

SPECIFICATION

DEVICE NAME : BIPOLAR TRANSISTOR
TYPE NAME : 2SD2047R
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.	
CHECKED					
					1/8

Ratings and Characteristics of Fuji Power Transistor

2SD2047R

1. Outline Drawings TO-3PF (Full Molded Package)
2. Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbols	Maximum Rating	Unit
Collector-Base Voltage	V_{CBO}	1500	V
Collector-Emitter Voltage	V_{CEO}	700	
Emitter-Base Voltage	V_{EBO}	10	
Collector Current	I_c	5	A
Collector Current	I_c pulse	10	
Base Current (Continuous)	I_B	3	
Collector Power Dissipation	P_c	80	W
Operating Temperature	T_j	+150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	

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

Characteristics	Symbol	Conditions	Min	Max	Unit
Collector-Base Voltage	V_{CBO}	$I_{CBO} = 1\text{mA}$	1500		V
Collector-Emitter Voltage	V_{CEO}	$I_{CEO} = 10\text{mA}$	700		
Emitter-Base Voltage	V_{EBO}	$I_{EBO} = 1\text{mA}$	10		
Collector Cutoff Current	I_{CBO}	$V_{CBO} = 750\text{V}$		50	μA
		$V_{CBO} = 1500\text{V}$		1.0	mA
DC Current Gain	h_{FE}	$I_C = 1\text{A}, V_{CE} = 5\text{V}$	18	50	
Collector Saturation Voltage	$V_{CE(sat)}$	$I_C = 4.5\text{A}$		2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_B = 2.0\text{A}$		1.5	
Switching Time	t_{on}	$I_C = 2.5\text{A}$		1.0	μs
	t_{stg}	$I_{B1} = +0.25\text{A}$		3.0	
	t_f	$I_{B2} = -0.5\text{A}$		0.5	

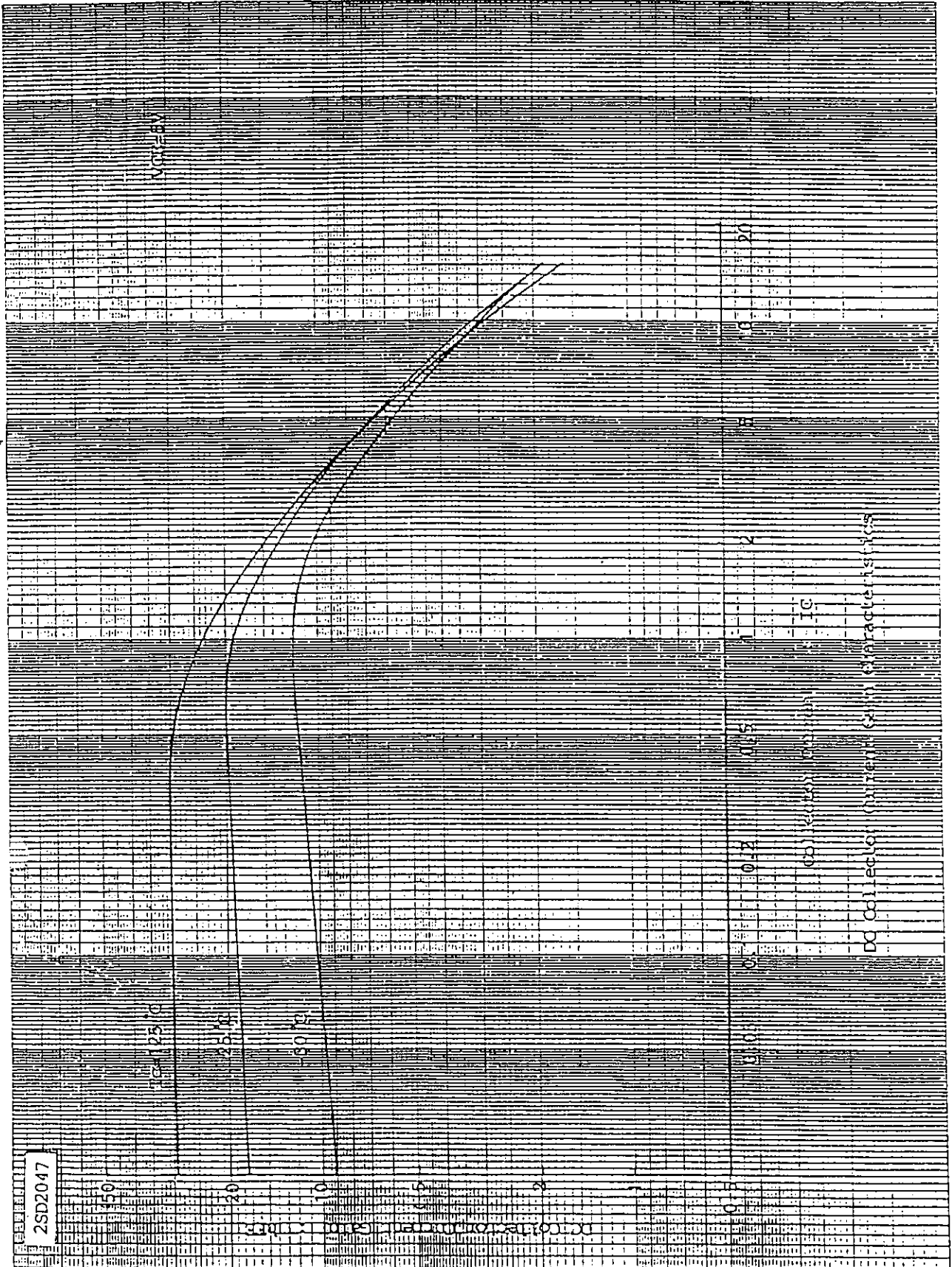
4. Thermal Characteristics

Characteristics	Symbol	Conditions	Min	Max	Unit
Thermal Resistance	$R_{th(j-c)}$	Junction to Case		1.55	$^\circ\text{C}/\text{W}$

Fuji Electric Co.,Ltd

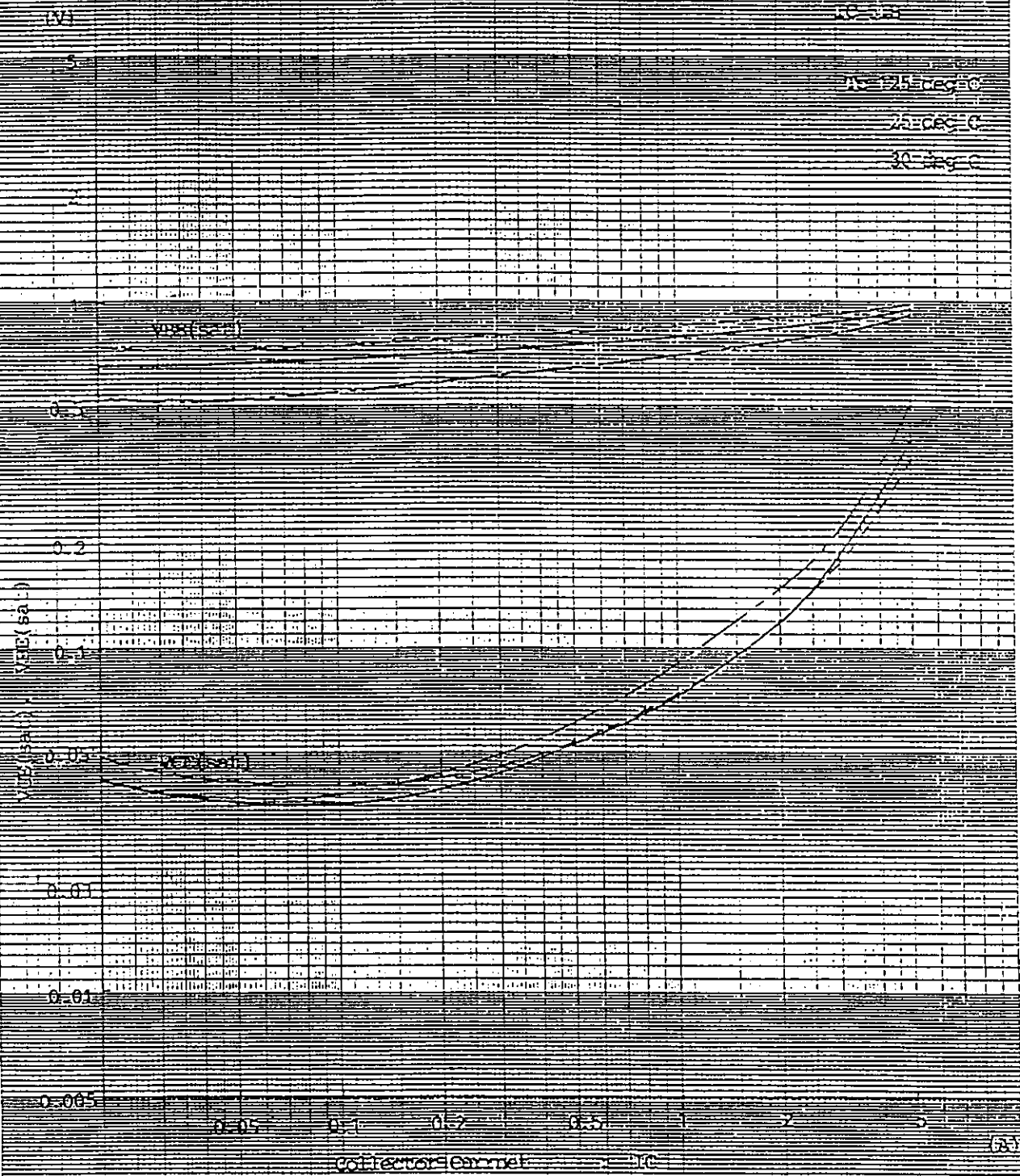
DWG.NO.

2/8



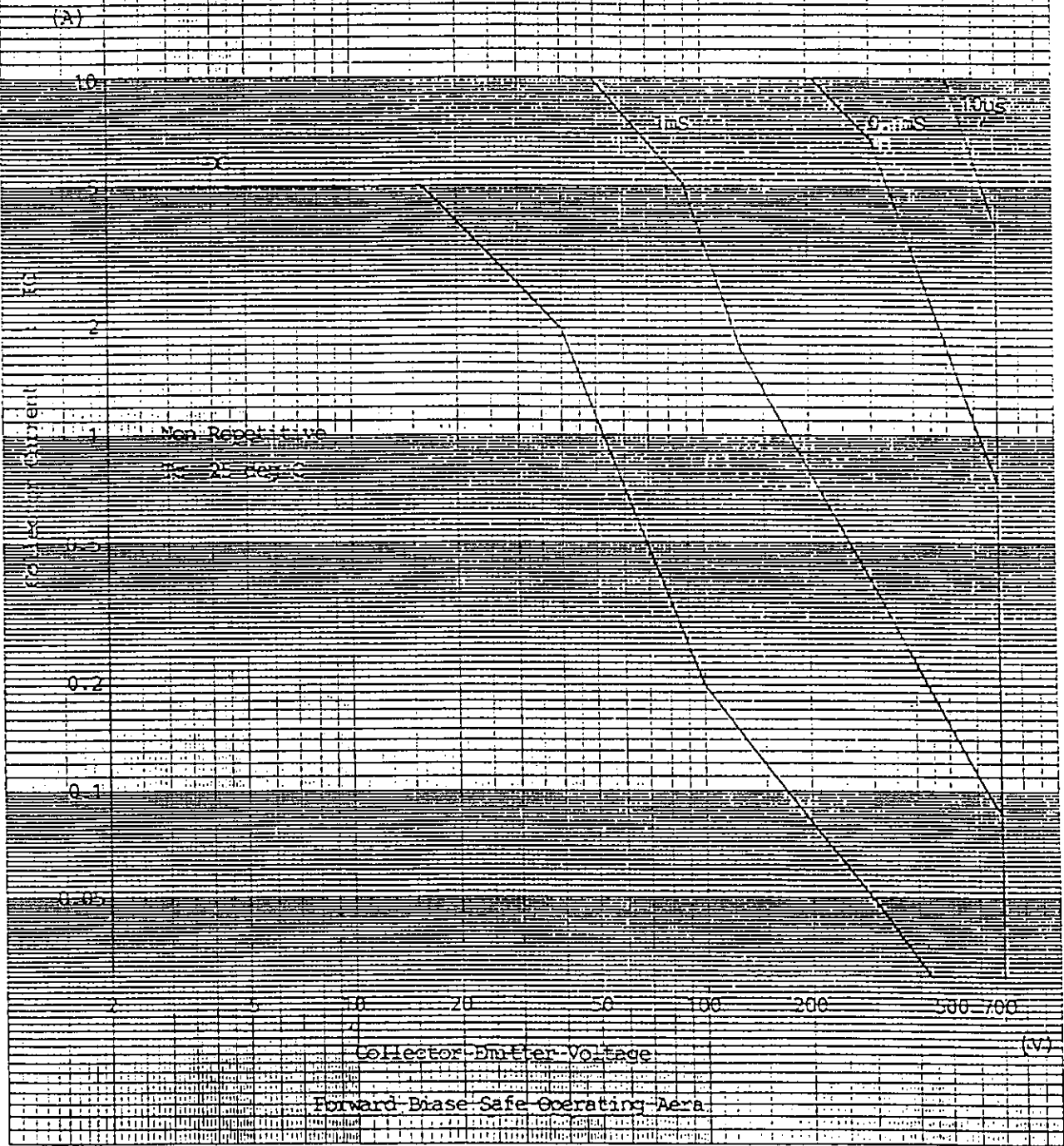
DC Collector Current (mA) Characteristics

2SD2047



base and collector saturation voltage characteristics

2SD2047

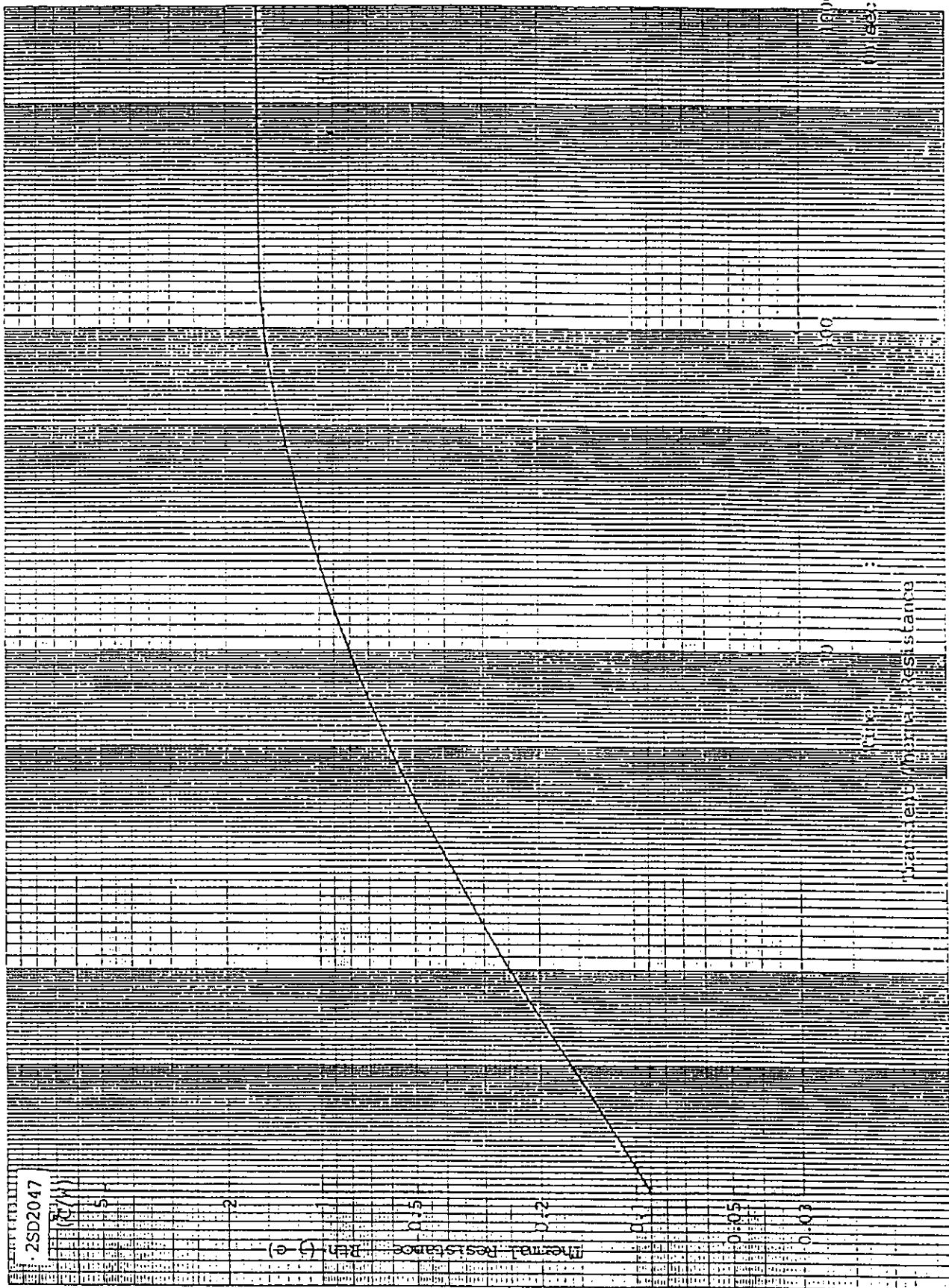


Fuji Electric Co., Ltd.

DWG NO.

5/8

Y 0257-R-003a



2SD2047

Thermal Resistance (K/W)

Ambient Temperature (°C)

100

80

60

40

20

0

100

80

60

40

20

0

100

80

60

40

20

0

100

80

60

40

20

0

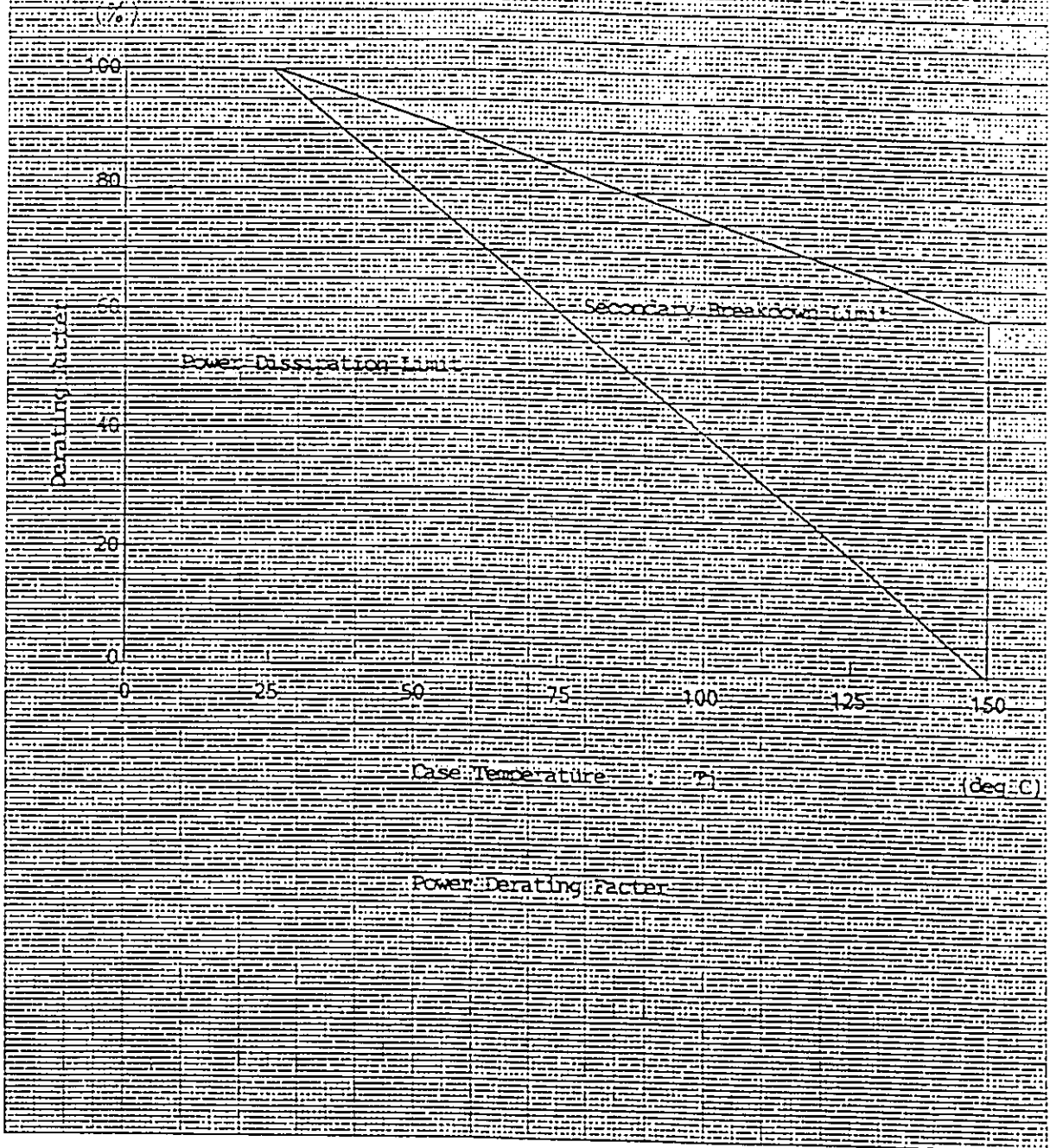
Fuji Electric Co., Ltd

DWG. NO.

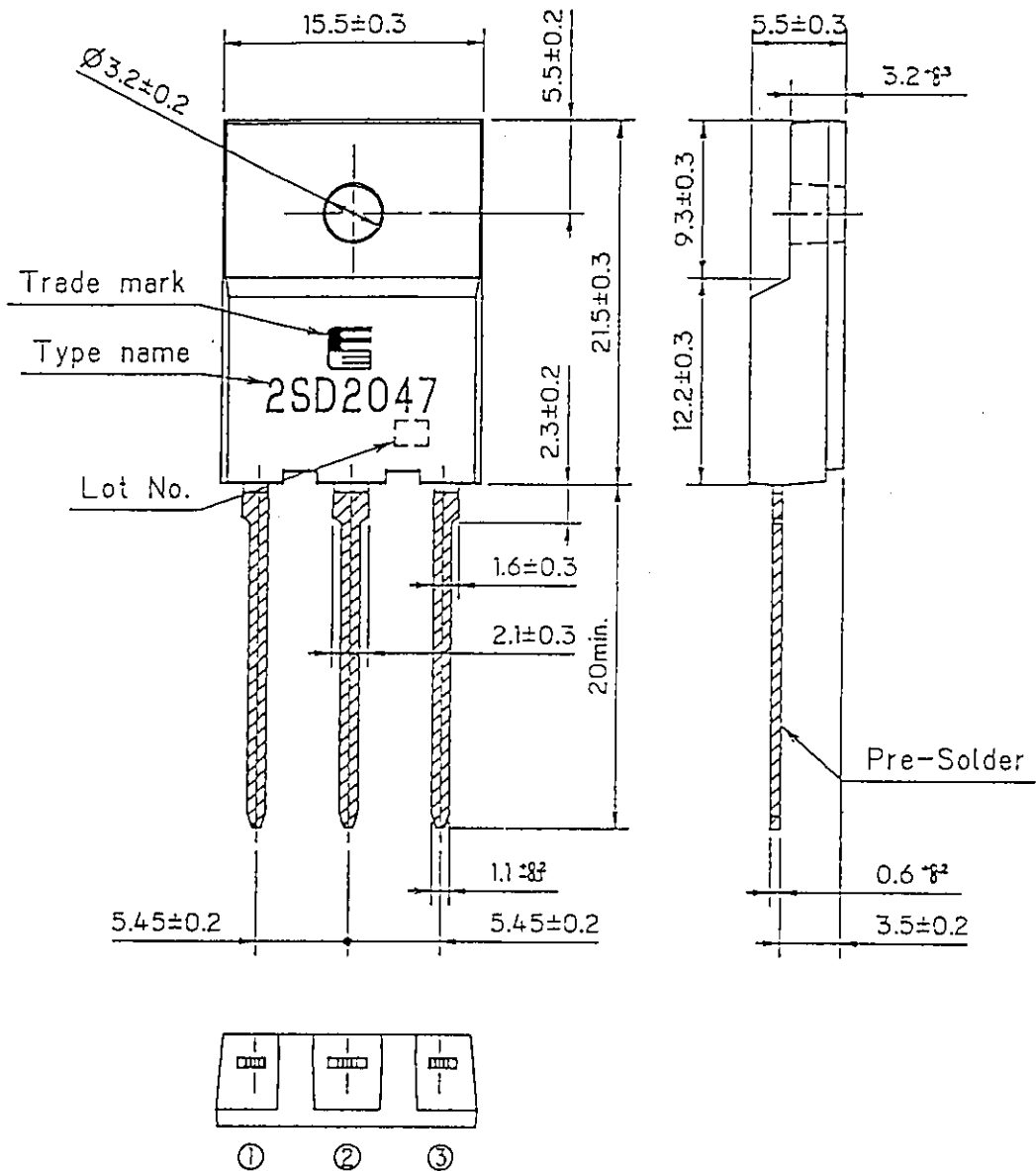
6/8

Y 0257-R-003a

2SD2047



FUJI POWER TRANSISTOR
TYPE : 2SD2047R



CONNECTION

- ① BASE
- ② COLLECTOR
- ③ EMITTER

DIMENSIONS ARE IN MILLIMETERS