

# SPECIFICATION

DEVICE NAME : BIPOLAR TRANSISTOR  
 TYPE NAME : 2SC4538R  
 SPEC. No. :  
 DATE :

Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

	DATE	NAME	APPROVED	Fuji Electric Co.,Ltd.	
DRAWN				DWG.NO.	1/12
CHECKED					

Ratings and Characteristics of Fuji Power Transistor

2 S C 4 5 3 8 R

1. Outline Drawings TO-3PF
2. Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Maximum Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	900	V
Collector-Emitter Voltage	V <sub>CE0</sub>	800	
Emitter-Base Voltage	V <sub>EB0</sub>	10	
Collector Current	I <sub>c</sub>	5	A
Base Current	I <sub>b</sub>	3	
Collector Power Dissipation	P <sub>c</sub>	80	W
Operating Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +150	

3. Electrical Characteristics (Tc=25°C)

Item	Symbol	Conditions	Min	Max	Unit
Collector-Base Voltage	V <sub>CB0</sub>	I <sub>CB0</sub> = 1mA	900		V
Collector-Emitter Voltage	V <sub>CE0</sub>	I <sub>CE0</sub> = 10mA	800		
Emitter-Base Breakdown Voltage	V <sub>EB0</sub>	I <sub>EB0</sub> = 1mA	10		
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = 900V		1.0	mA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> = 10V		1.0	
DC Current Gain	h <sub>FE</sub>	I <sub>c</sub> =2A V <sub>CE</sub> =5V	10		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = 2A		1.0	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>b</sub> = 0.4A		1.5	
Switching Time	ton	I <sub>c</sub> = 3 A I <sub>B1</sub> = +0.6A I <sub>B2</sub> = -1.2A P <sub>w</sub> = 20us, Duty ≤ 2% RL = 100Ω		1.0	μs
	tstg			4.0	
	tf			0.8	

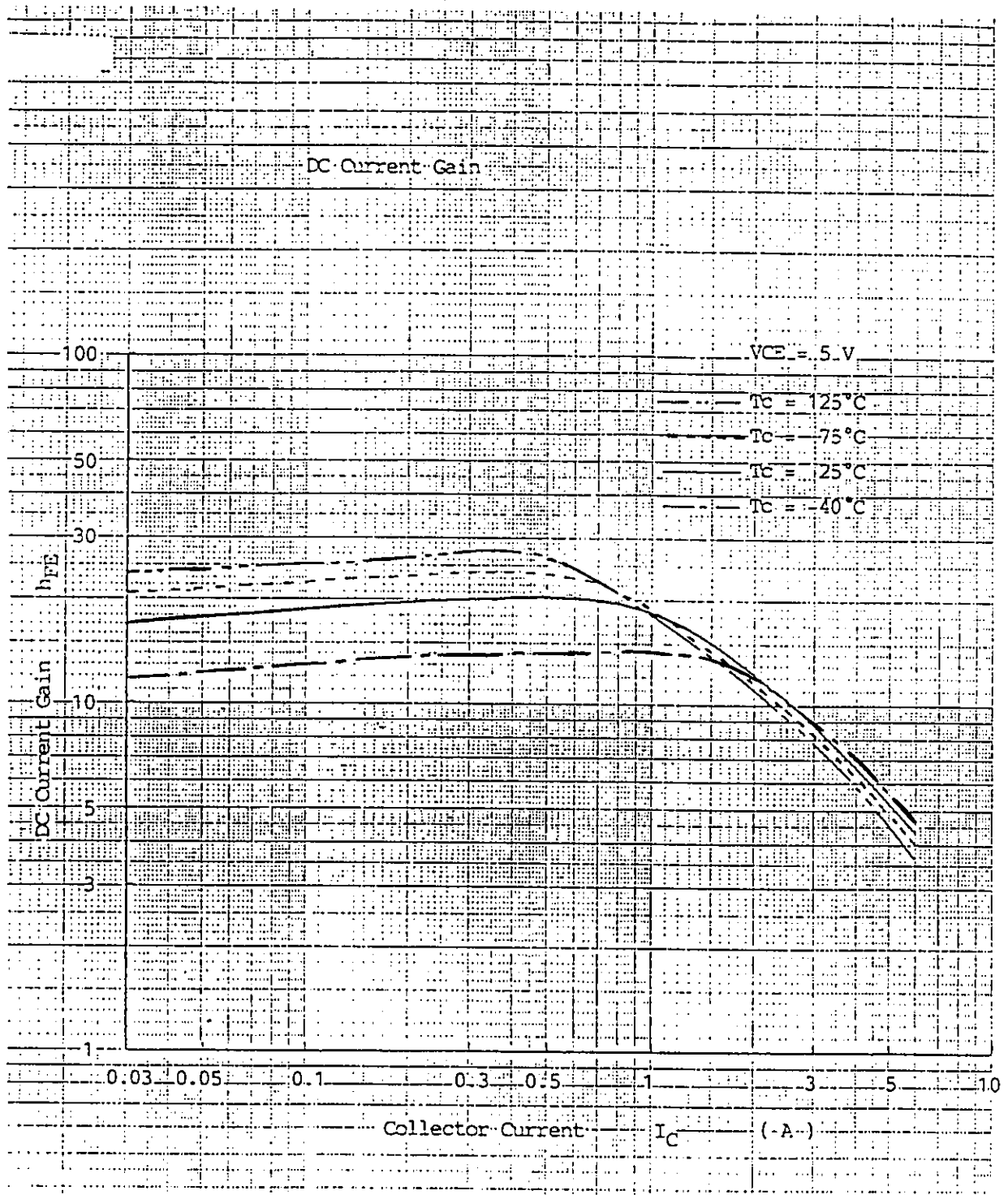
4. Thermal Characteristics

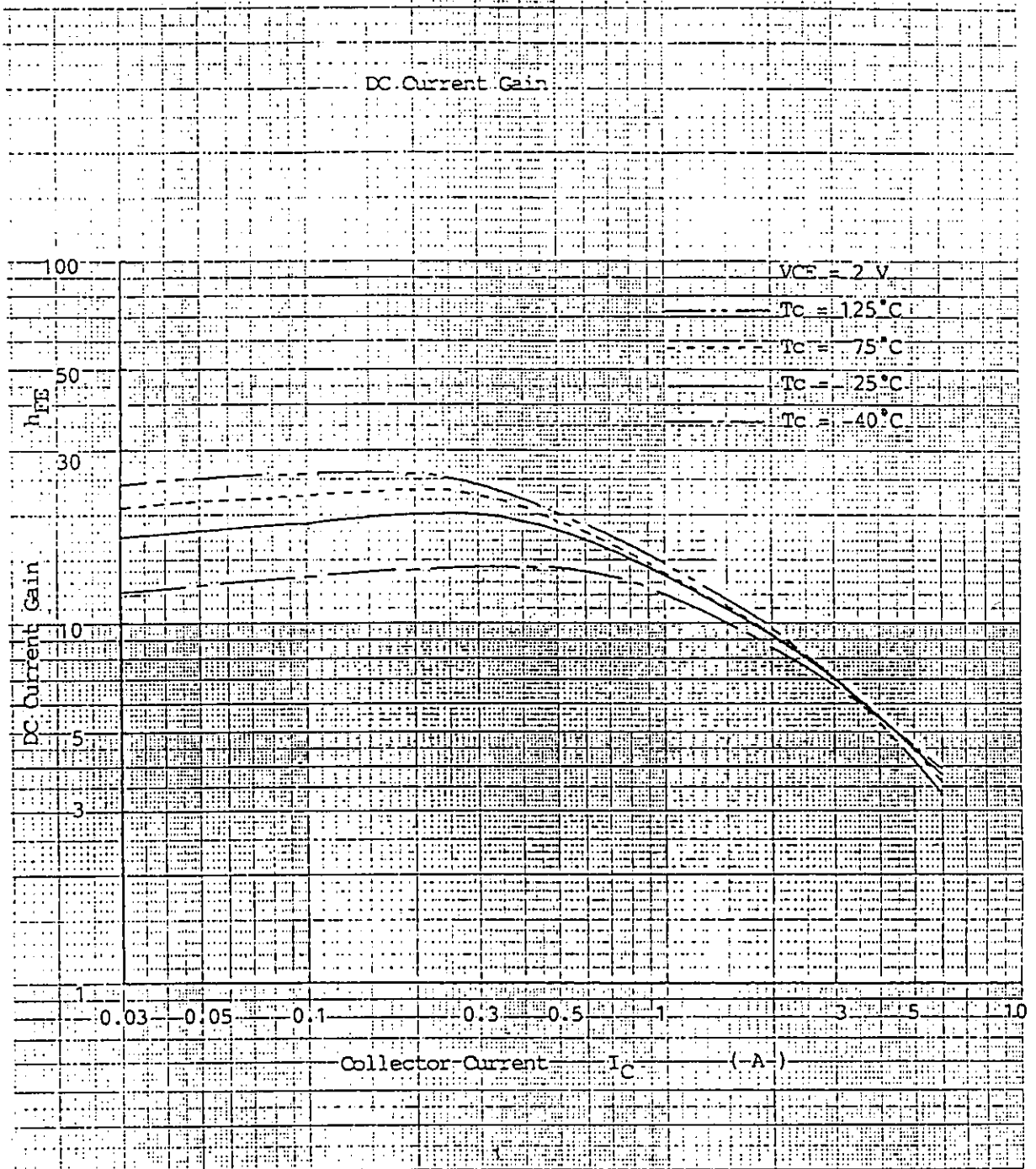
Item	Symbol	Conditions	Min	Max	Unit
Thermal Resistance	R <sub>th(j-c)</sub>	Junction to Case		1.5	°C/W

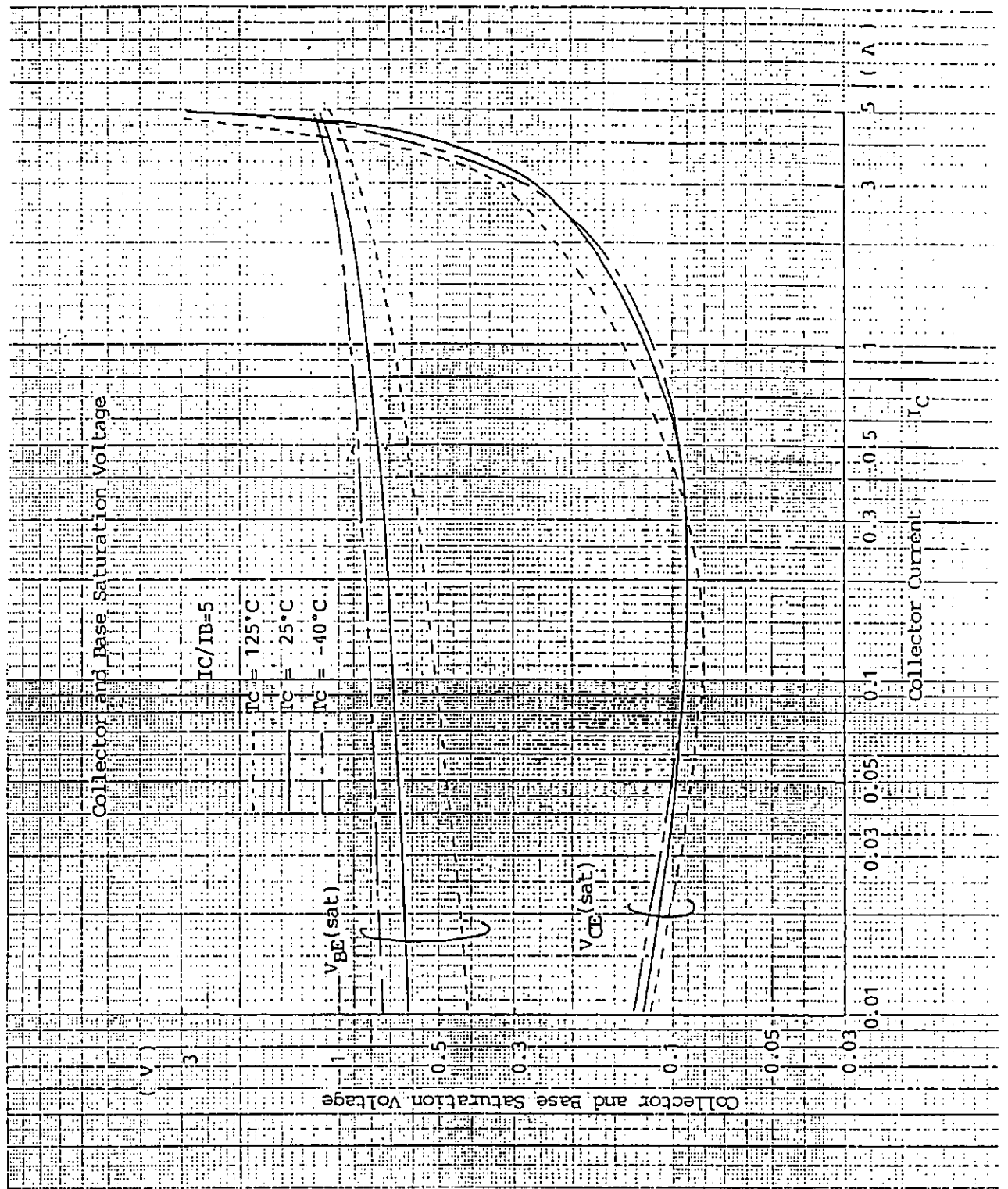
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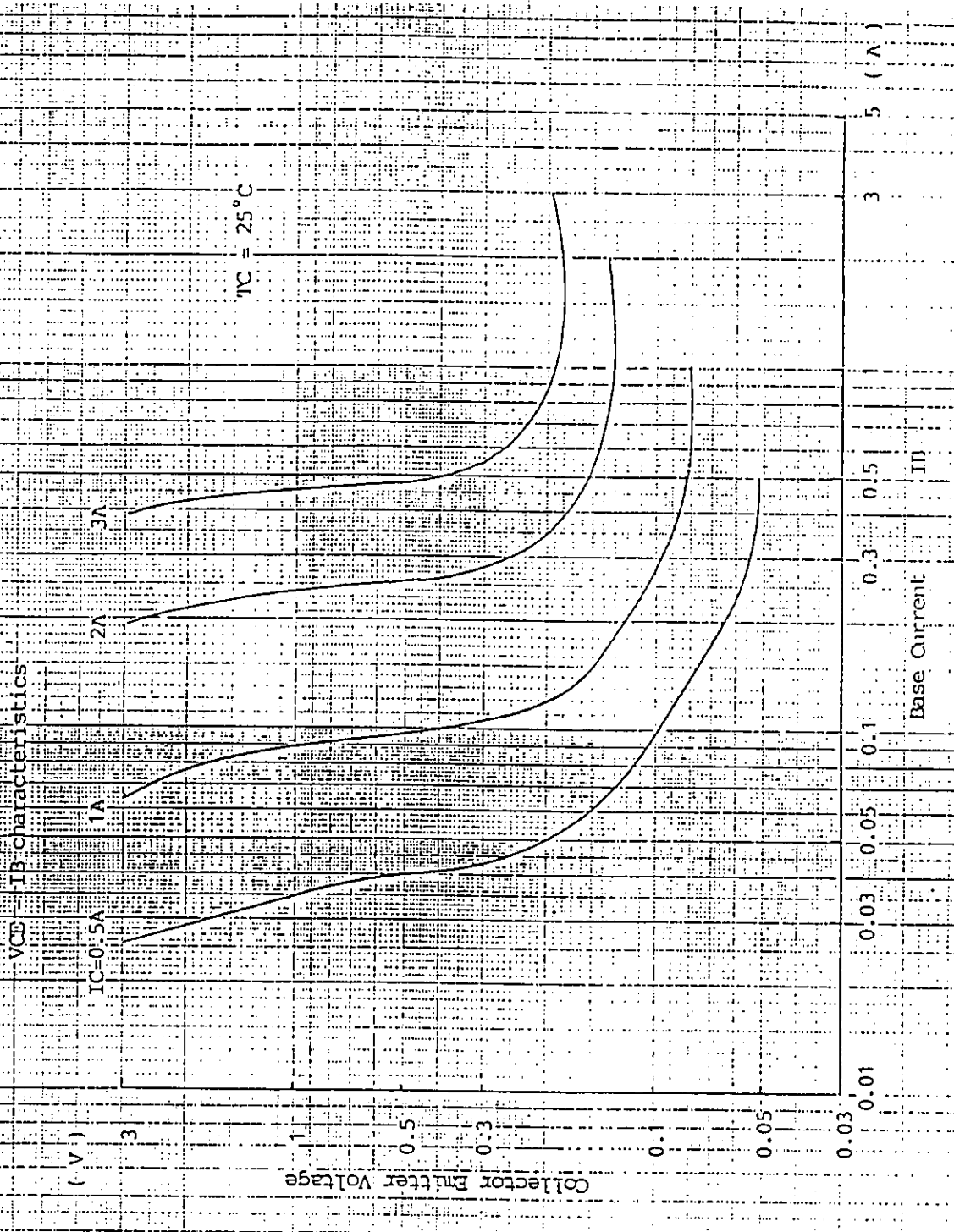
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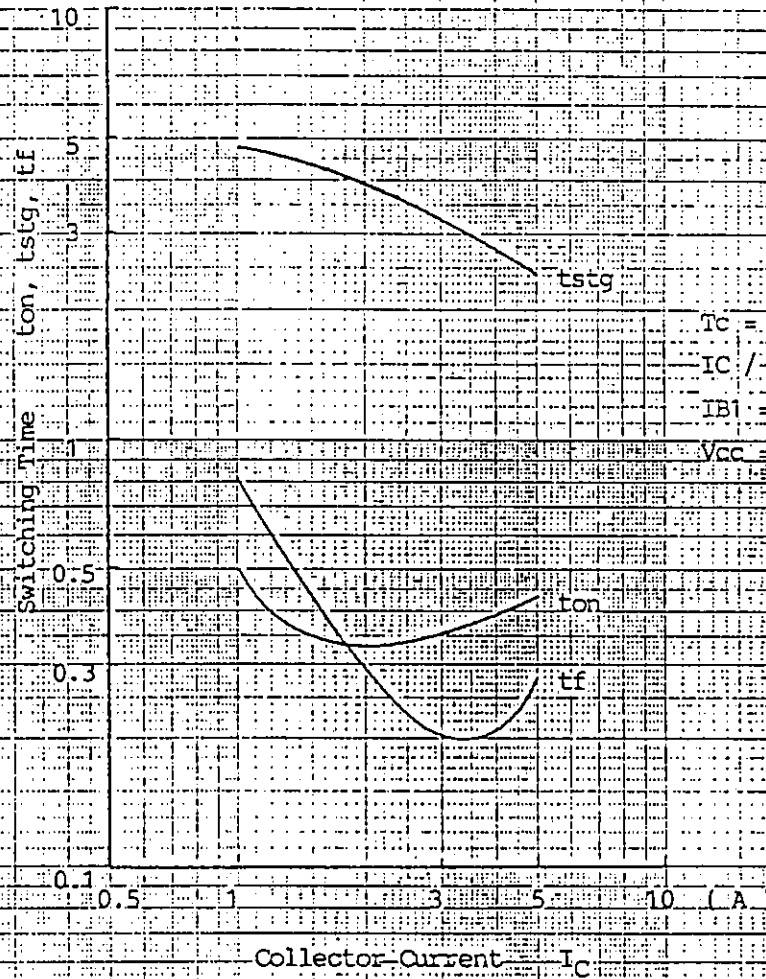
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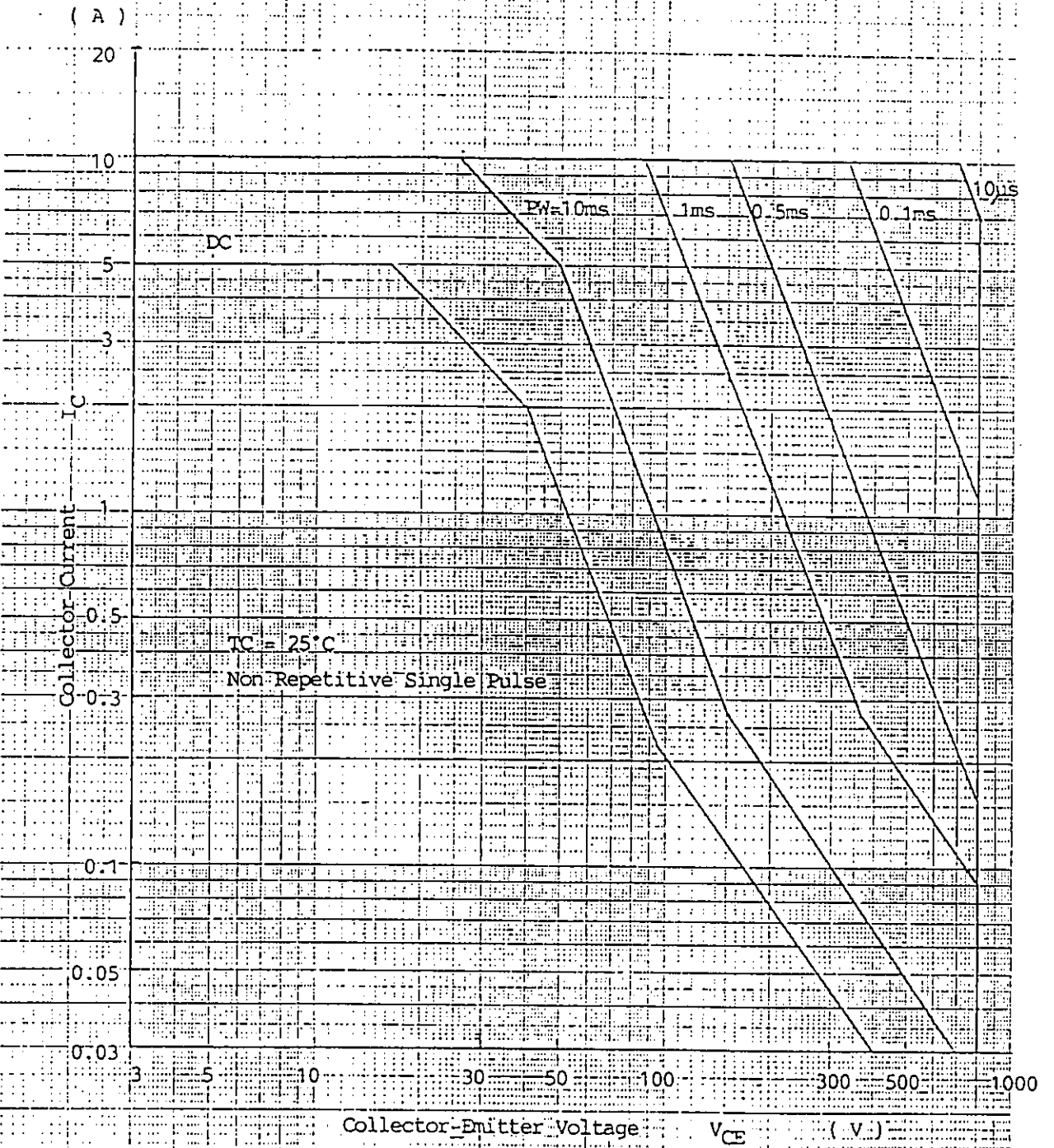
### Switching Time

( $\mu$ sec)



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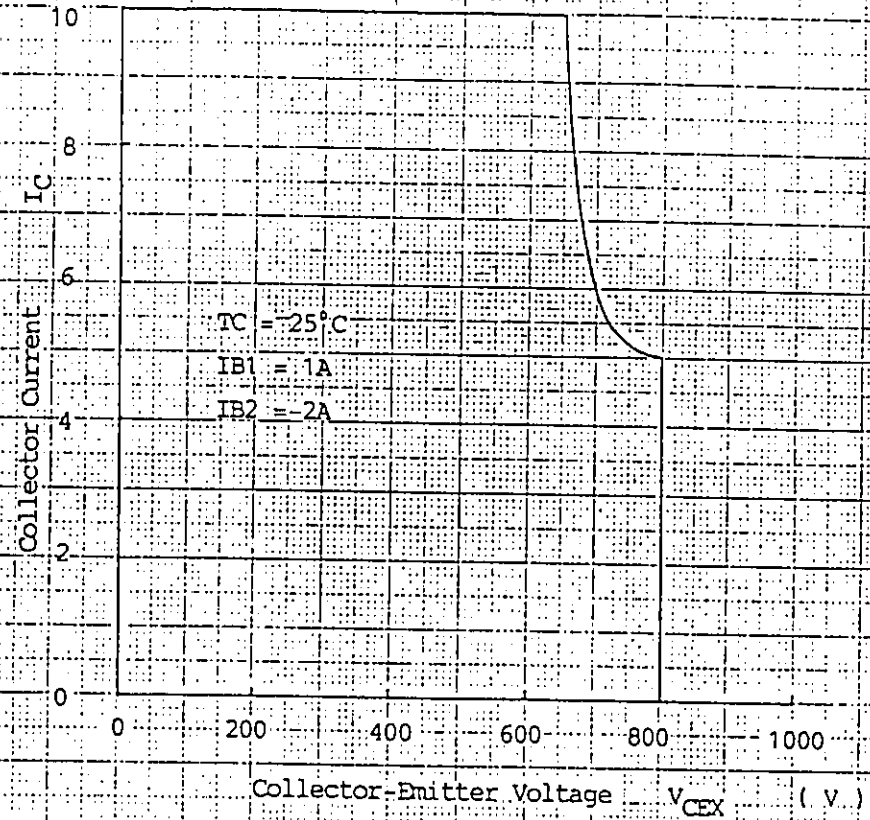
Forward Biased Safe Operating Area

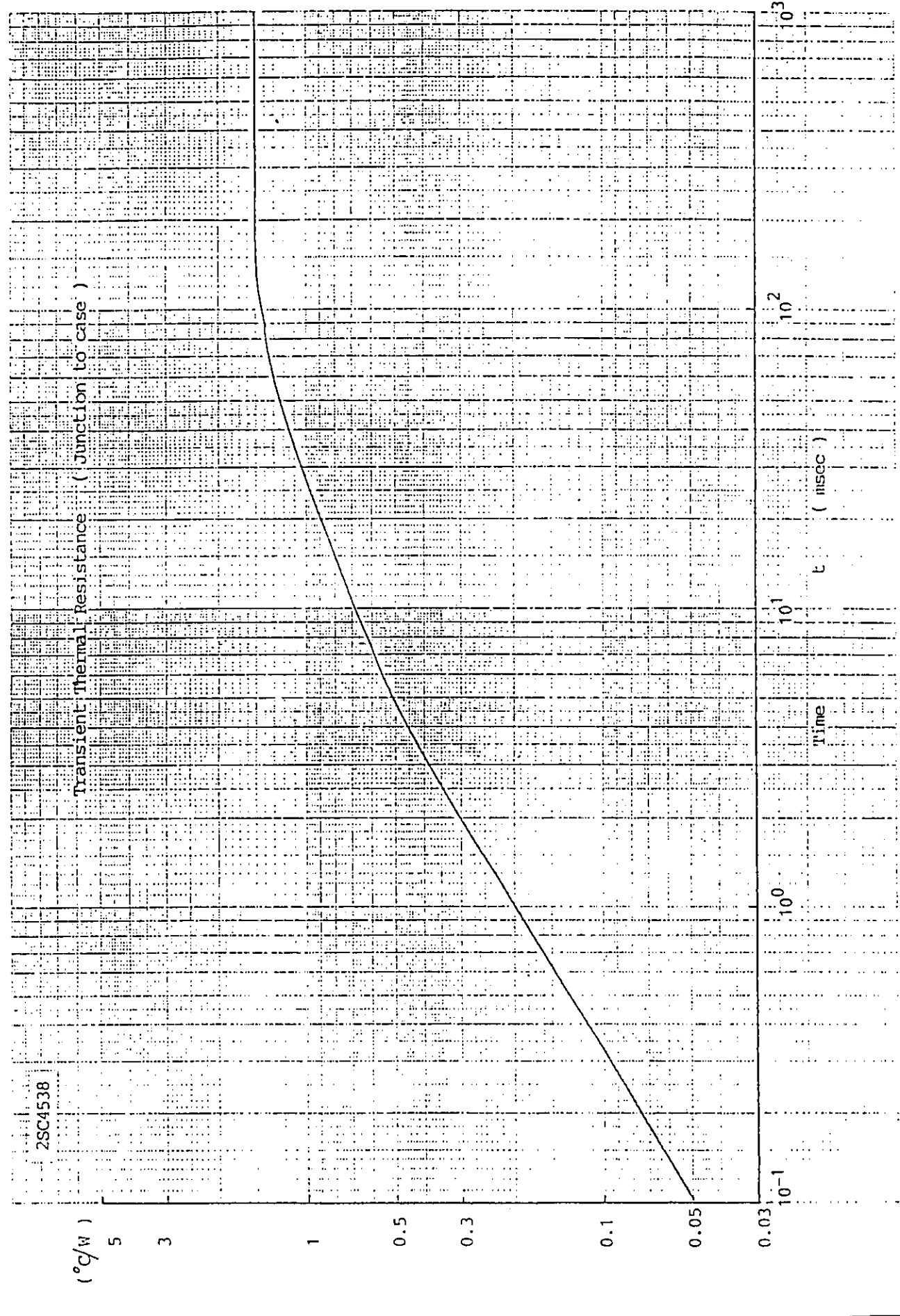


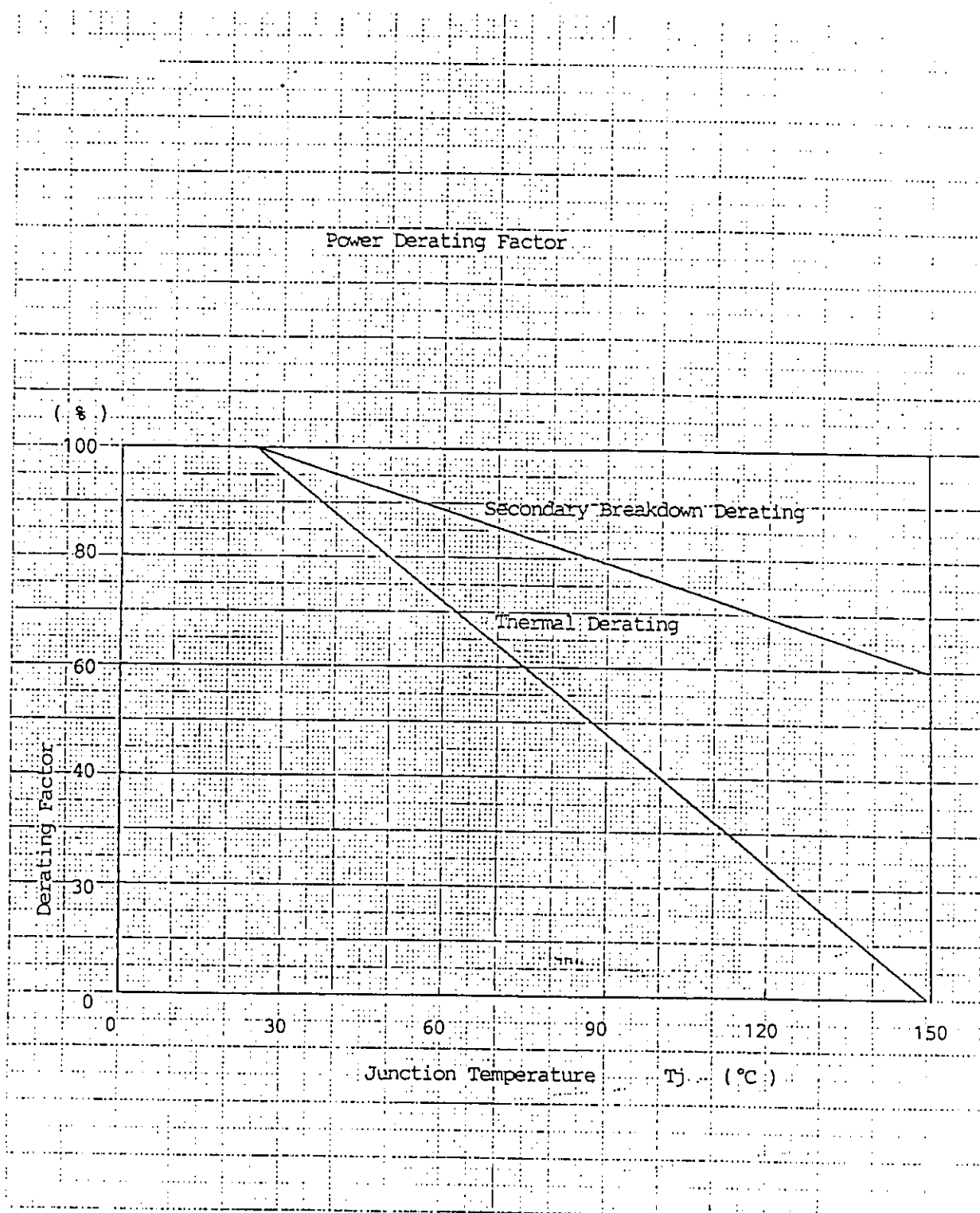


Reverse Biased Safe Operating Area

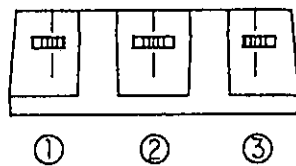
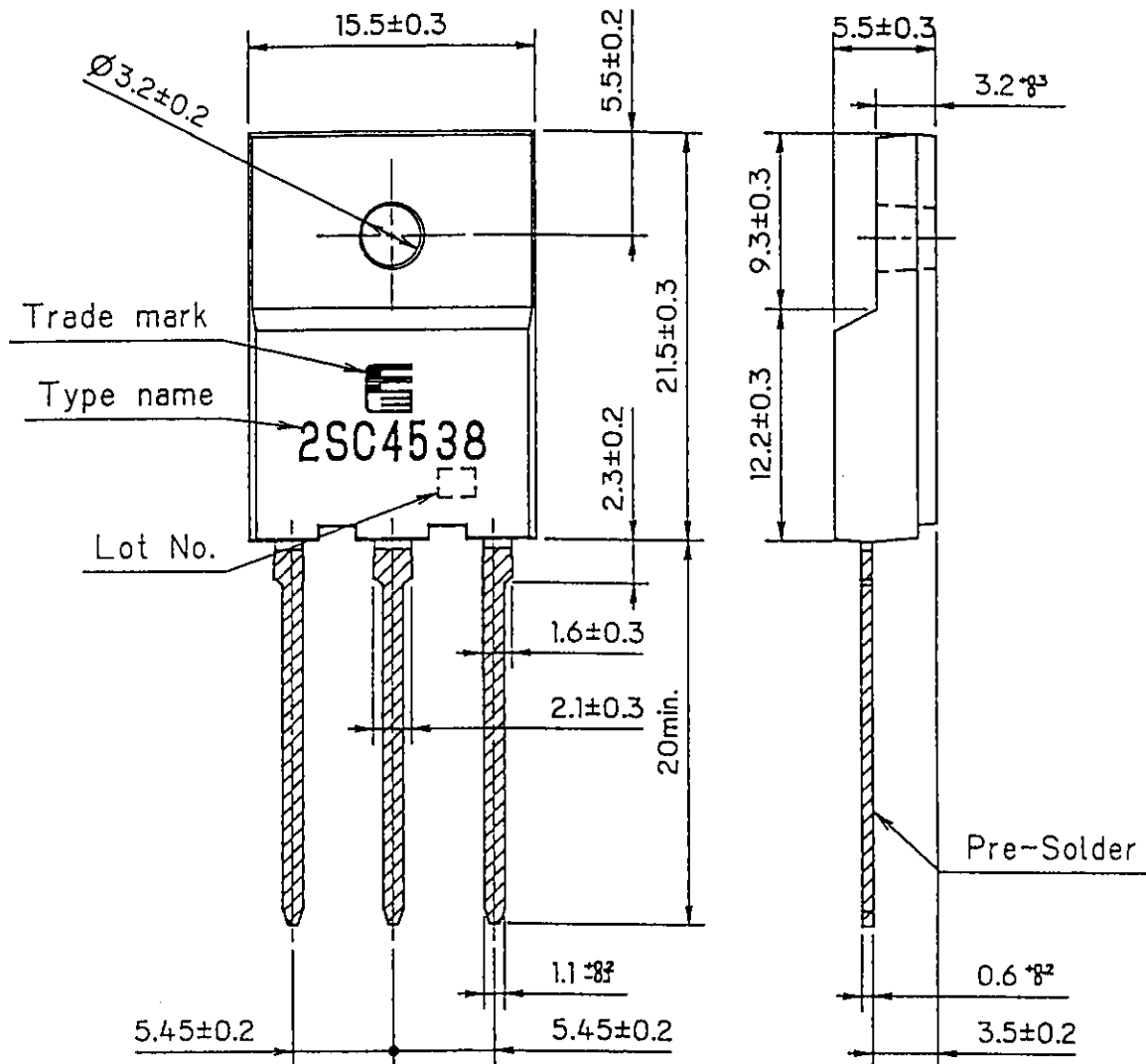
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FUJI POWER TRANSISTOR  
TYPE : 2SC4538R



CONNECTION

- ① BASE
- ② COLLECTOR
- ③ EMITTER

DIMENSIONS ARE IN MILLIMETERS.

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