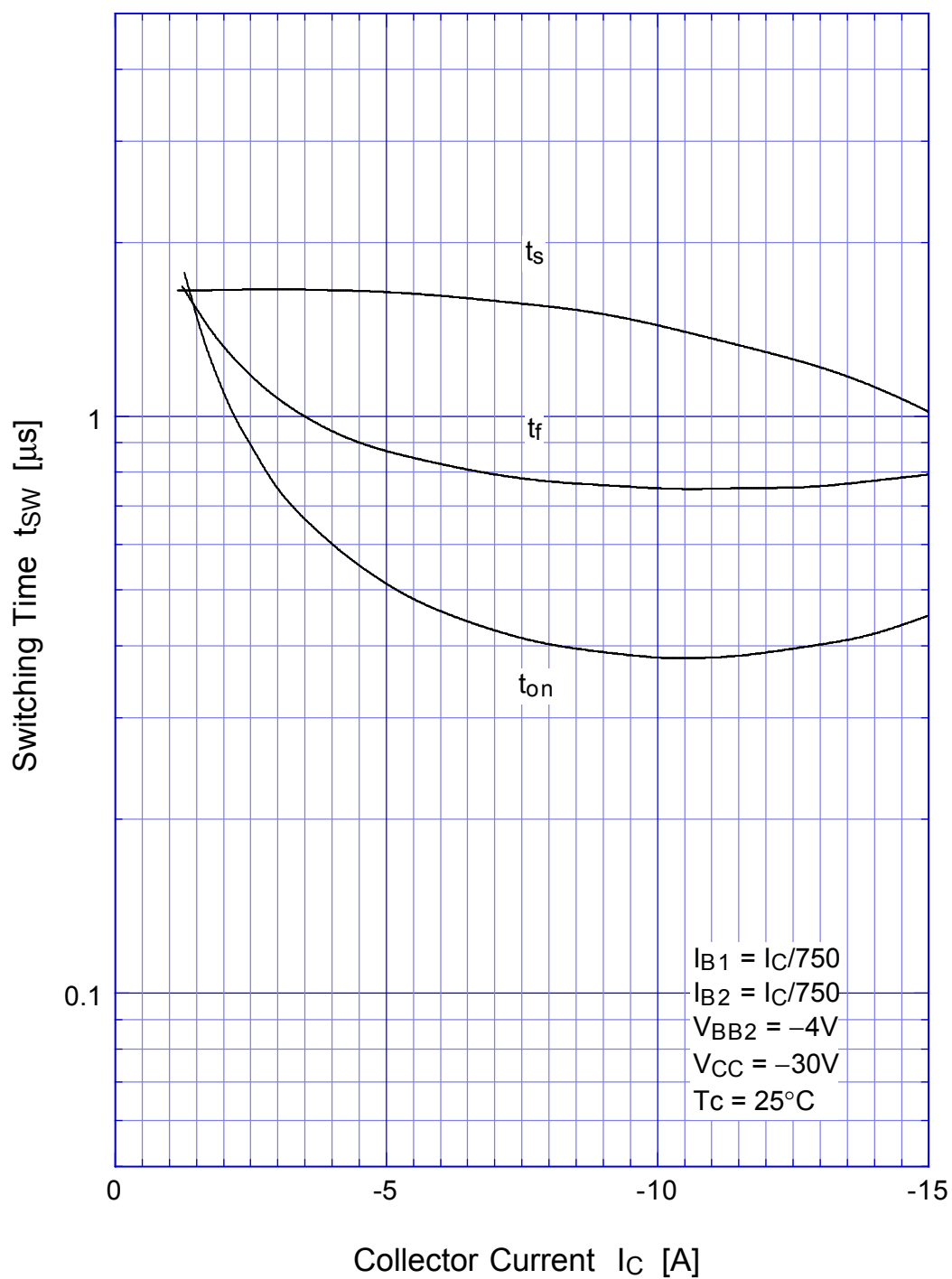


## 2SB1448 Saturation Voltage

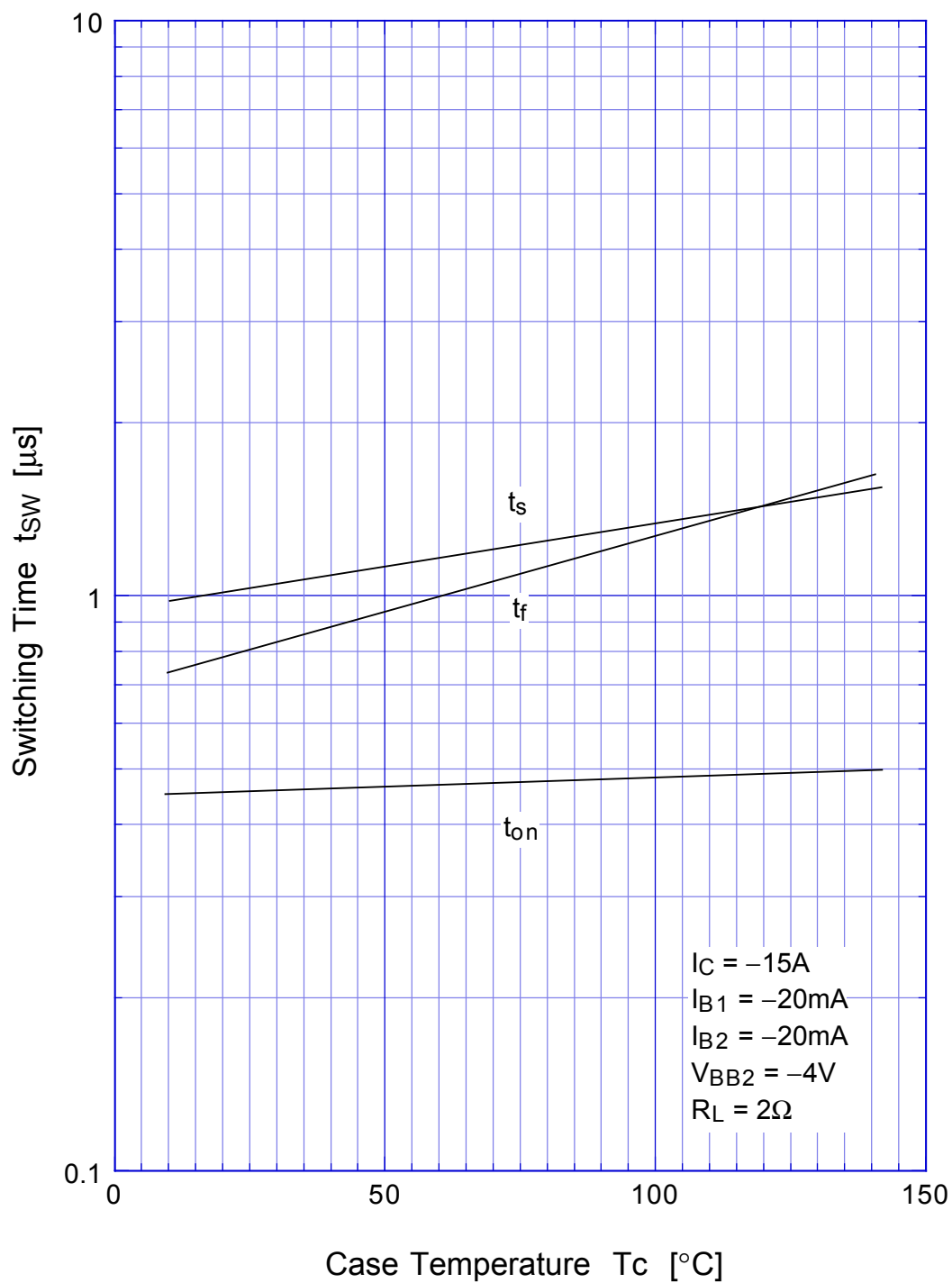


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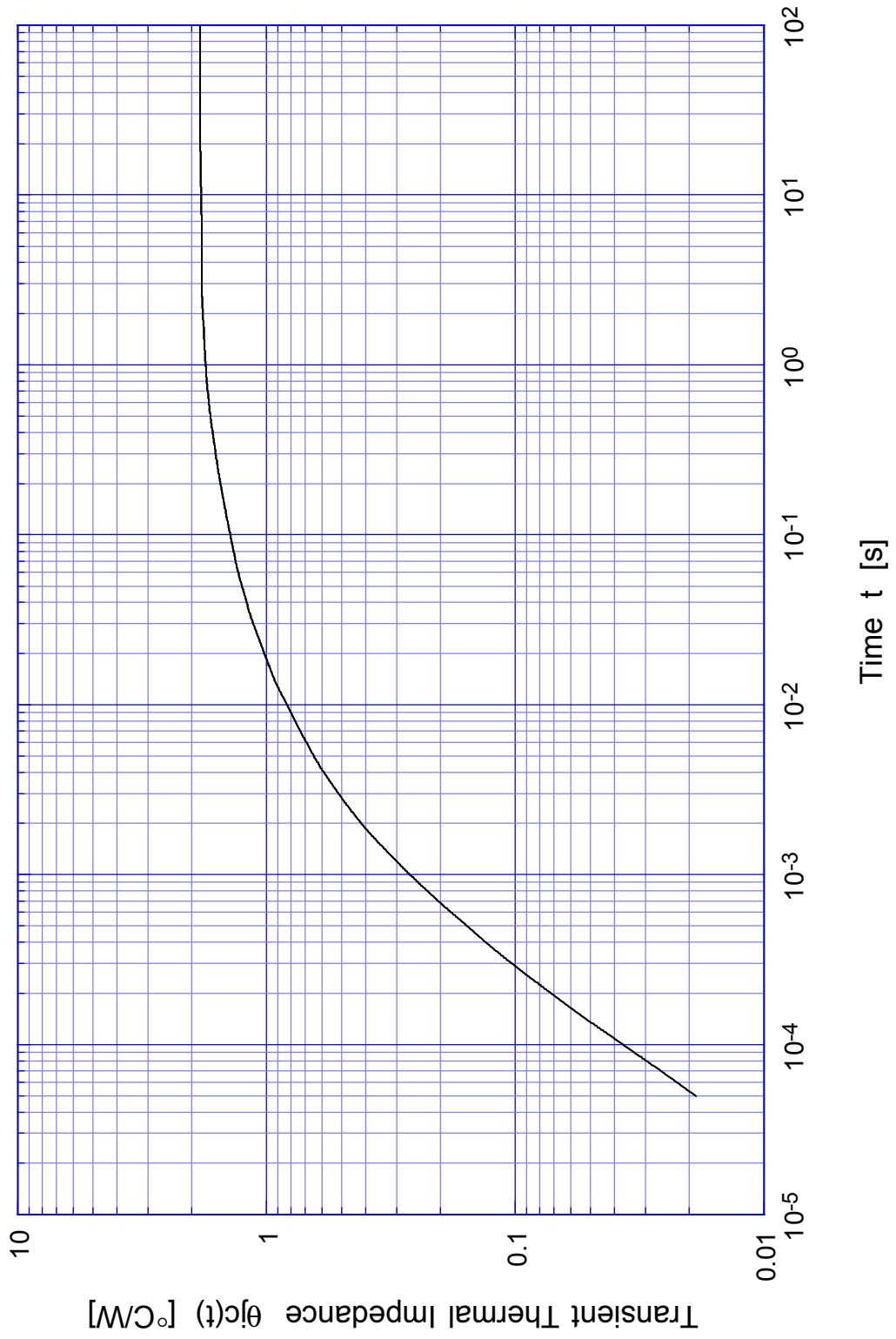
## Switching Time - $I_C$



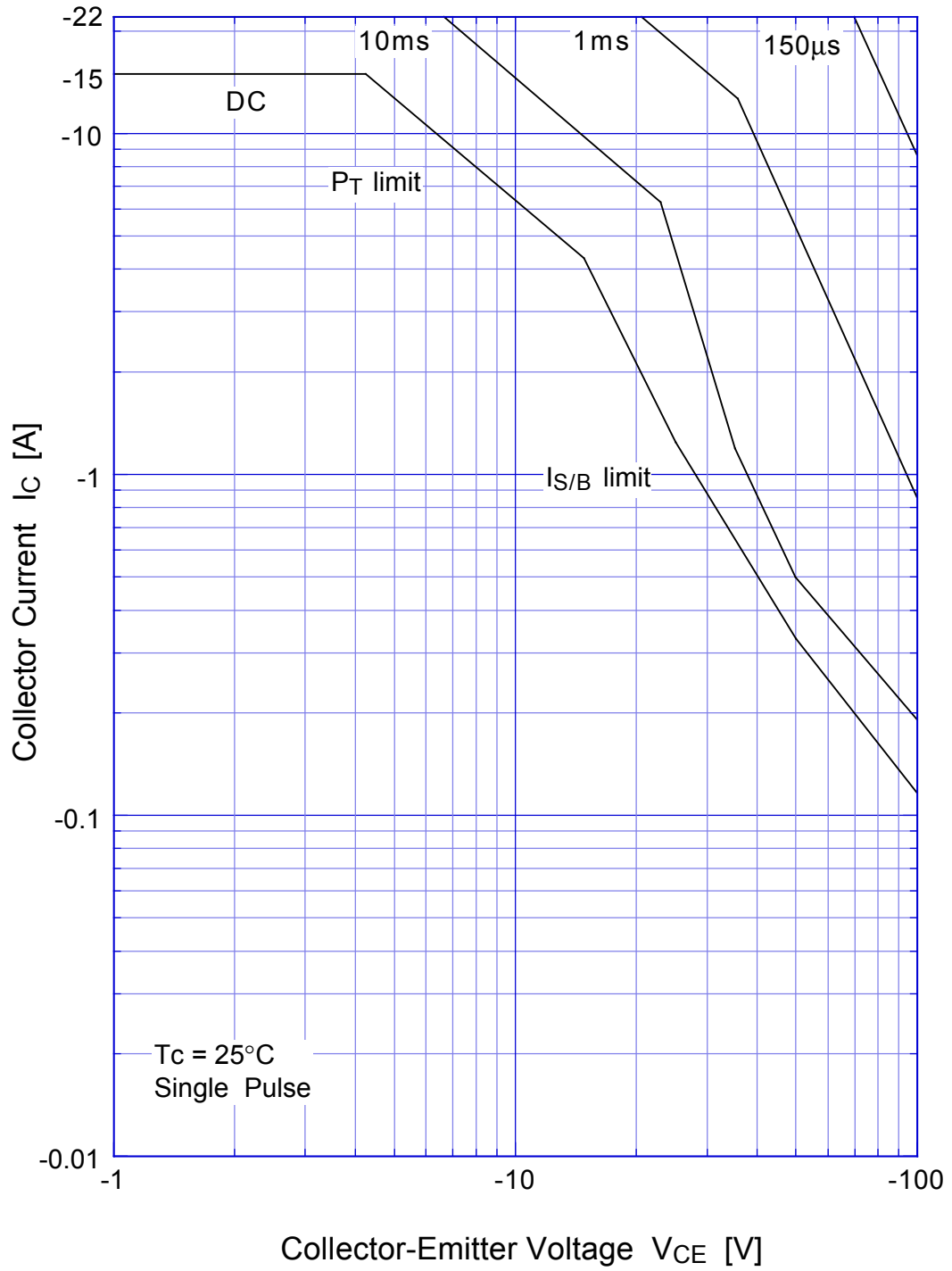
## 2SB1448 Switching Time - Tc



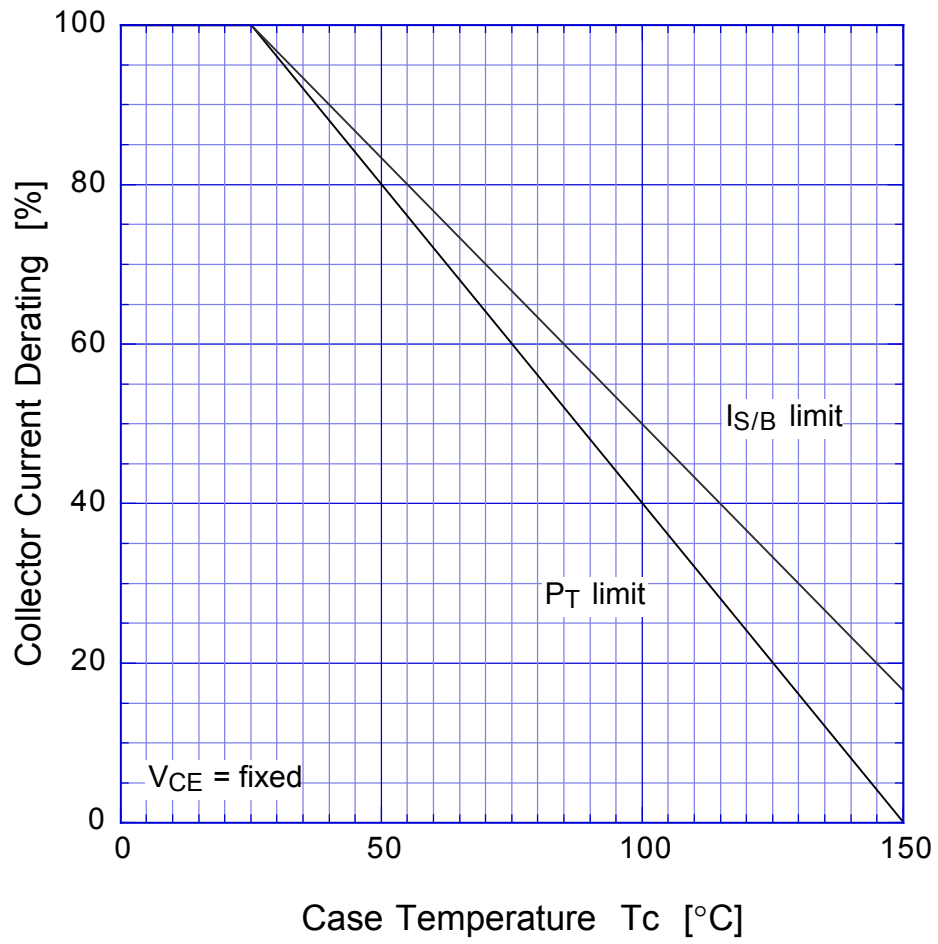
2SB1448 Transient Thermal Impedance



# 2SB1448 Forward Bias SOA



## 2SB1448 Collector Current Derating





# 2SB1448

## Reverse Bias SOA

