

SPECIFICATION

DEVICE NAME : BIPOLAR TRANSISTOR
 TYPE NAME : 2 S C 4 5 3 8 R
 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 ($T_c=25^{\circ}\text{C}$)

Item	Symbol	Maximum Rating	Unit
Collector-Base Voltage	V_{CB0}	9 0 0	V
Collector-Emitter Voltage	V_{CE0}	8 0 0	
Emitter-Base Voltage	V_{EB0}	1 0	
Collector Current	I_c	5	A
Base Current	I_b	3	
Collector Power Dissipation	P_c	8 0	W
Operating Temperature	T_j	+ 1 5 0	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	- 5 5 ~ + 1 5 0	

3. Electrical Characteristics ($T_c=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Min	Max	Unit
Collector-Base Voltage	V_{CB0}	$I_{CB0} = 1\text{mA}$	900		V
Collector-Emitter Voltage	V_{CE0}	$I_{CE0} = 10\text{mA}$	800		
Emitter-Base Breakdown Voltage	V_{EB0}	$I_{EB0} = 1\text{mA}$	10		
Collector Cutoff Current	I_{CB0}	$V_{CB} = 900\text{V}$		1.0	mA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = 10\text{V}$		1.0	
DC Current Gain	h_{FE}	$I_c=2\text{A}$ $V_{CE}=5\text{V}$	10		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c = 2\text{A}$ $I_b = 0.4\text{A}$		1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.5	
Switching Time	t_{on}	$I_c = 3\text{A}$ $I_{B1}=+0.6\text{A}$ $I_{B2}=-1.2\text{A}$ $P_w=20\mu\text{s}$, Duty $\leq 2\%$ $R_L=100\Omega$		1.0	μs
	t_{stg}			4.0	
	t_f			0.8	

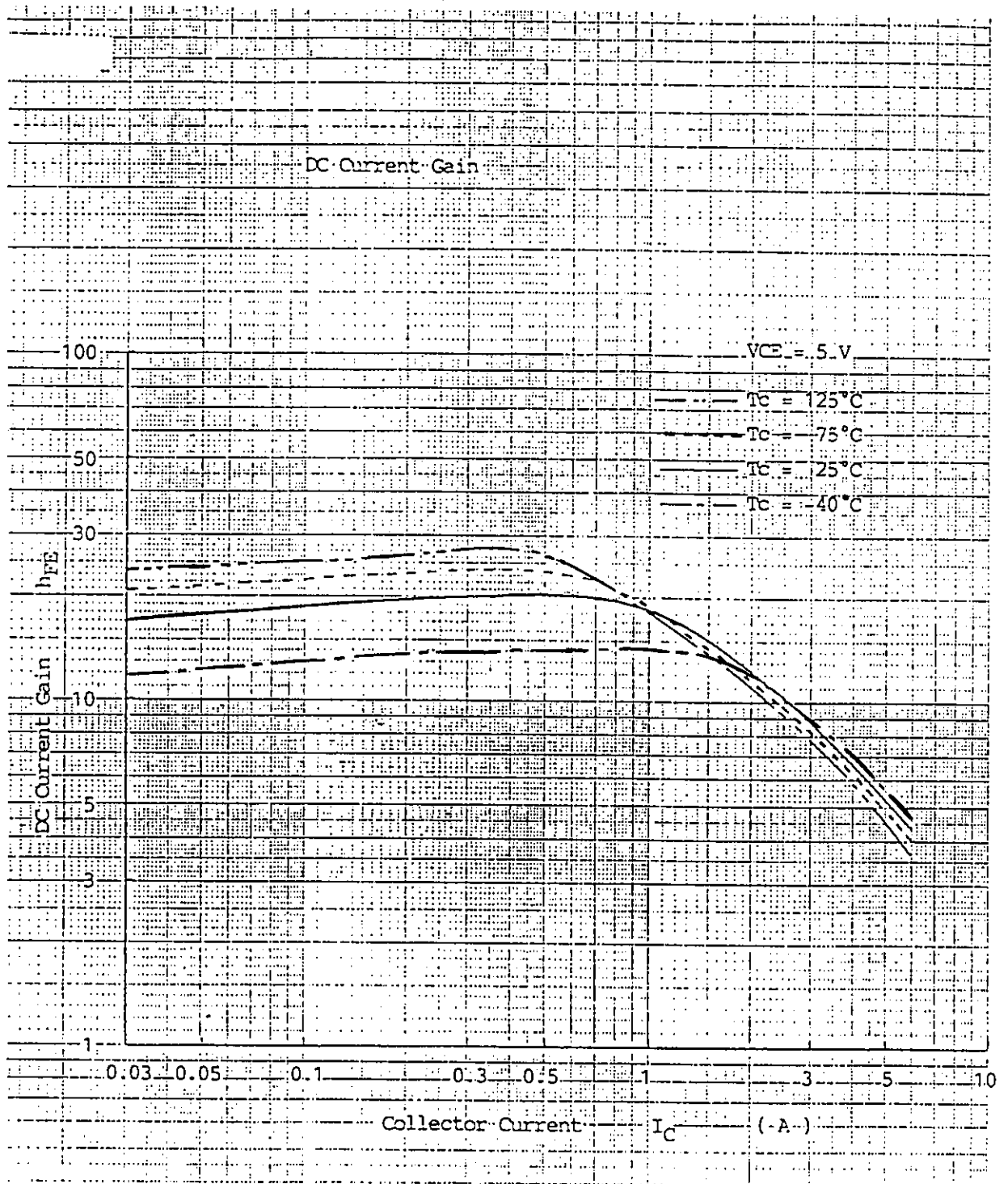
4. Thermal Characteristics

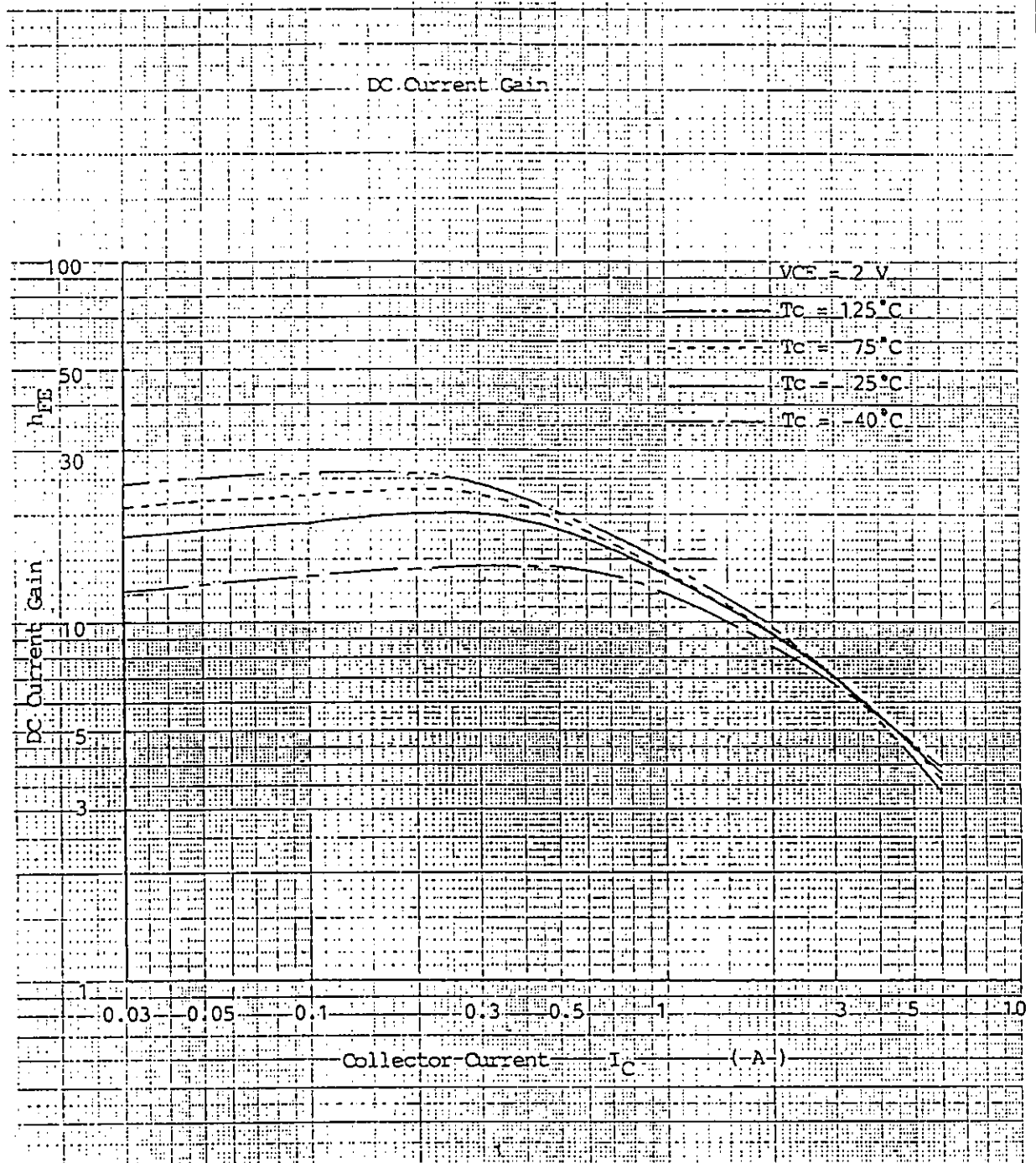
Item	Symbol	Conditions	Min	Max	Unit
Thermal Resistance	$R_{th(j-c)}$	Junction to Case		1.5	$^{\circ}\text{C/W}$

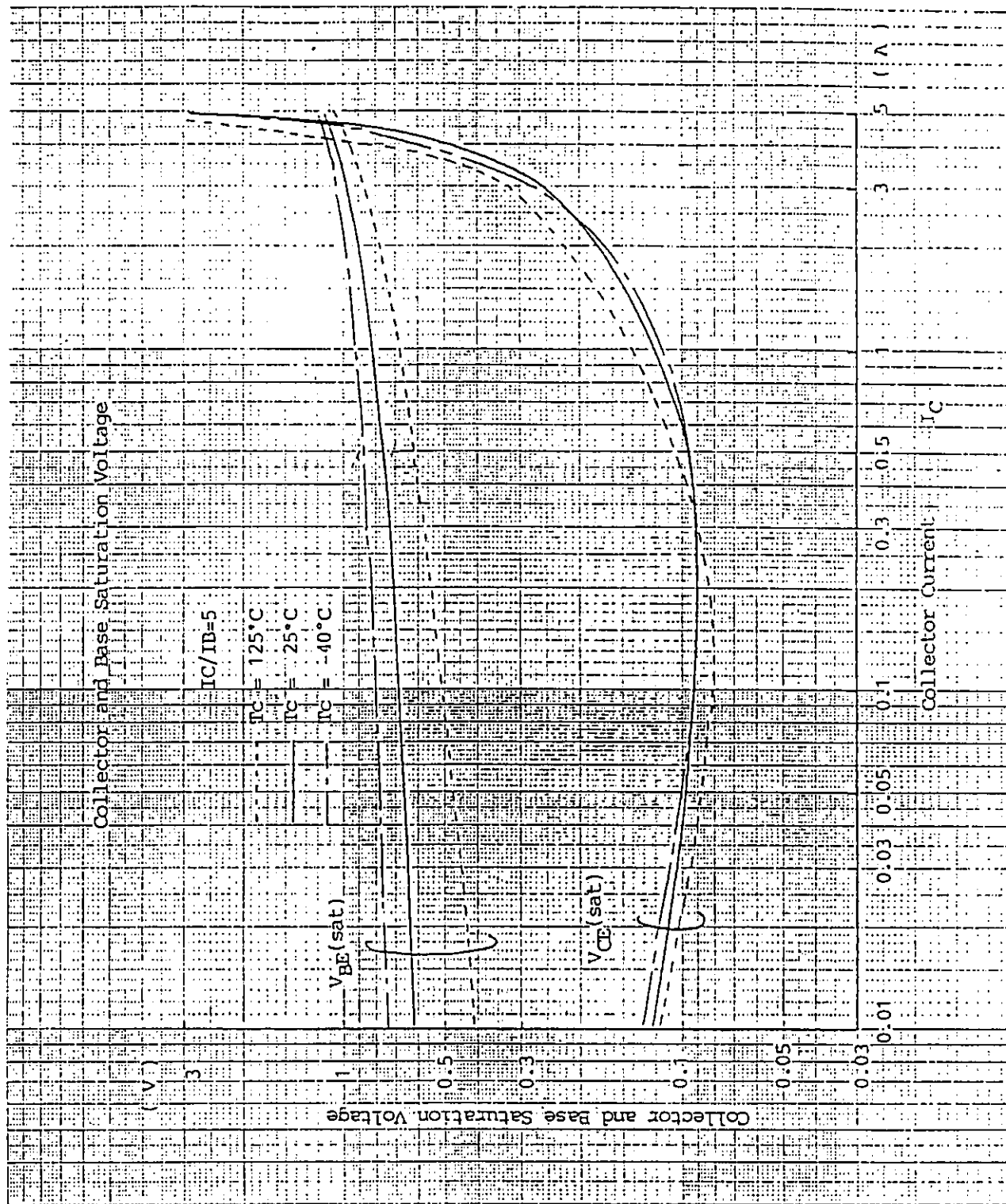
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2SC4538

VCE-IB characteristics

IC=0.5A

1A

2A

3A

TC = 25°C

(V)

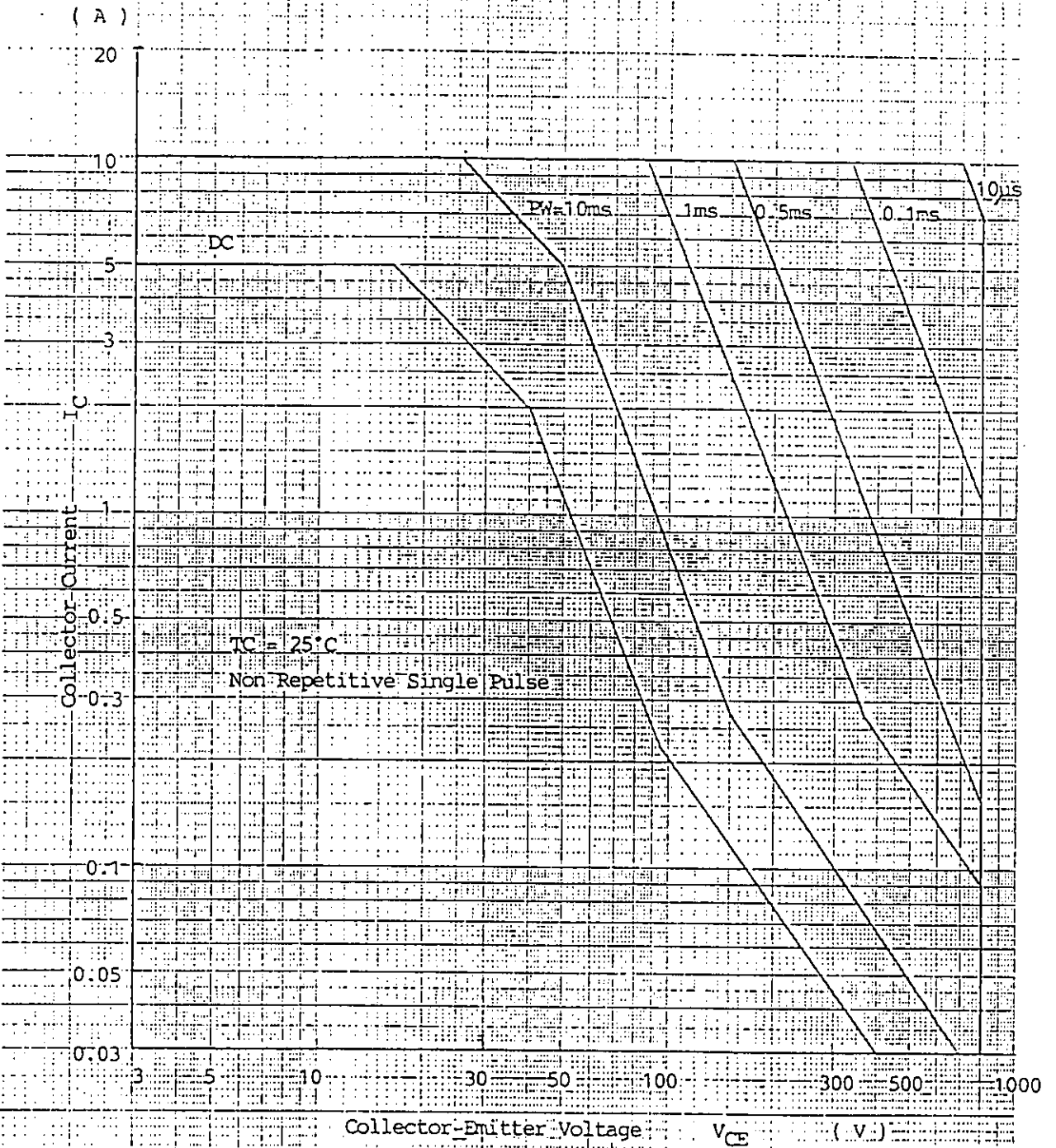
Collector Emitter Voltage

Base Current

III

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Forward Biased Safe Operating Area

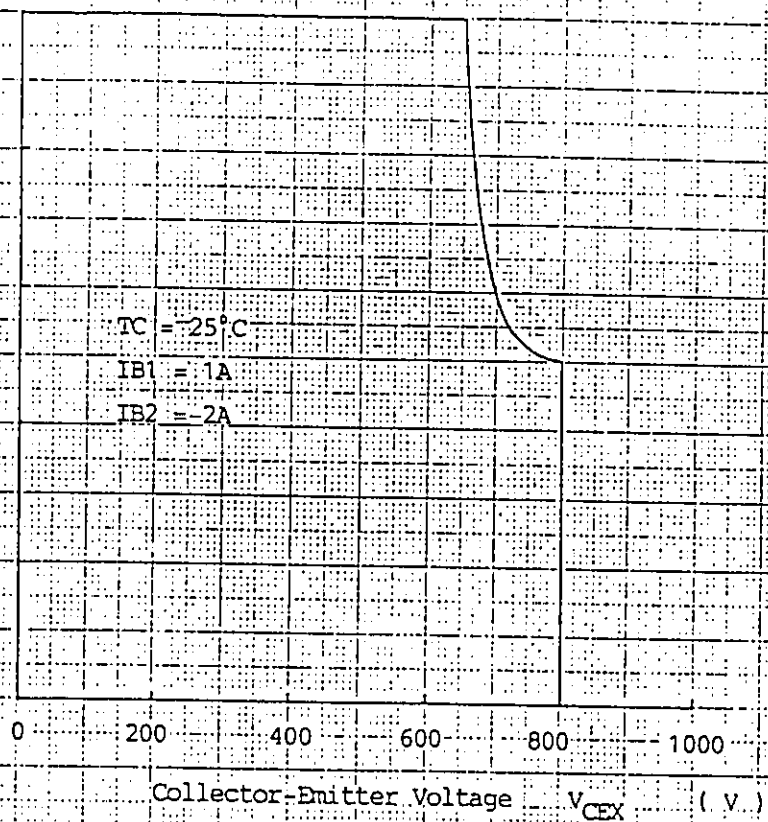


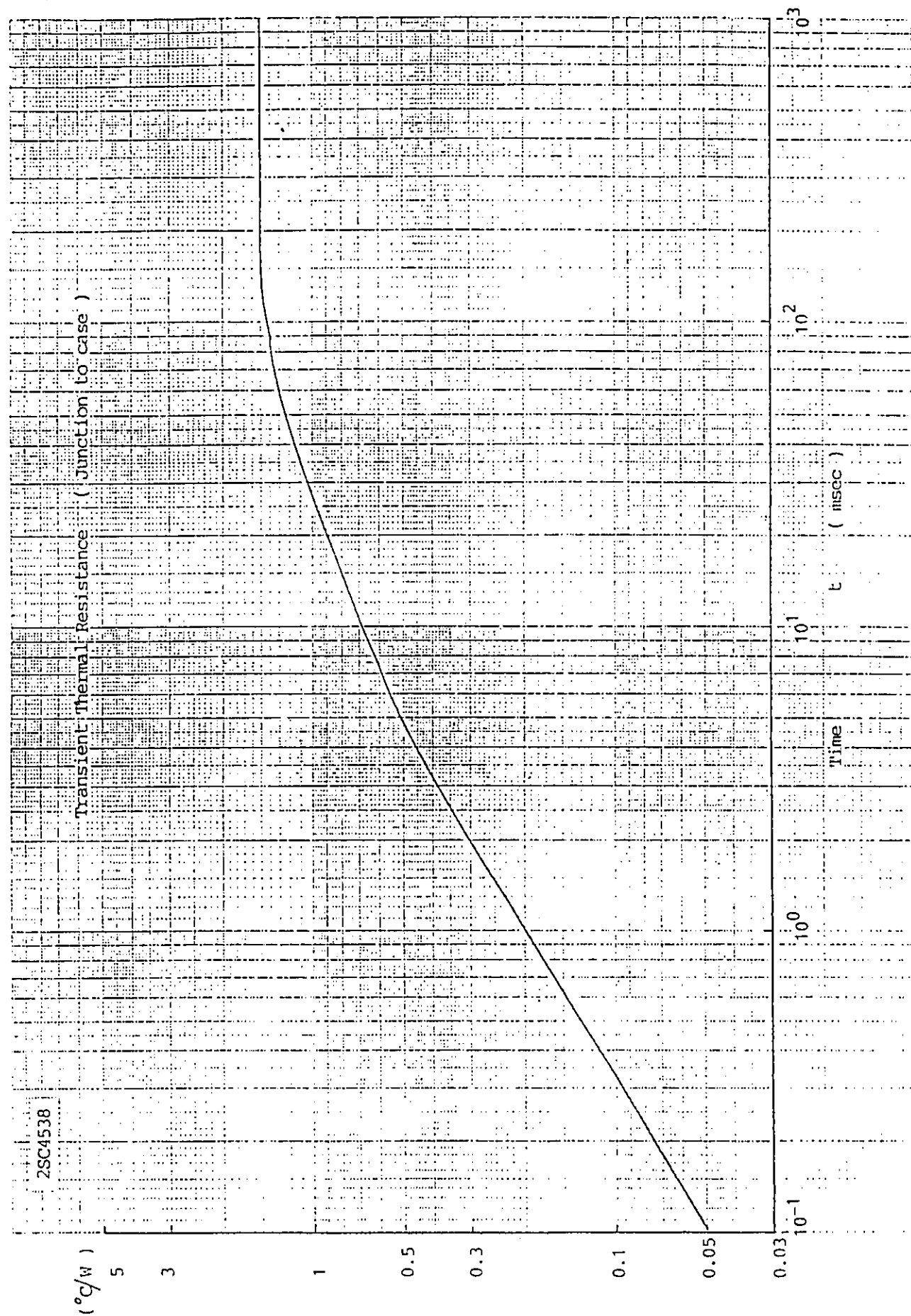
Reverse Biased Safe Operating Area

(A)

10
8
6
4
2
0

IC
Collector Current



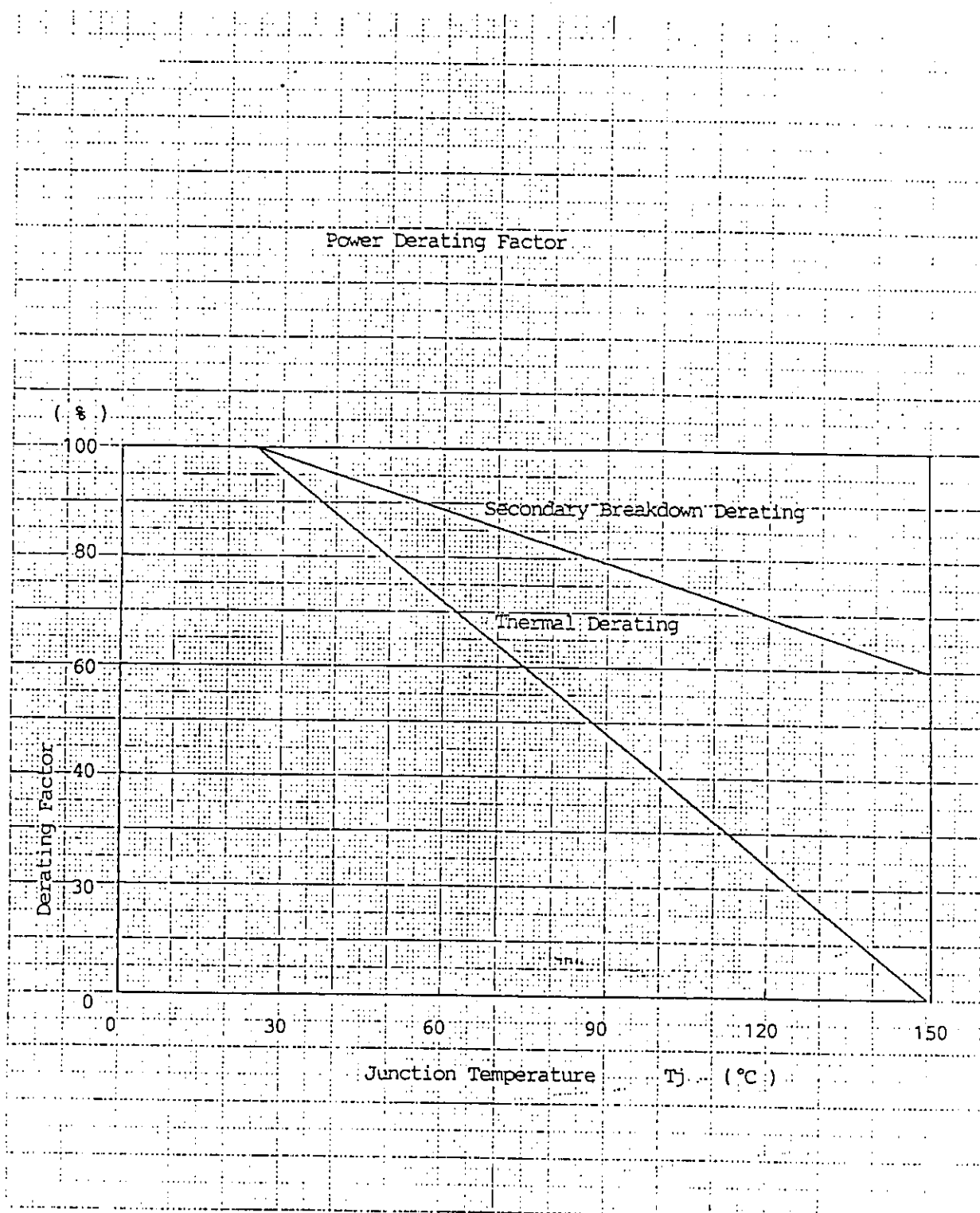


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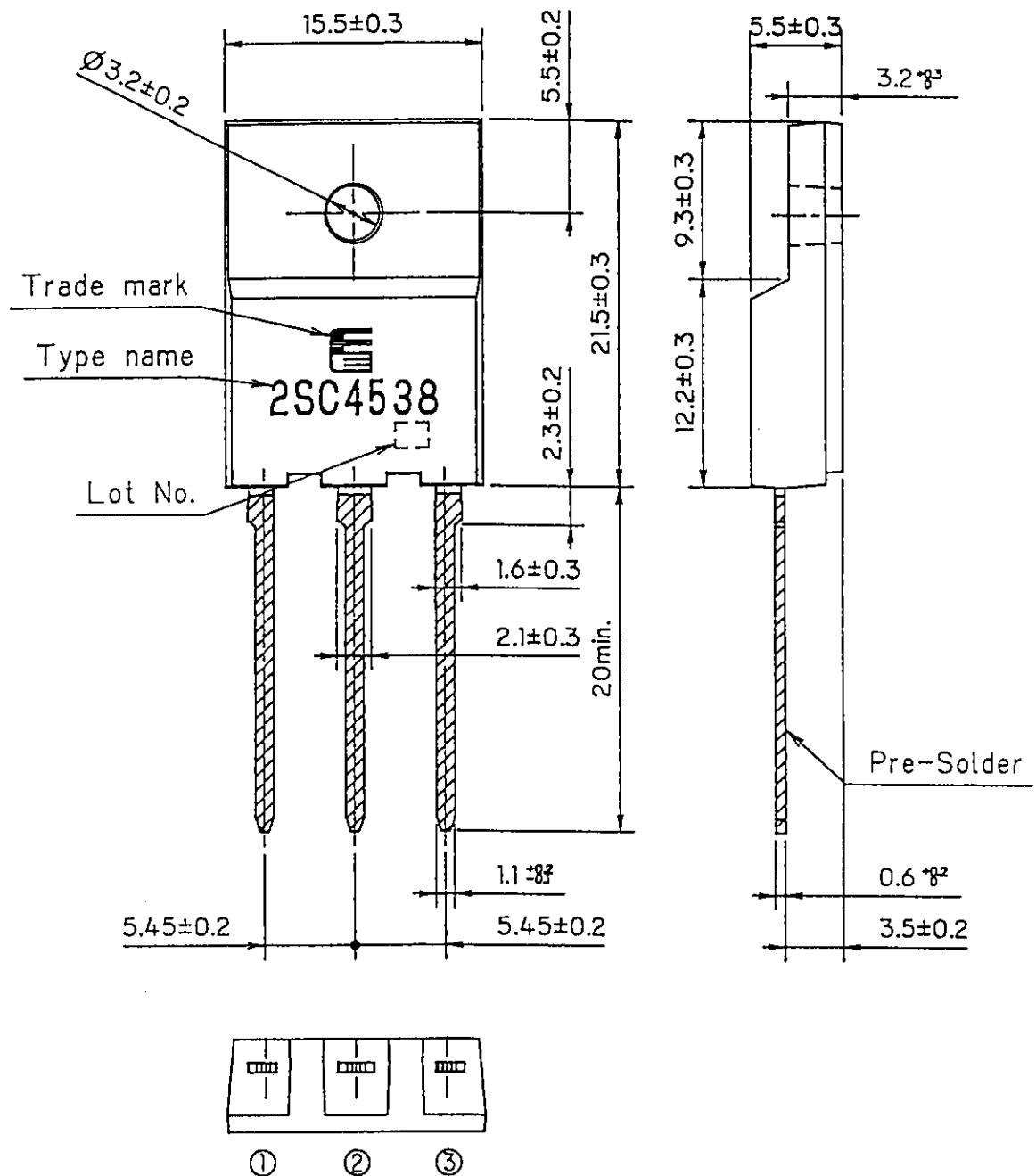
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FUJI POWER TRANSISTOR
TYPE : 2SC4538R



CONNECTION

- ① BASE
- ② COLLECTOR
- ③ EMITTER

DIMENSIONS ARE IN MILLIMETERS.

For more information, contact:

Collmer Semiconductor, Inc.

P.O. Box 702708

Dallas, TX 75370

972-733-1700

972-381-9991 Fax

<http://www.collmer.com>