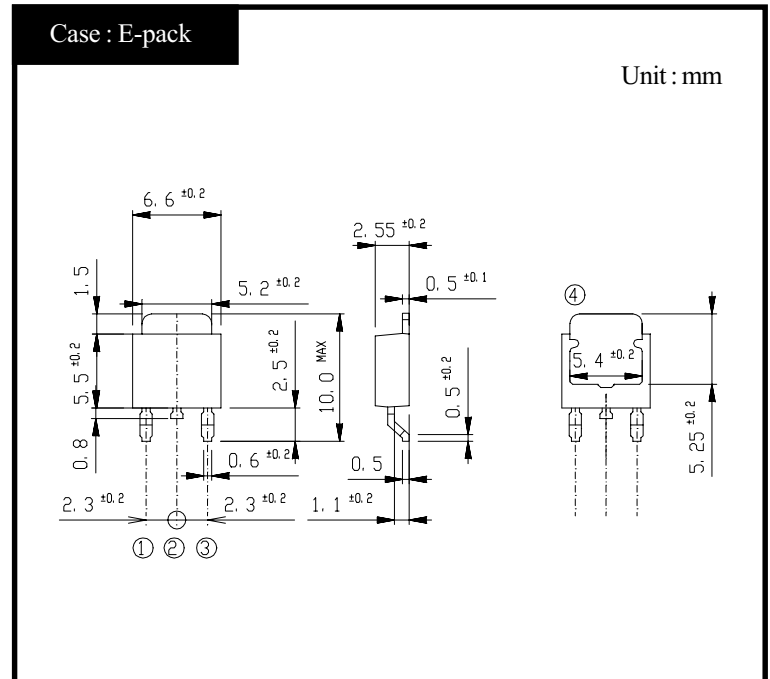


# 2SC4668

(TE7S4)

## 7A NPN

### OUTLINE DIMENSIONS



### RATINGS

#### ● Absolute Maximum Ratings

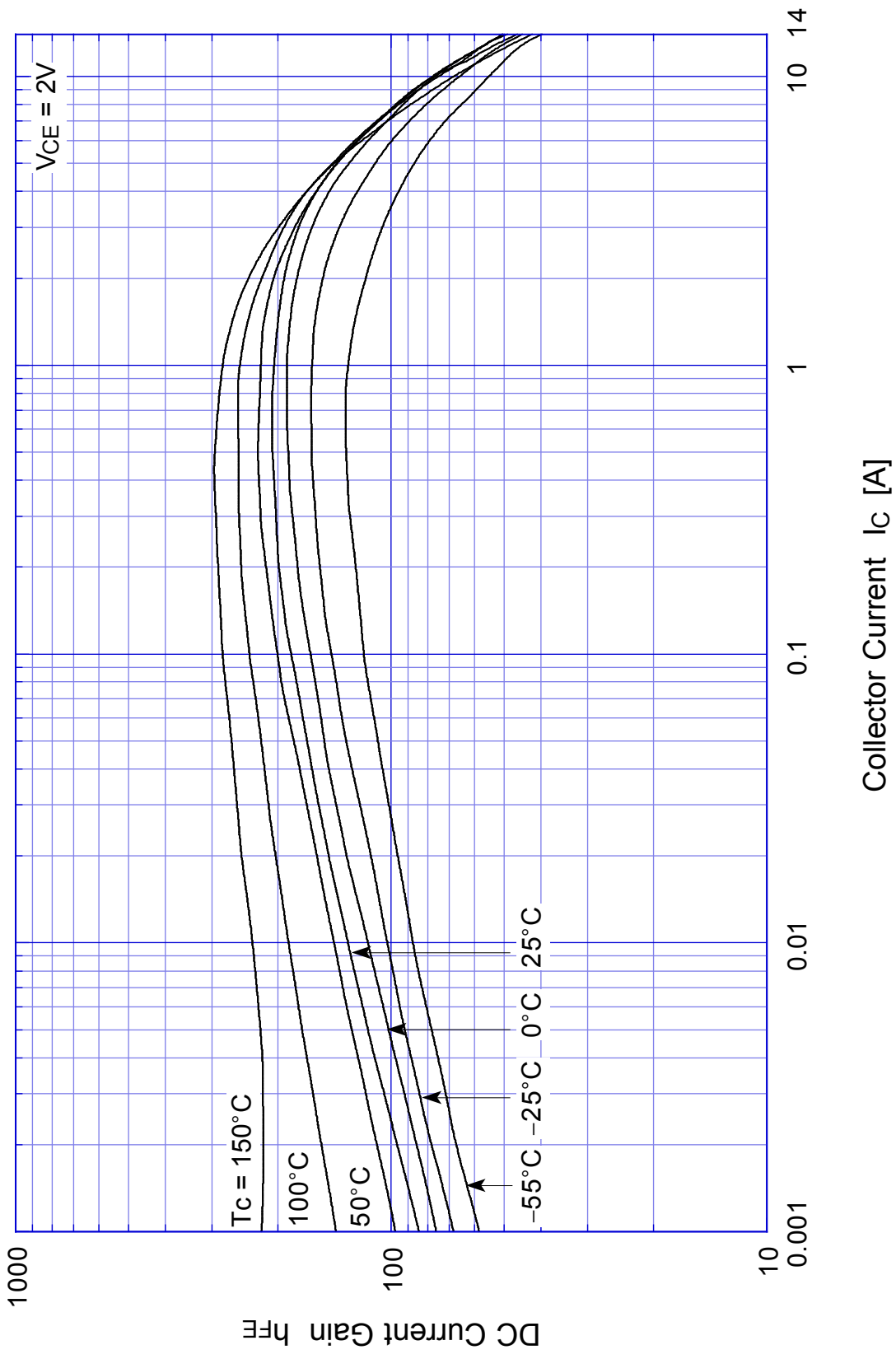
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	$T_{stg}$		-55~150	°C
Junction Temperature	$T_j$		150	°C
Collector to Base Voltage	$V_{CBO}$		60	V
Collector to Emitter Voltage	$V_{CEO}$		40	V
Emitter to Base Voltage	$V_{EBO}$		7	V
Collector Current DC	$I_C$		7	A
Collector Current Peak	$I_{CP}$		14	A
Base Current DC	$I_B$		1.5	A
Base Current Peak	$I_{BP}$		2	A
Total Transistor Dissipation	$P_T$	$T_c = 25^\circ\text{C}$	10	W

#### ● Electrical Characteristics ( $T_c=25^\circ\text{C}$ )

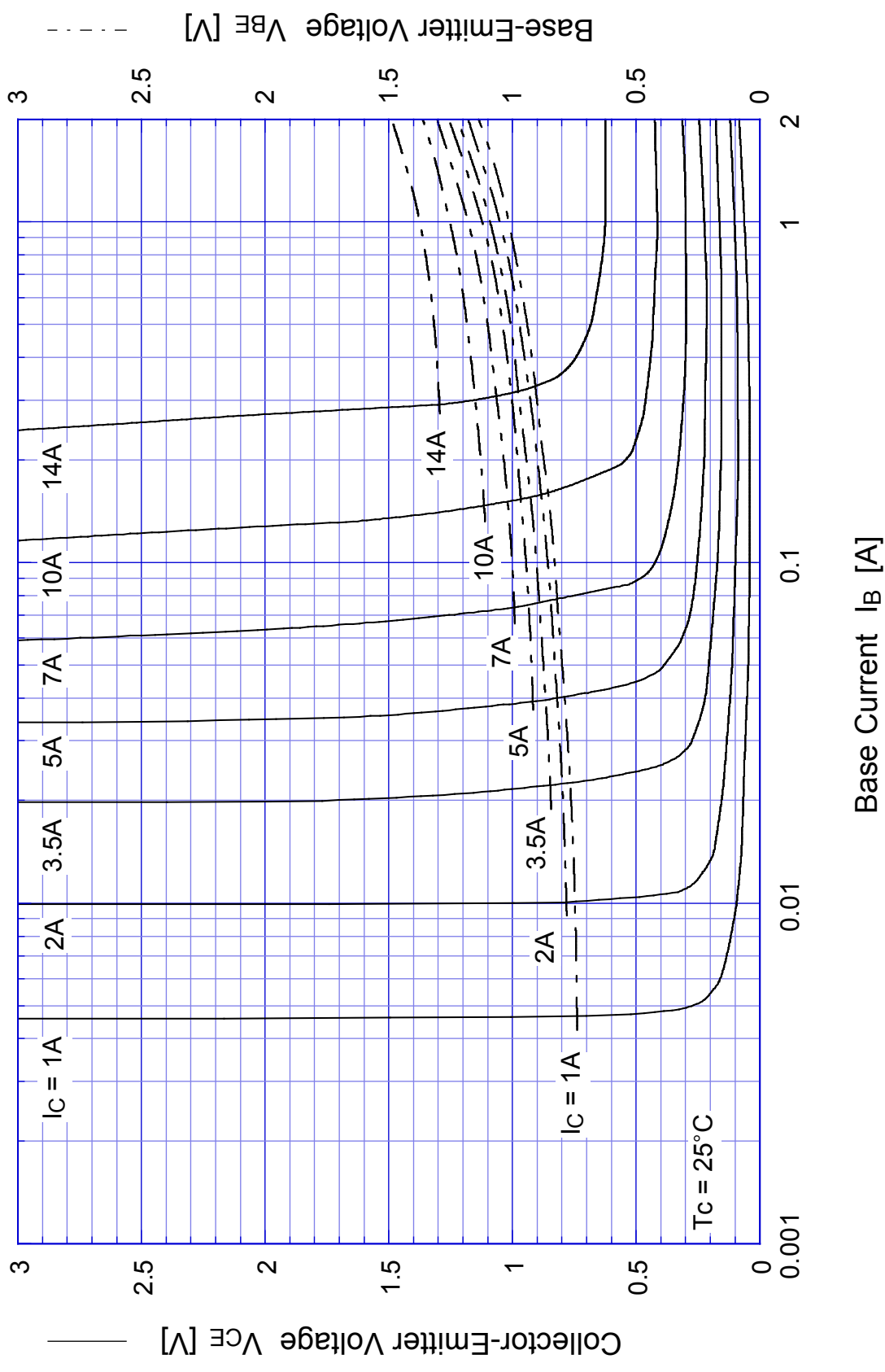
Item	Symbol	Conditions	Ratings	Unit
Collector to Emitter Sustaining Voltage	$V_{CEO}(\text{sus})$	$I_C = 0.1\text{A}$	Min 40	V
Collector Cutoff Current	$I_{CBO}$	At rated Voltage	Max 0.1	mA
	$I_{CEO}$		Max 0.1	
Emitter Cutoff Current	$I_{EBO}$	At rated Voltage	Max 0.1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 2\text{V}, I_C = 3.5\text{A}$	Min 70	
Collector to Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 3.5\text{A}$	Max 0.3	V
Base to Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_B = 0.2\text{A}$	Max 1.2	V
Thermal Resistance	$\theta_{jc}$	Junction to case	Max 12.5	°C/W
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 0.7\text{A}$	TYP 50	MHz
Turn on Time	$t_{on}$	$I_C = 3.5\text{A}$ $I_{B1} = 0.35\text{A}, I_{B2} = 0.35\text{A}$ $R_L = 8\Omega, V_{BB2} = 4\text{V}$	Max 0.3	$\mu\text{s}$
Storage Time	$t_s$		Max 1.5	
Fall Time	$t_f$		Max 0.5	

# 2SC4668

$h_{FE} - I_c$

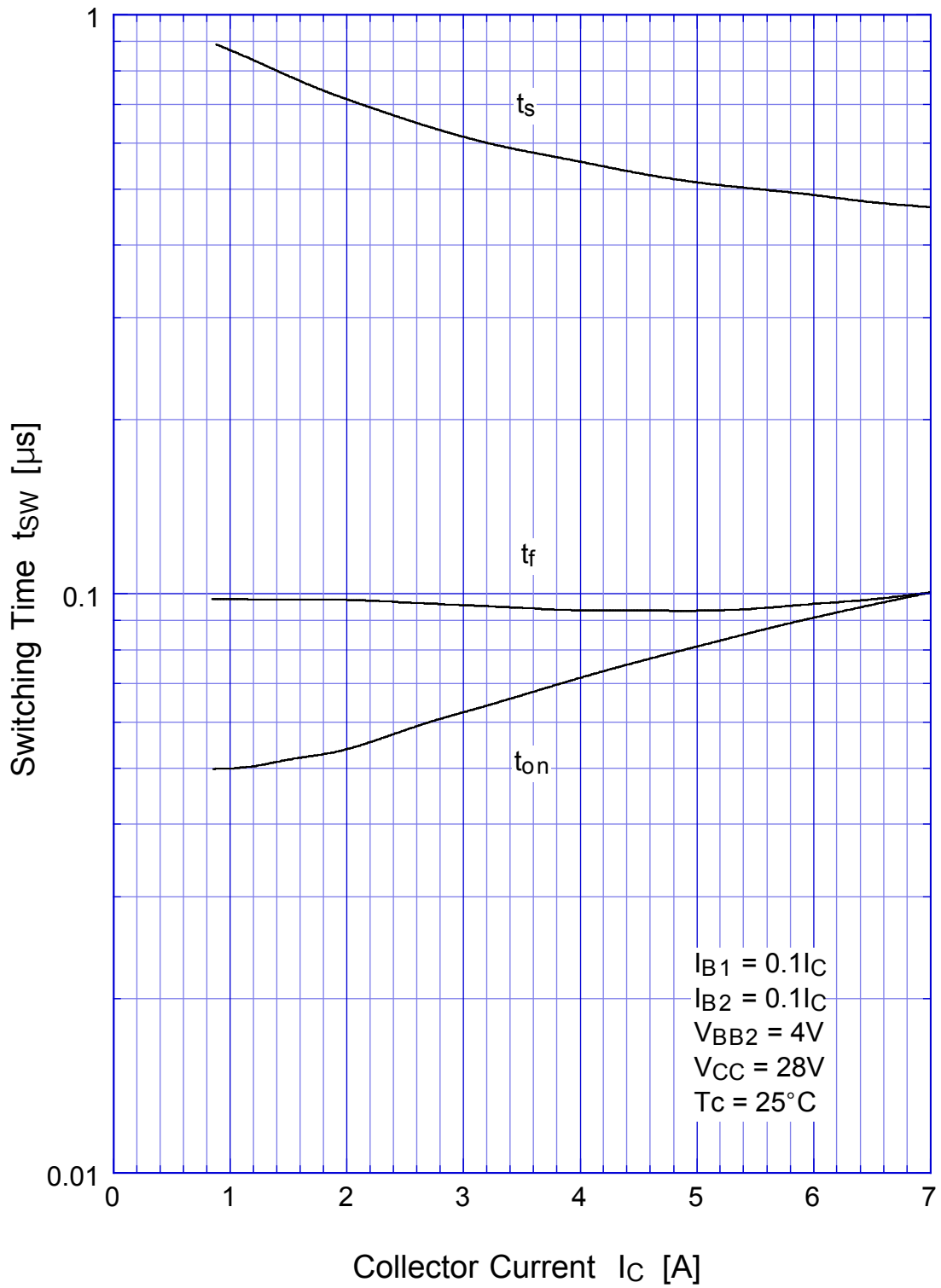


# 2SC4668 Saturation Voltage



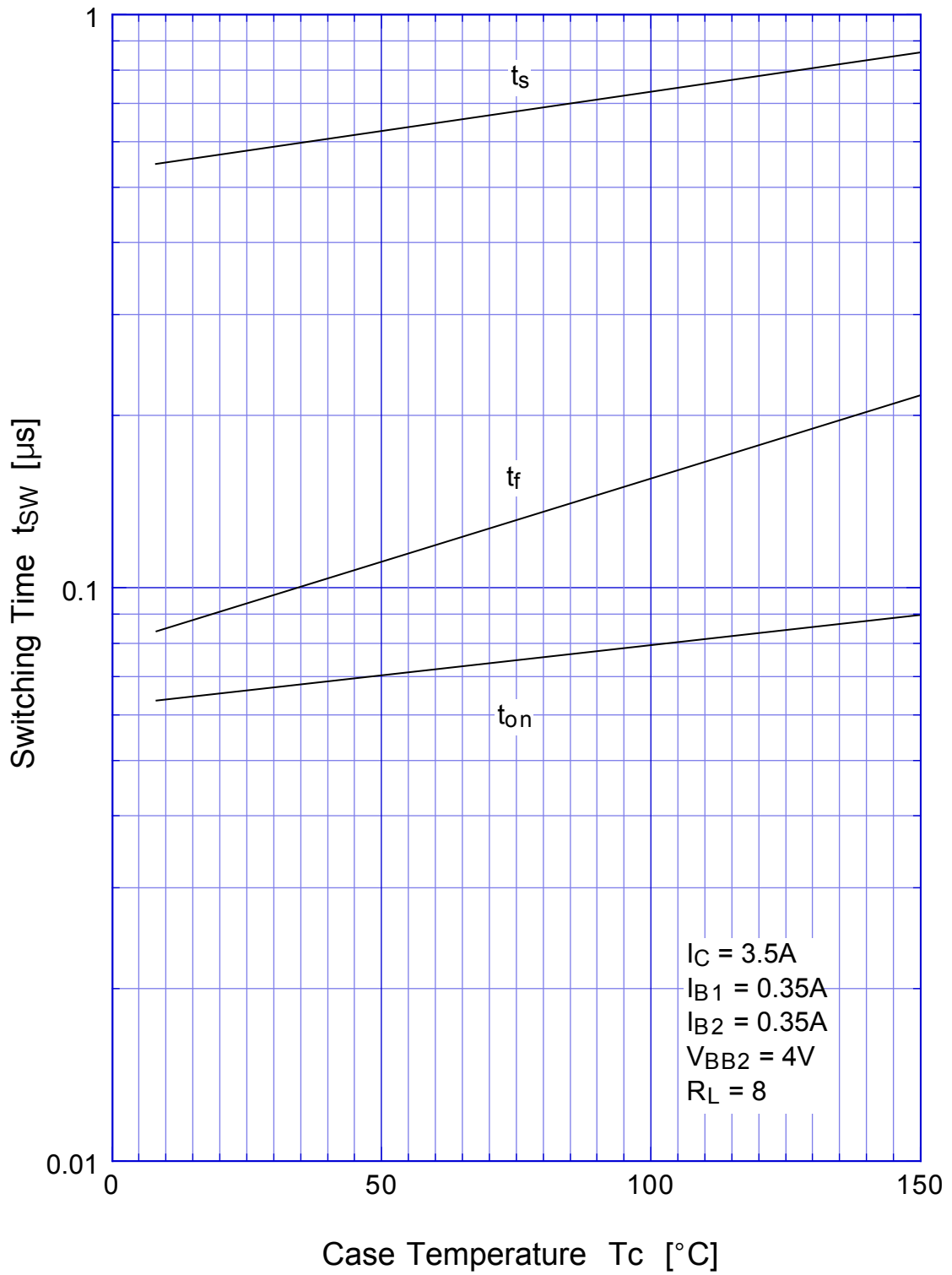
# 2SC4668

## Switching Time - $I_C$

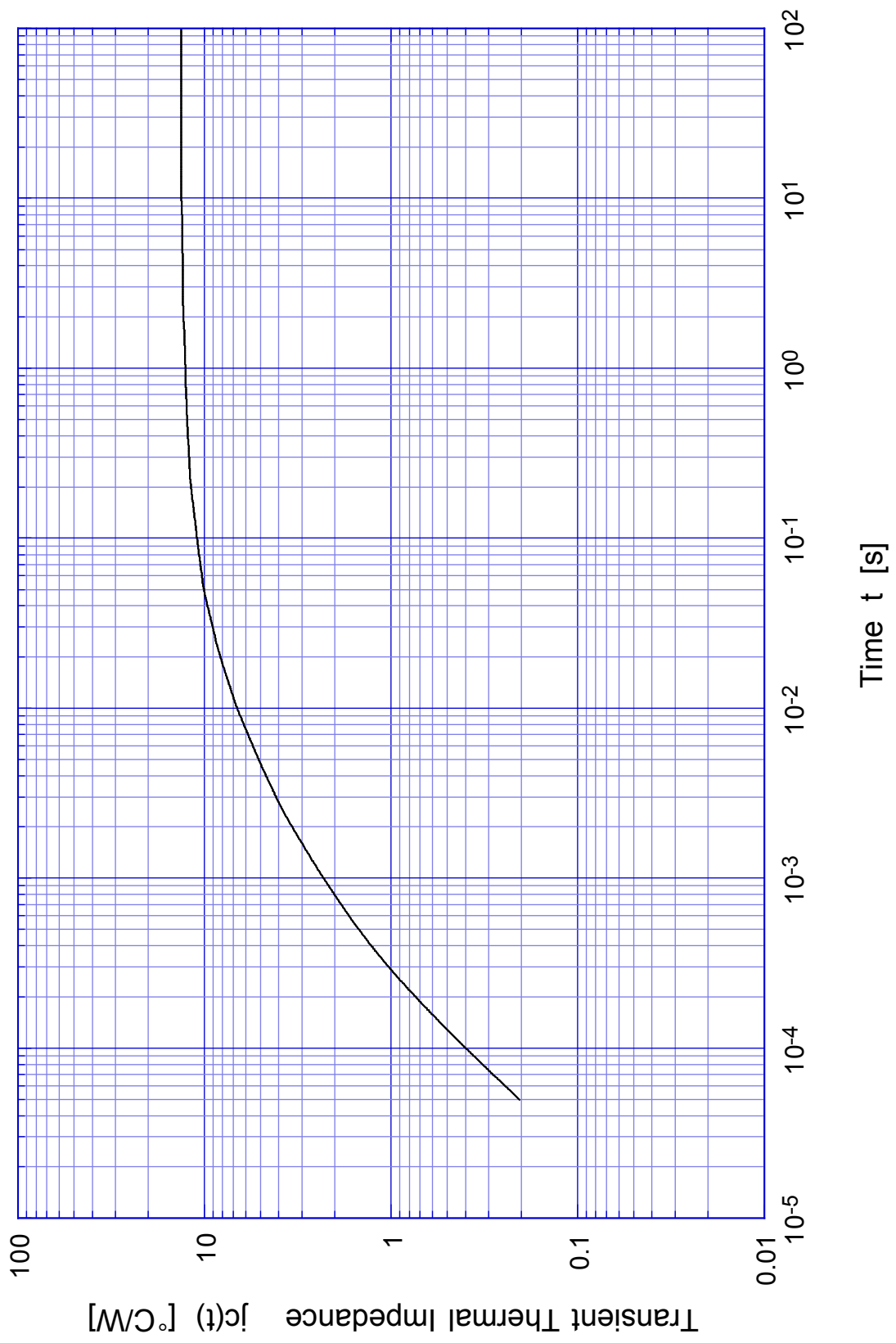


# 2SC4668

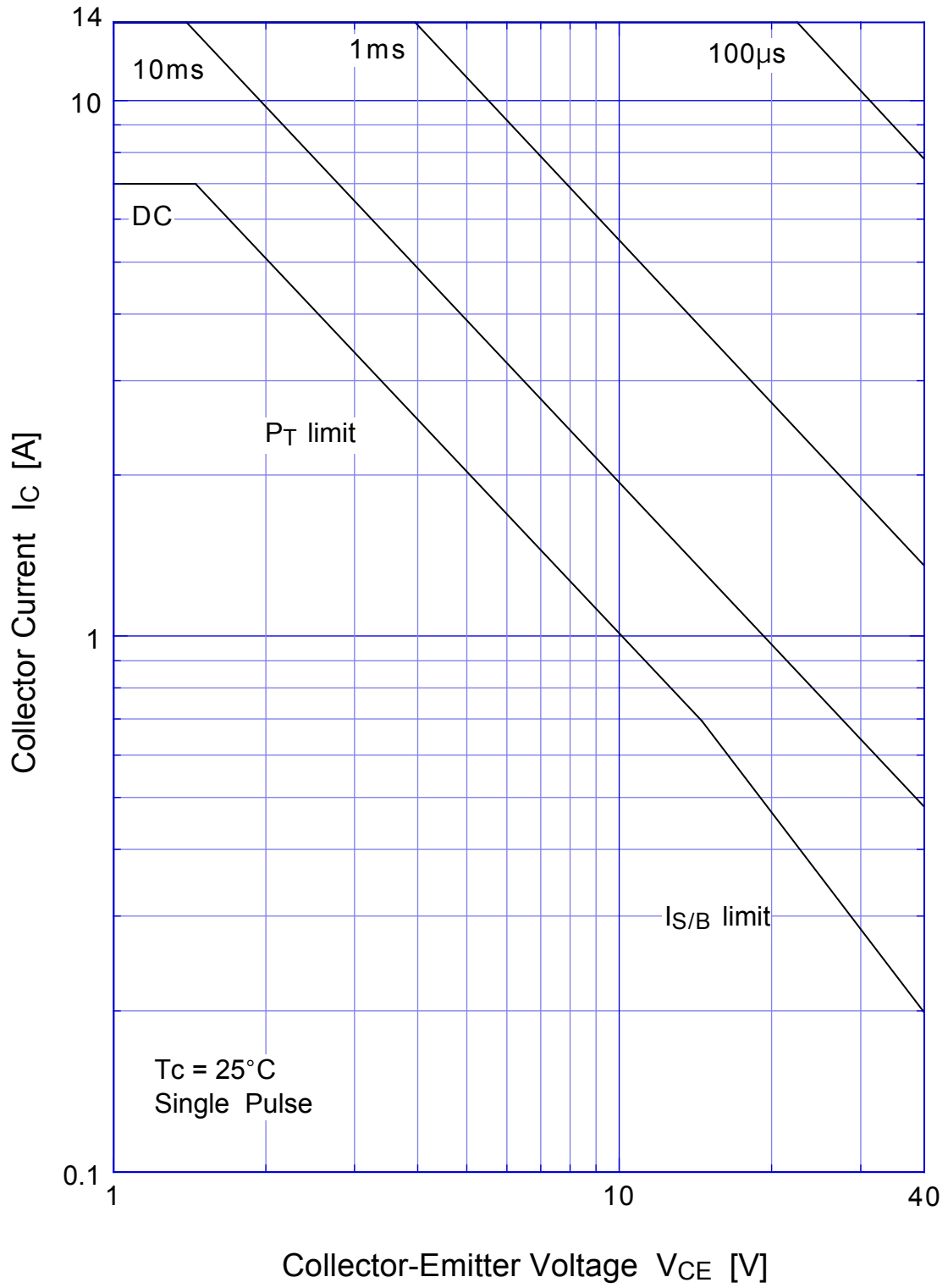
## Switching Time - Tc



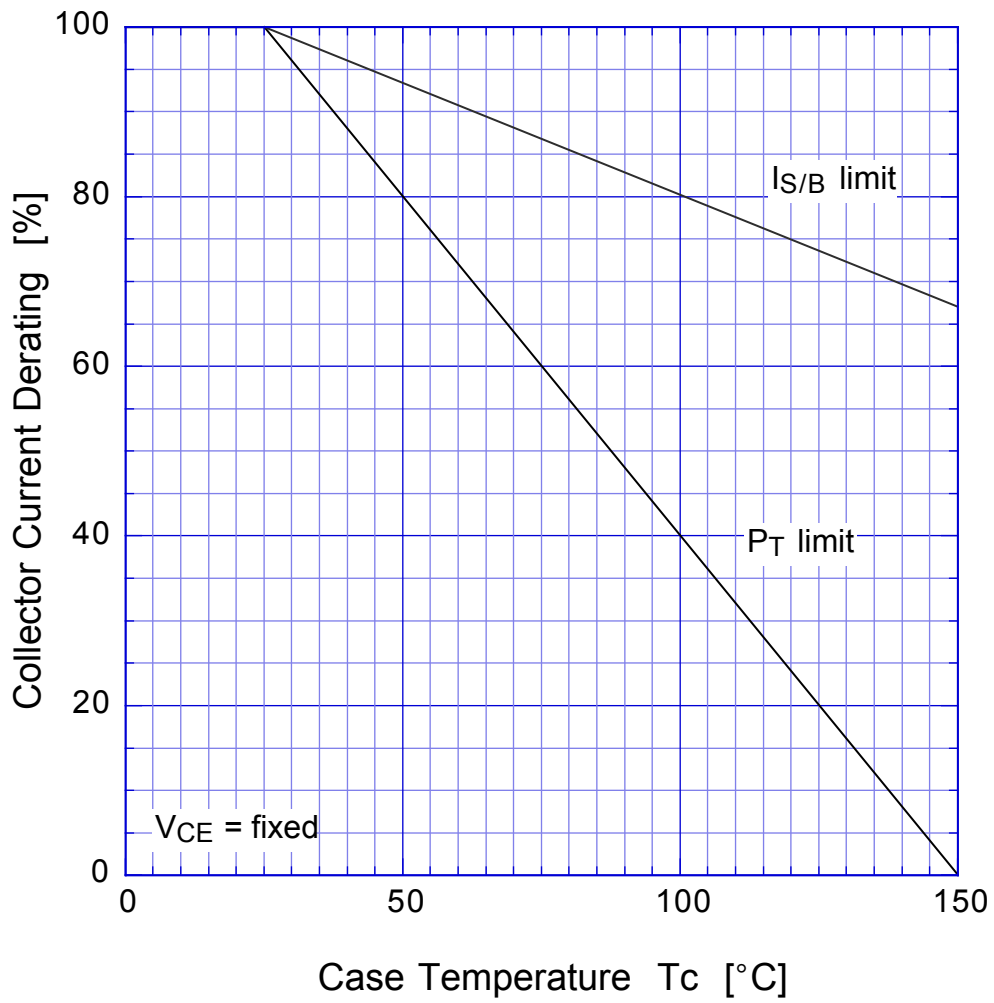
# 2SC4668 Transient Thermal Impedance



2SC4668 Forward Bias SOA



## 2SC4668 Collector Current Derating



2SC4668

Reverse Bias SOA

