查询1MBH10D-120供应商 捷多邦，专业PCB打样工厂，24小时加急出货

SPECIFICATION

DEVICE NAME : IGBT

TYPE NAME : 1MBH10D-120

SPEC. No. : MS5F 4091

DATE : July-15-1997

Fuji Electric Co., Ltd.
Matsumoto Factory

	DATE	NAME	APPROVED
DRAWN	July 15-97	K. Sawada	
CHECKED	July-15-97	T. Igarashi	

Fuji Electric Co.,Ltd.

DWG.NO. MS5F4091

找PDF 维库 pdf.dzsc.com

Revised Records

Date	Classi-fication	Ind.	Content	Applied date	Drawn	Checked	Approved
July-15-1997	enactment	—	—	Issued date	—		

This material and the information herein is the property of Fuji Electric Co. Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

・ Scope

This specification is applied to Fuji discrete IGBT 1MBH10D-120
supplied for Rockwell Automation Co.,Ltd.

・ Construction

1. Package dimension
   There is a package dimension in 4/14 page .

2. Outview
   There are no remarkable flaws on a product .

3. Indication
   ① Tradmark
   ② Type Name
   ③ Lot No.

・ Ratings and Characteristics

1. There are some ratings and characteristics tables in 4/14 page and 5/14 page .

2. There are some performance curves in from 6/14 page to 14/14 page .

・ Packing

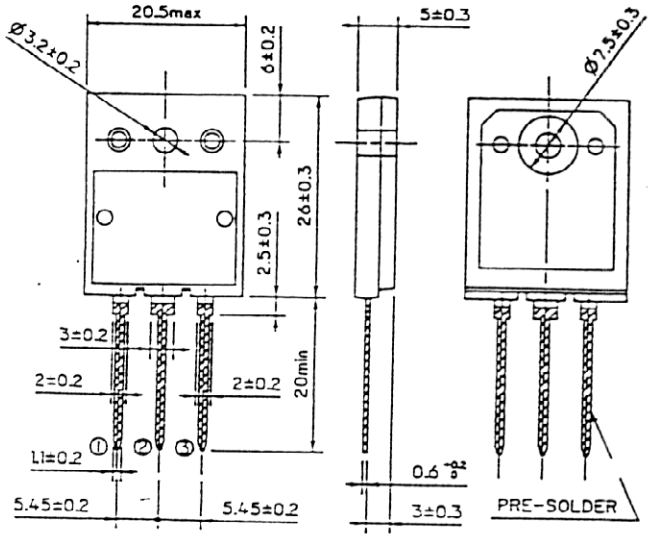
Packing style follows our packing specification MS5Q0026 .

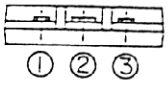
This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co.,Ltd.

Ratings and characteristics of Fuji IGBT

1MBH10D-120

1. Outline Drawing

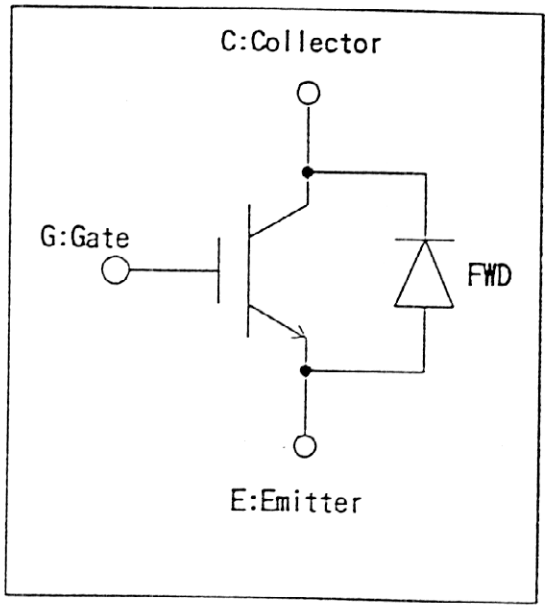




CONNECTION

① GATE
② COLLECTOR
③ EMITTER

2. Equivalent circuit



3. Absolute maximum ratings (Tc=25℃)

Items			Symbols	Ratings	Units
Collector-Emitter Voltage			V_{CES}	1200	V
Gate-Emitter Voltage			V_{GES}	±22	V
Collector Current	DC	Tc=25 ℃	Ic_{25}	18	A
		Tc=105℃	Ic_{105}	10	A
	1ms	Tc=25 ℃	Icp	48	A
IGBT Max. Power Dissipation			Pc	155	W
FWD Max. Power Dissipation			Pc	105	W
Operating Temperature			Tj	+ 150	℃
Storage Temperature			Tstg	-40 ~ +150	℃
Mounting Screw Torque			——	70	N・cm

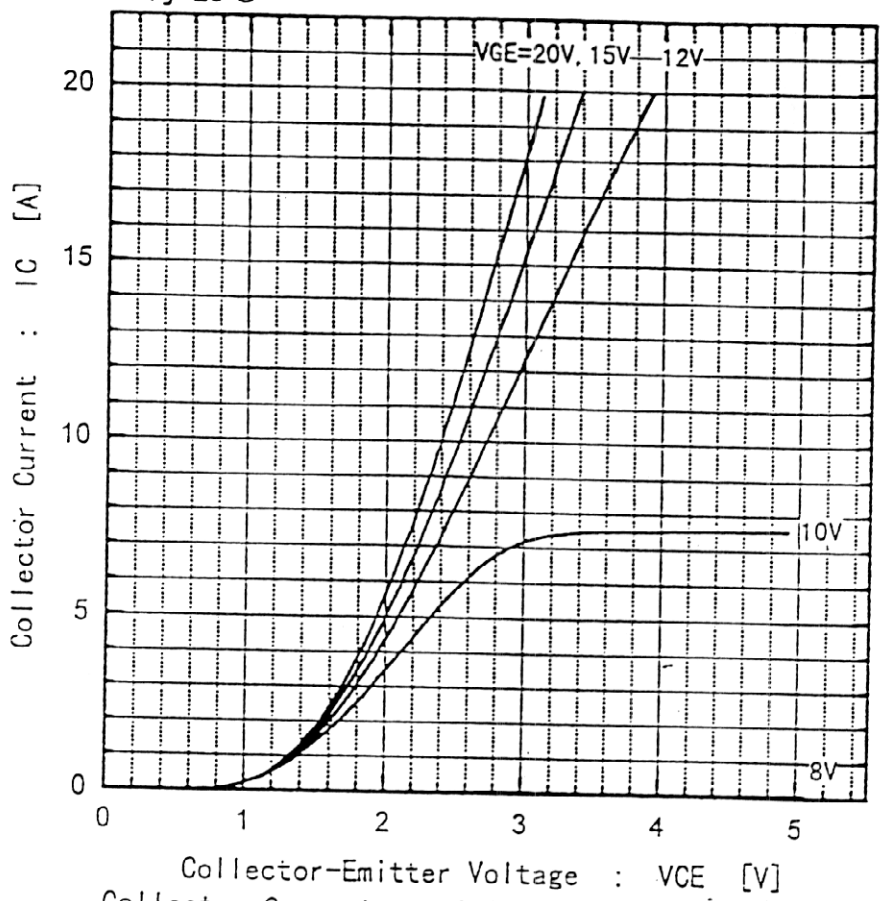
4. Electrical Characteristics (at Tc=25℃ unless otherwise specified)

Items		Symbols	Characteristics min.	typ.	max.	Conditions	Unit
Zero gate voltage Collector Current		I_{CES}			1.0	V_{GE} = 0V V_{CE} =1200V	mA
Gate-Emitter leakage Current		I_{GES}			20	V_{CE} = 0V V_{GE} = ±22V	μA
Gate-Emitter Threshold Voltage		$V_{GE(th)}$	5.5		8.5	V_{CE} = 20V Ic = 10mA	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			3.5	V_{GE} = 15V Ic = 10A	V
Input capacitance		Cies		1200		V_{GE} = 0V	pF
Output capacitance		Coes		250		V_{CE} = 10V	
Reverse transfer capacitance		Cres		80		f = 1MHz	
Switching Time	Turn-on time	ton			1.2	Vcc = 600V Ic = 10A V_{GE} = ±15V R_G = 160Ω (Half Bridge)	μs
		tr			0.6		
	Turn-off time	toff			1.5		
		tf			0.5		
	Turn-on time	ton		0.16		Vcc = 600V Ic = 10A V_{GE} = +15V R_G = 16 Ω (Half Bridge)	
		tr		0.11			
	Turn-off time	toff		0.30			
		tf			0.50		
FWD forward voltage drop		VF			3.0	I_F = 10A	V
Reverse recovery time		trr			0.35	IF= 10A, VGE=-10V VR= 200V di/dt=100A/μs	μs

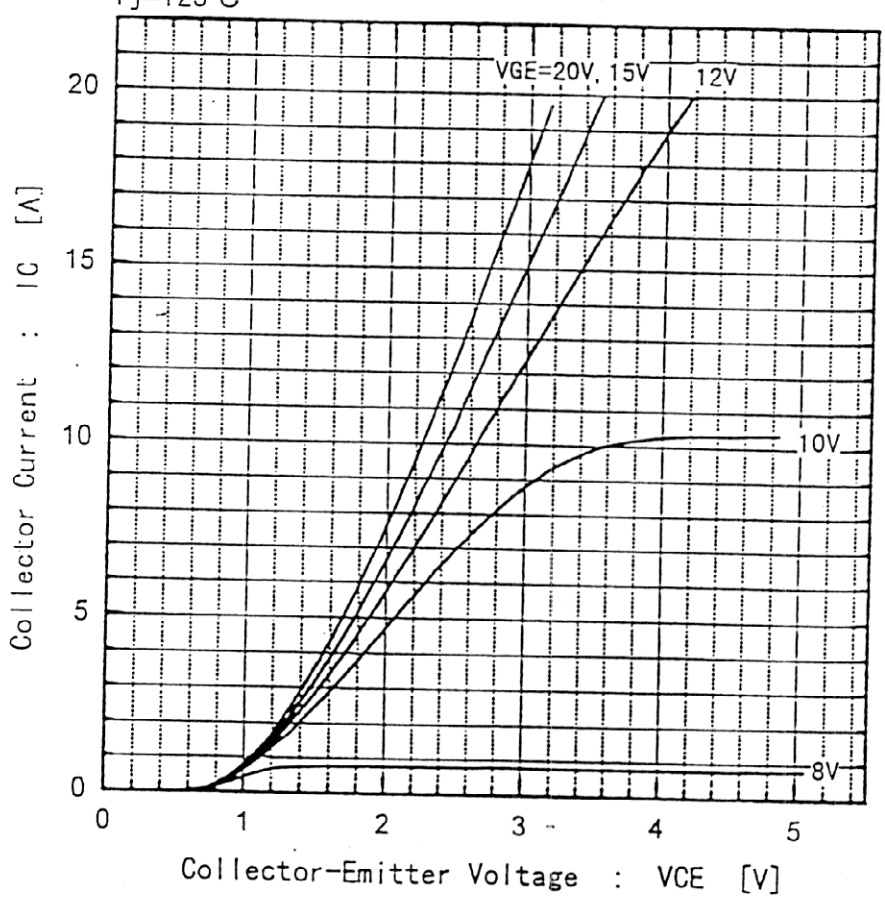
5. Thermal resistance characteristics

Items	Symbols	Characteristics min.	typ.	max.	Conditions	Unit
Thermal resistance	Rth(j-c)			0.80	IGBT	℃/W
	Rth(j-c)			1.19	FWD	

Collector Current vs. Collector-Emitter Voltage
Tj=25°C

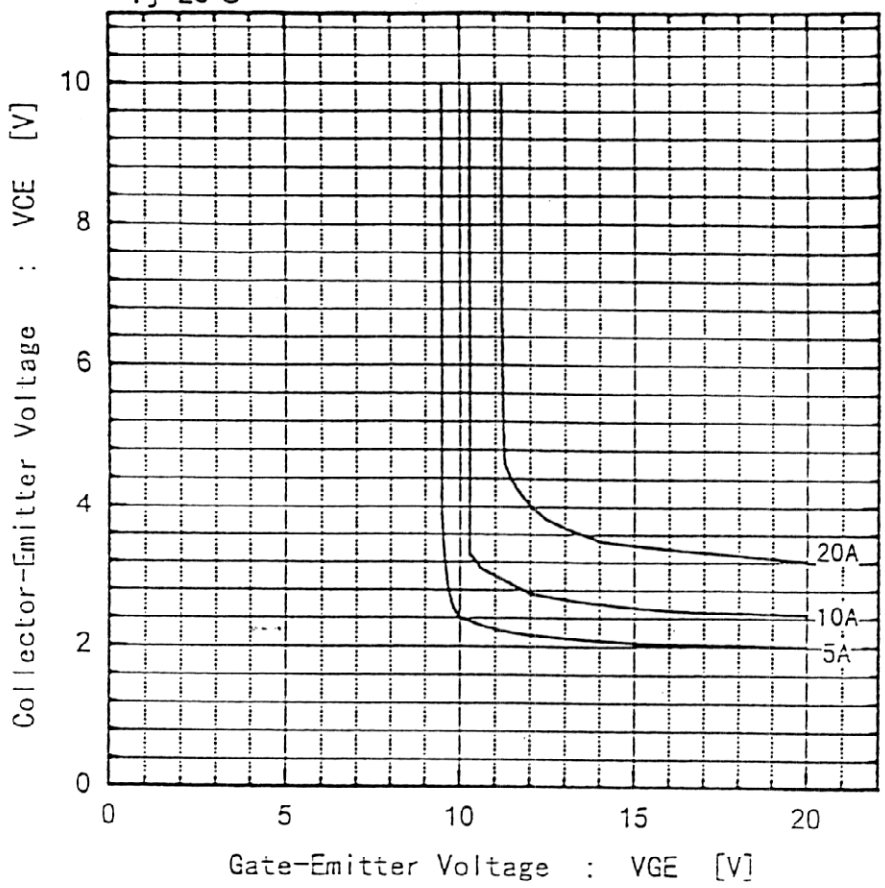


Collector Current vs. Collector-Emitter Voltage
Tj=125°C

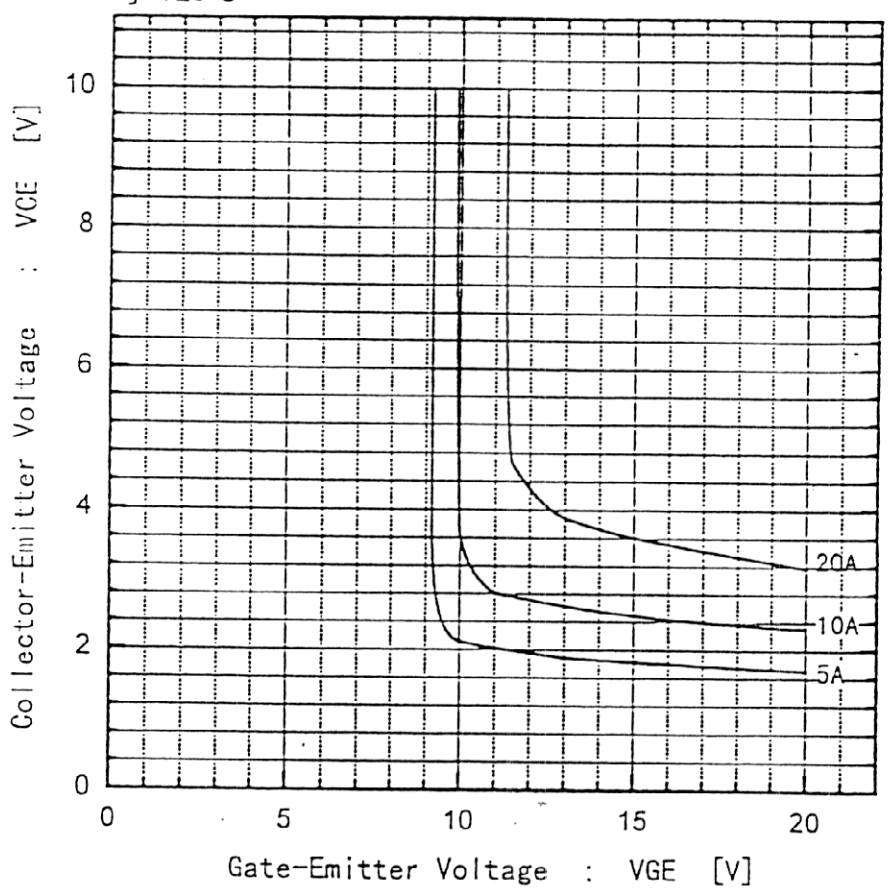


This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

Collector-Emitter Voltage vs Gate-Emitter Voltage
Tj=25°C

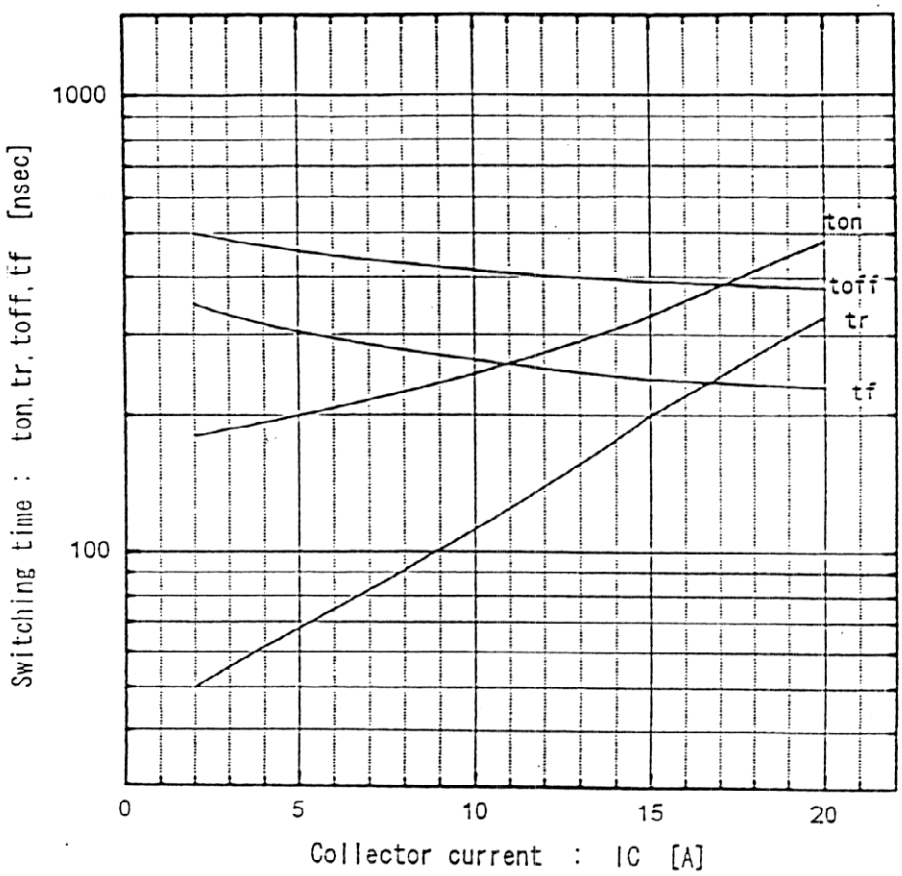


Collector-Emitter Voltage vs Gate-Emitter Voltage
Tj=125°C

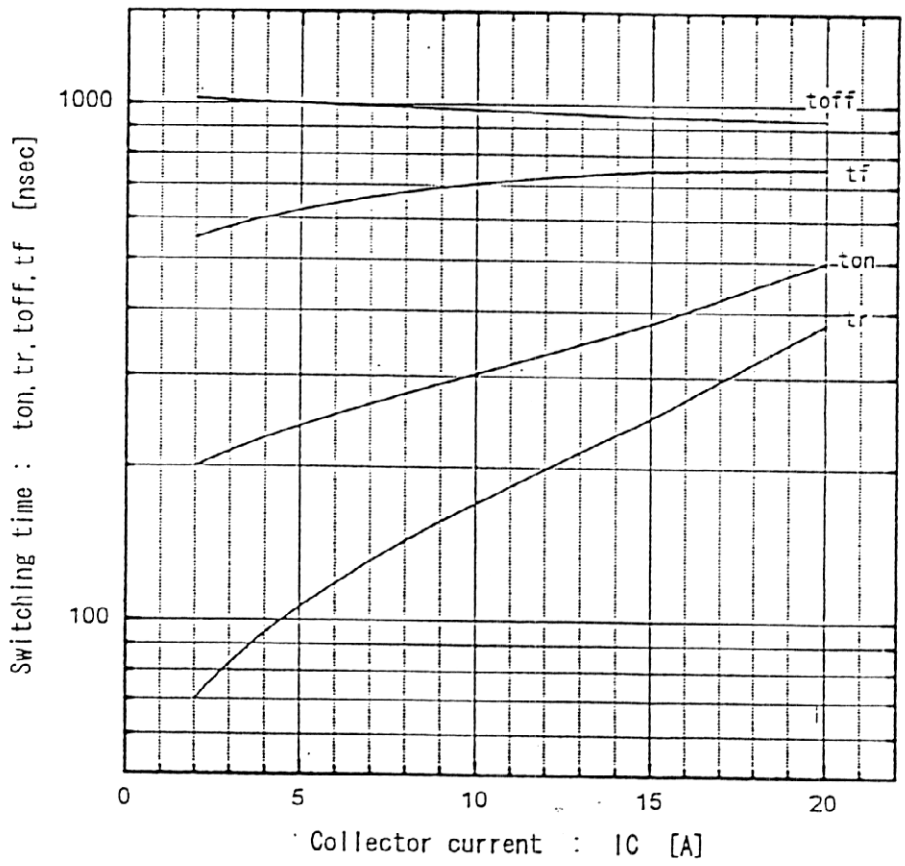


This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co.,Ltd.

Switching time vs. Collector current
Vcc=600V, RG=16Ω, VGE=±15V, Tj=25°C

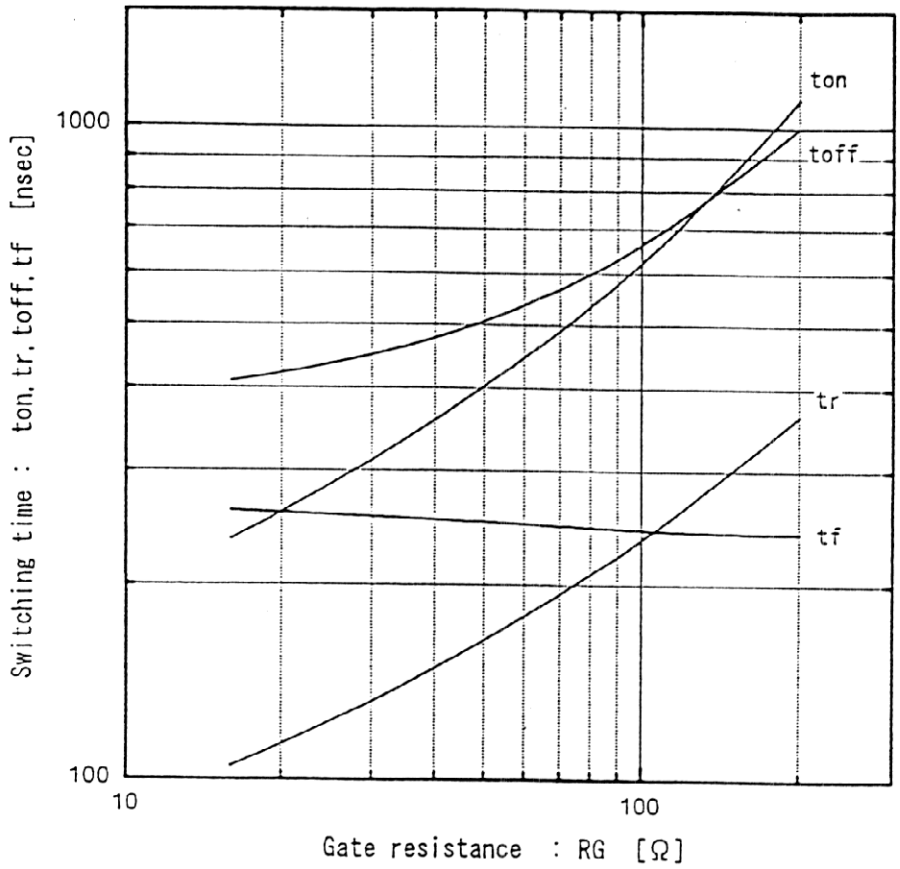


Switching time vs. Collector current
Vcc=600V, RG=16Ω, VGE=±15V, Tj=25°C

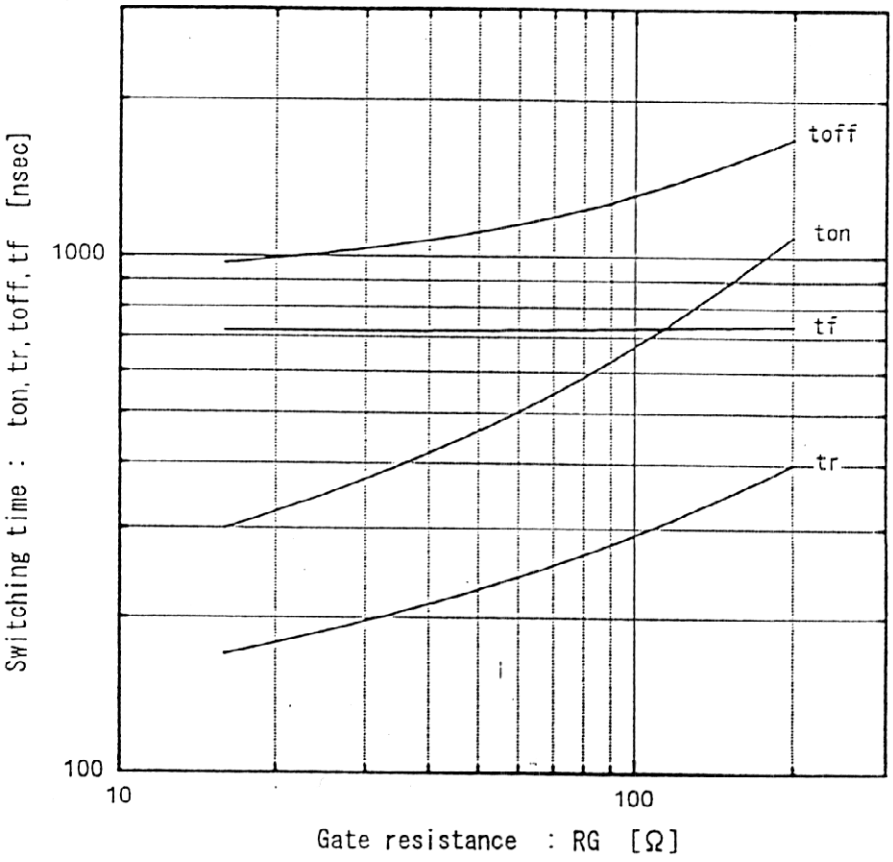


This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

Switching time vs. RG
Vcc=600V, IC=10A, VGE=±15V, Tj=25°C



Switching time vs. RG
Vcc=600V, IC=10A, VGE=±15V, Tj=125°C

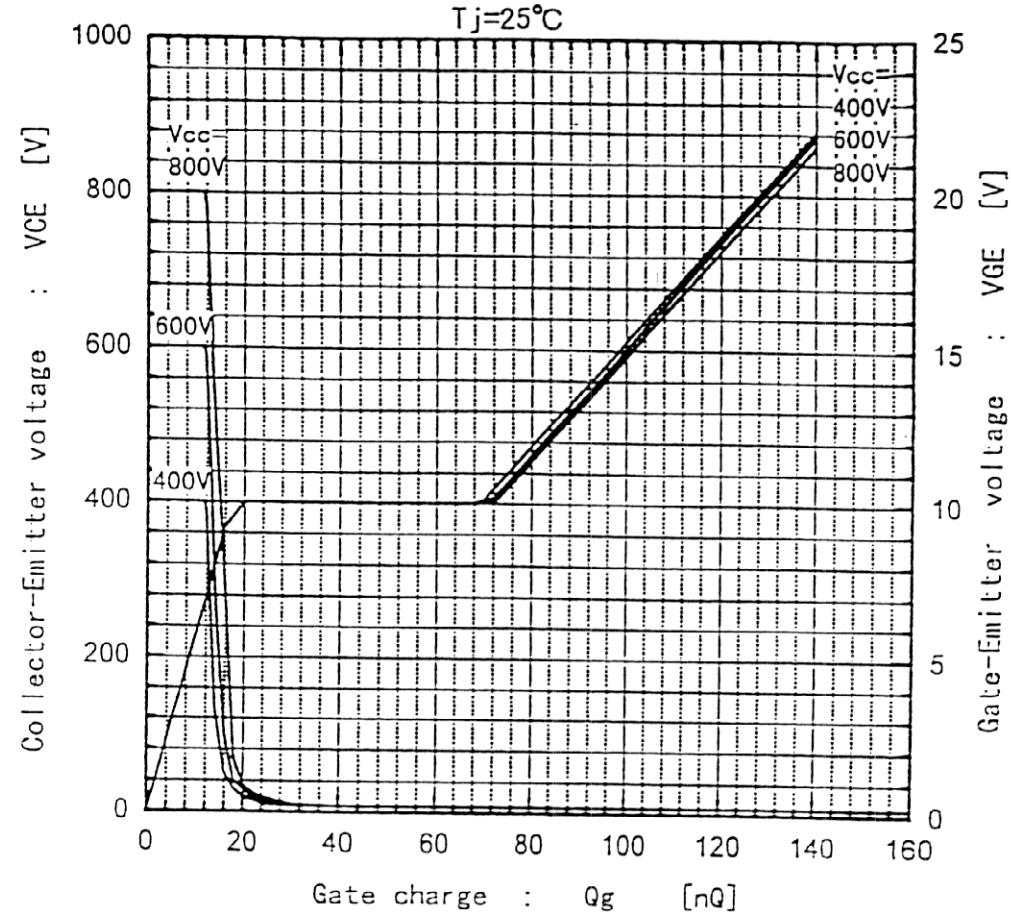


This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co.,Ltd.

This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party, nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

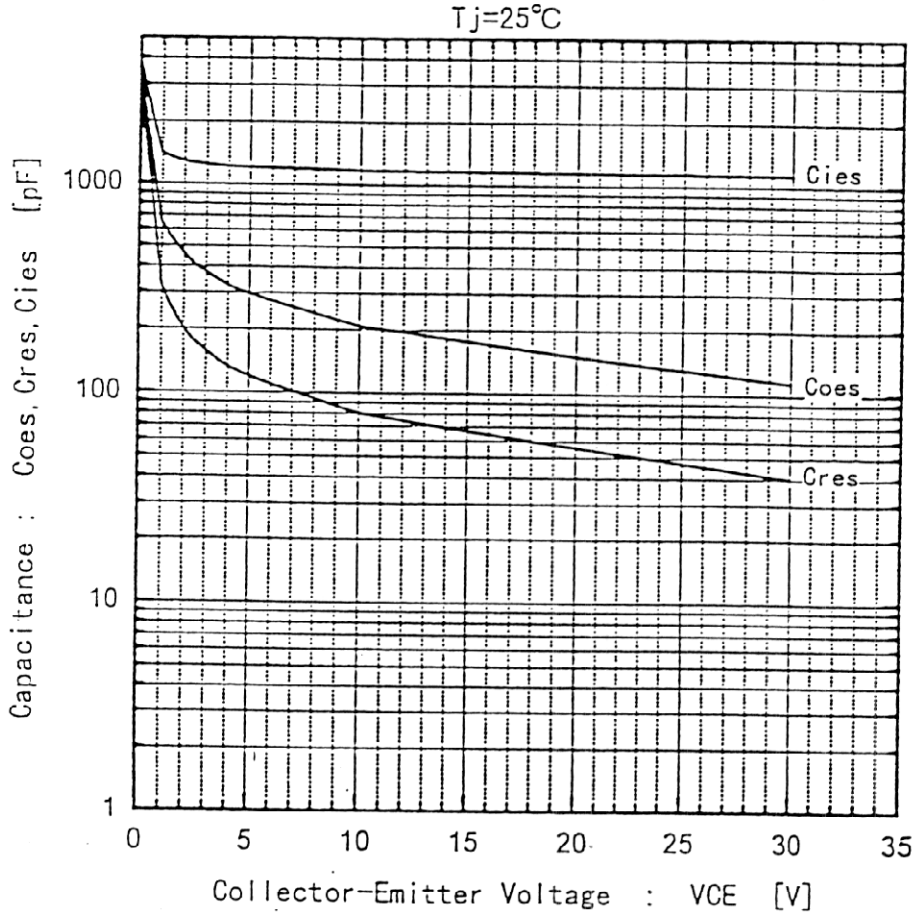
Dynamic input characteristics

Tj=25°C

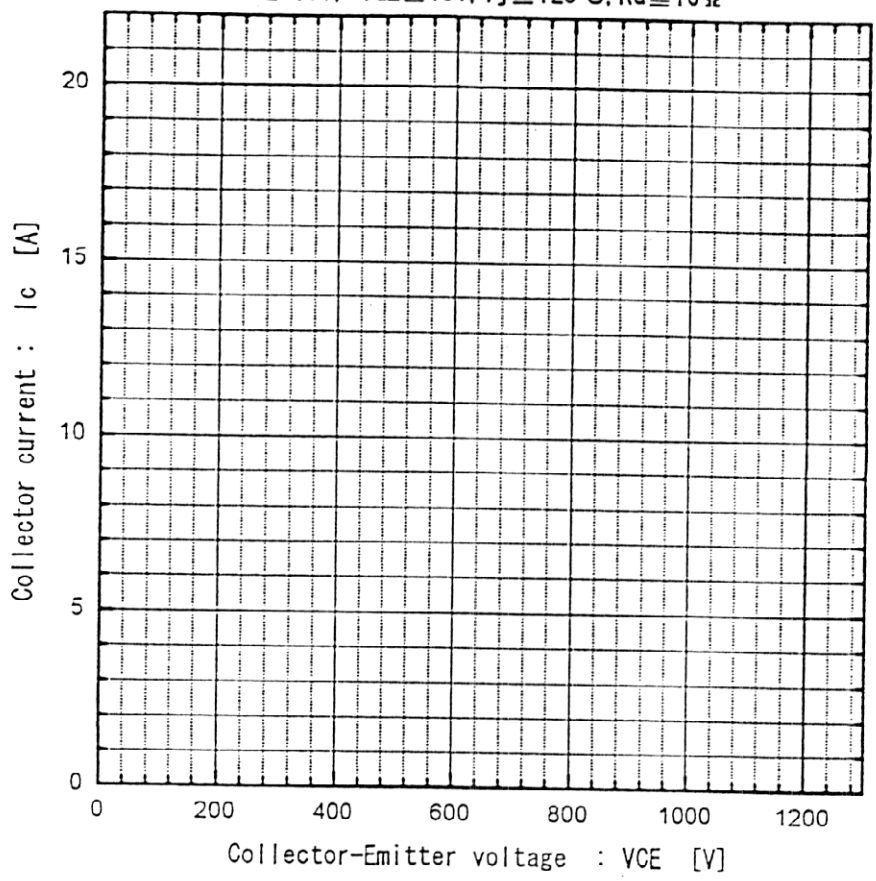


Capacitance vs. Collector-Emitter voltage

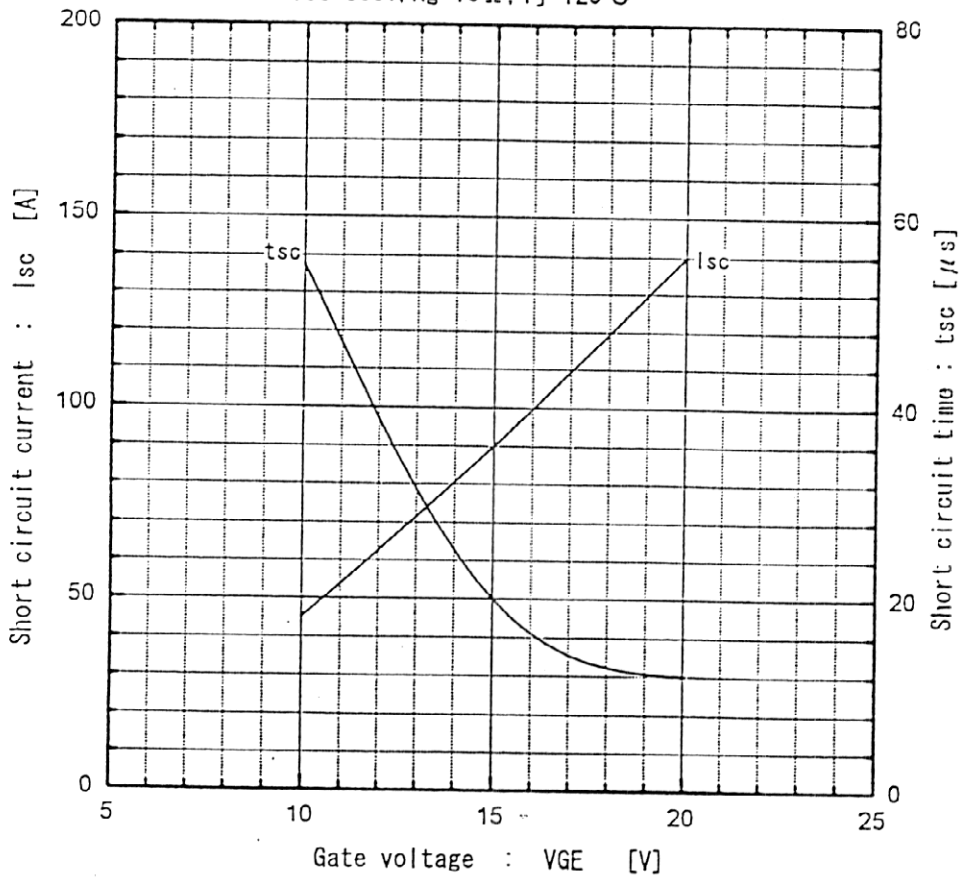
Tj=25°C



Reverse Biased Safe Operating Area
+VGE=15V, -VGE≦15V, Tj≦125°C, RG≧16Ω

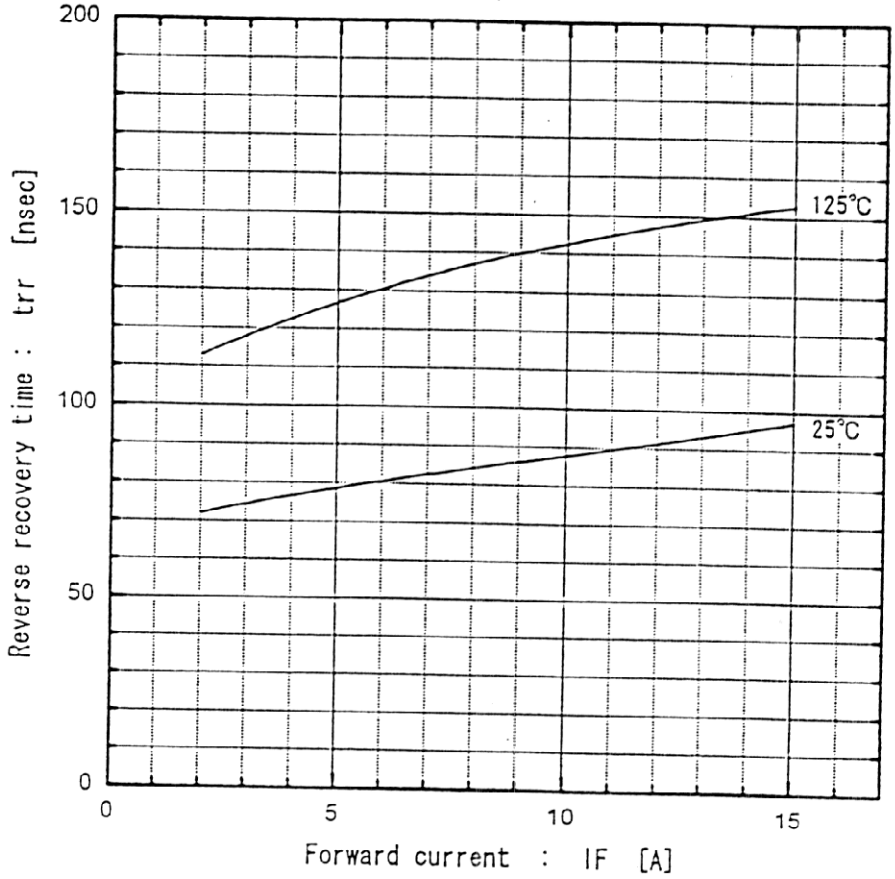


Typical short circuit capability
Vcc=800V, Rg=16Ω, Tj=125°C

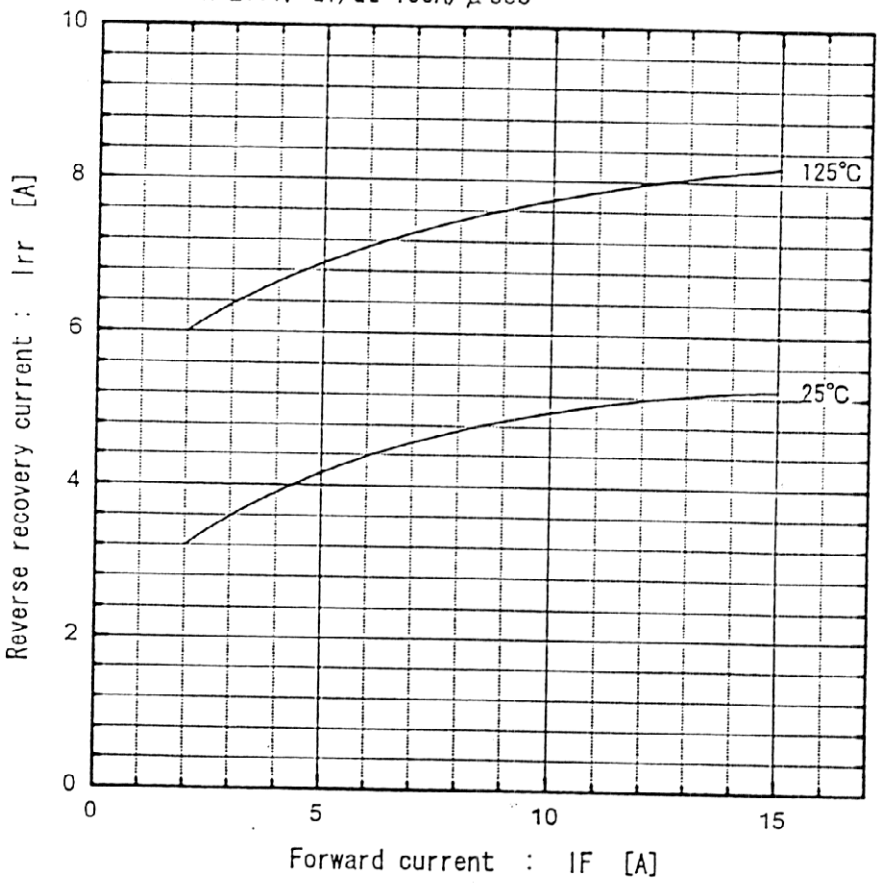


This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

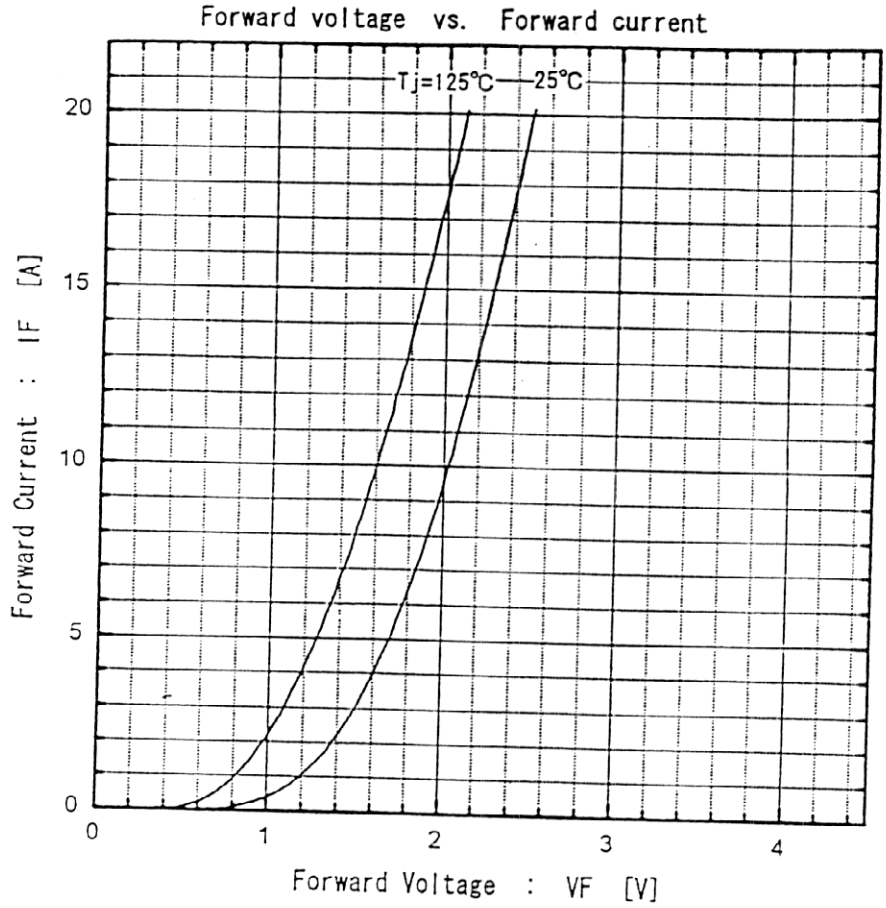
Reverse recovery time vs. Forward current
VR=200V, -di/dt=100A/μsec

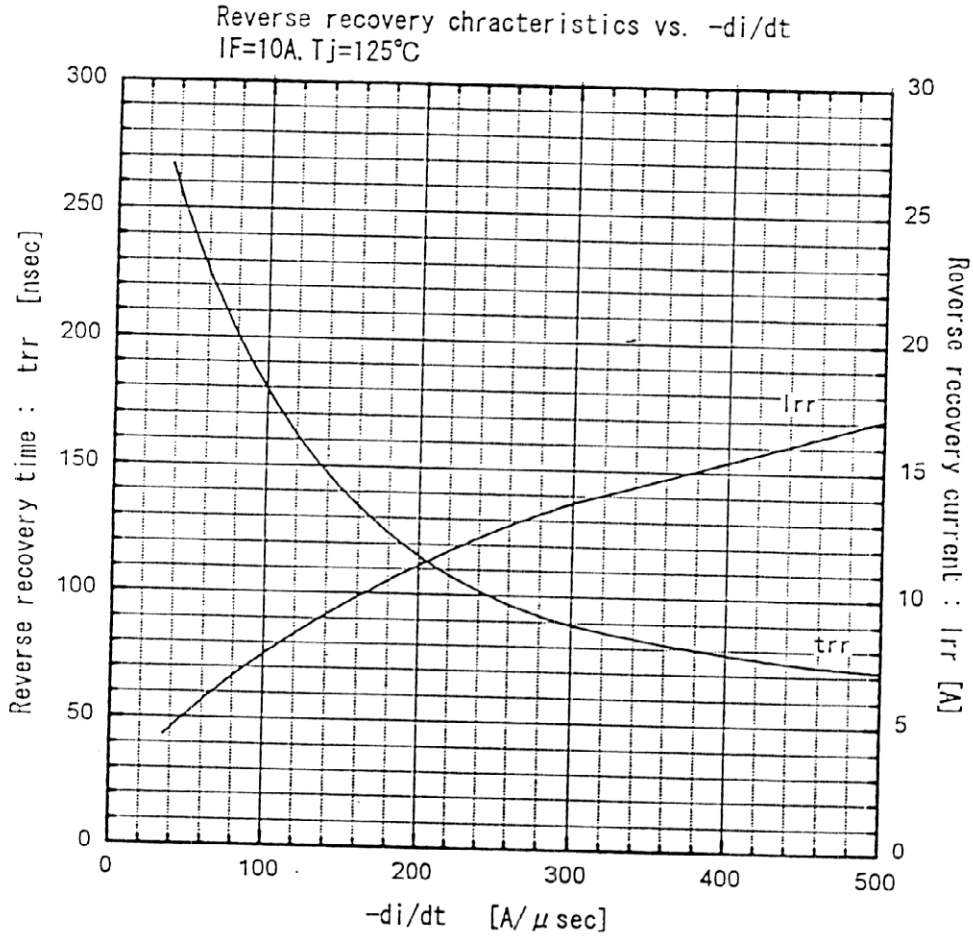


Reverse recovery current vs. Forward current
VR=200V, -di/dt=100A/μsec

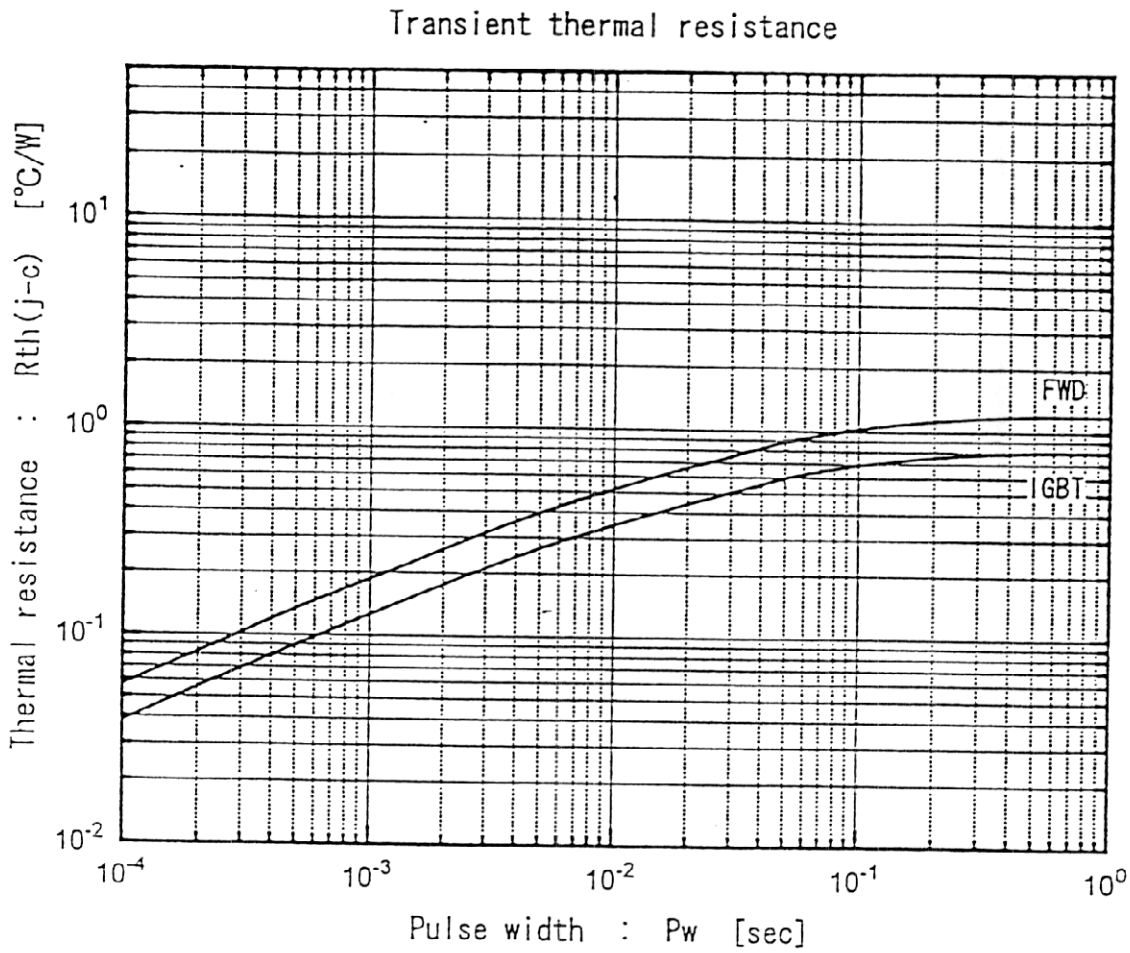


This material and the information herein is the property of Fuji Electric Co. Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.





This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.



This material and the information herein is the property of Fuji Electric Co.,Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party,nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.