

SPECIFICATION

DEVICE NAME : IGBT
 TYPE NAME : 1MBH08D-120
 SPEC. No. :
 DATE :

Fuji Electric Co.,Ltd.

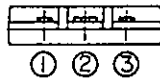
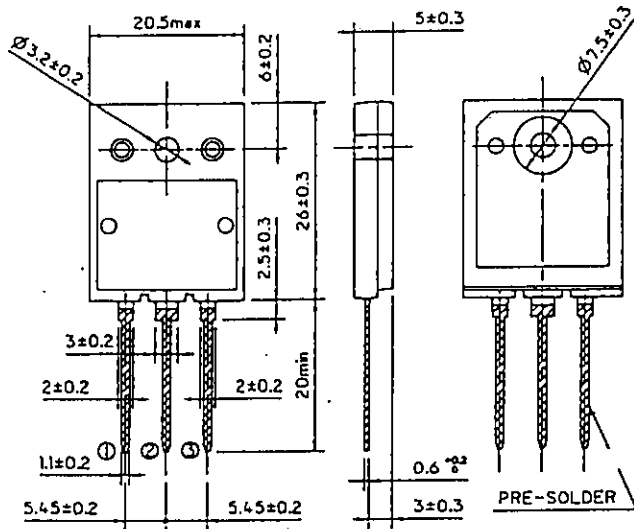
This Specification is subject to change without notice.

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

Ratings and characteristics of Fuji IGBT

1MBH08D-120

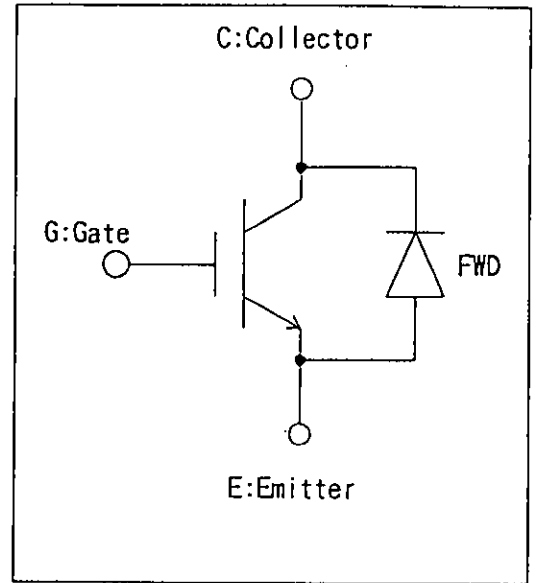
1. Outline Drawing



CONNECTION

- ① GATE
- ② COLLECTOR
- ③ EMITTER

2. Equivalent circuit

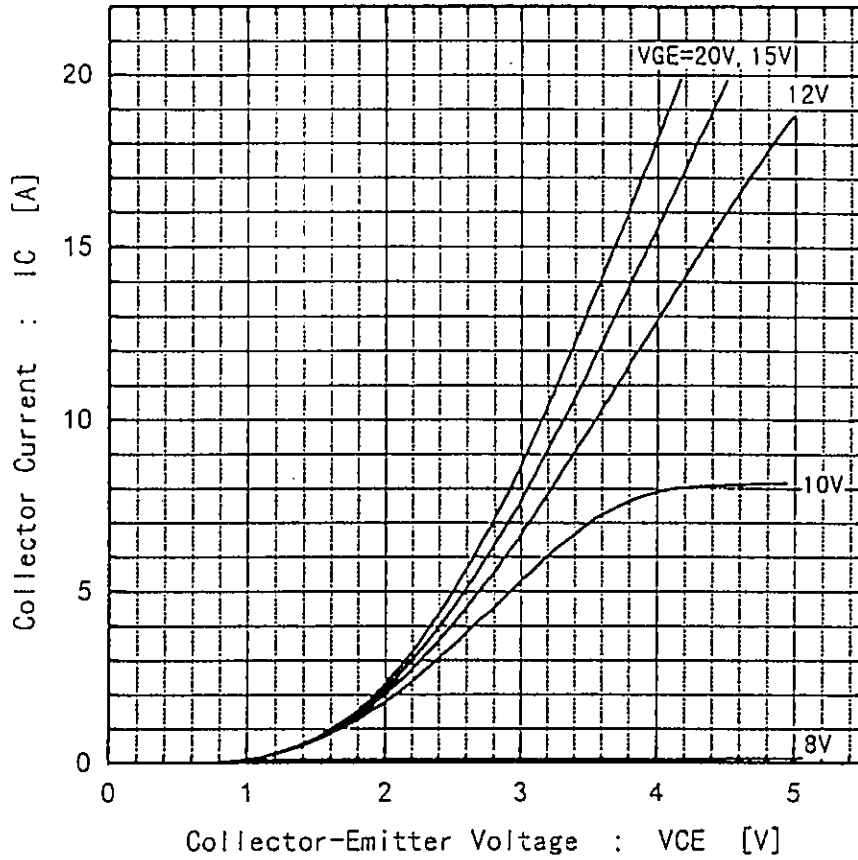


3. Absolute maximum ratings (Tc=25°C)

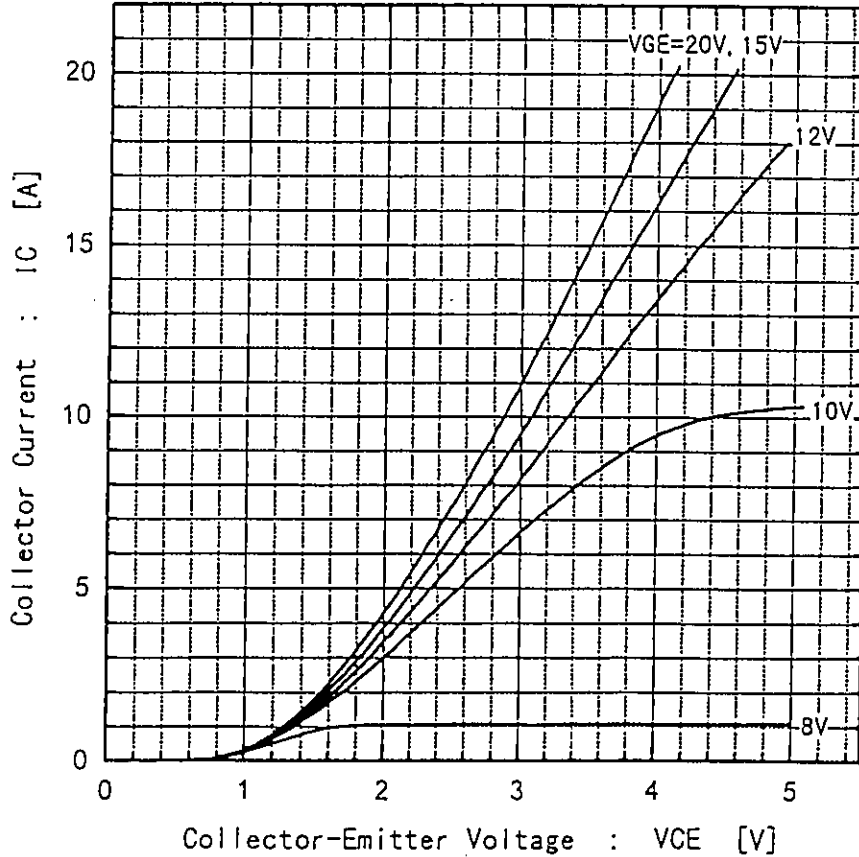
Items		Symbols	Ratings	Units	
Collector-Emitter Voltage		V_{CES}	1200	V	
Gate-Emitter Voltage		V_{GES}	± 20	V	
Collector Current	DC	Tc=25 °C	I_{C25}	15	A
		Tc=105°C	I_{C105}	8	A
	1ms	Tc=25 °C	I_{cp}	39	A
IGBT Max. Power Dissipation		P_c	135	W	
FWD Max. Power Dissipation		P_c	85	W	
Operating Temperature		T_j	+ 150	°C	
Storage Temperature		T_{stg}	-40 ~ +150	°C	
Mounting Screw Torque		—	70	N · cm	

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Collector Current vs. Collector-Emitter Voltage
 $T_j = 25^\circ\text{C}$

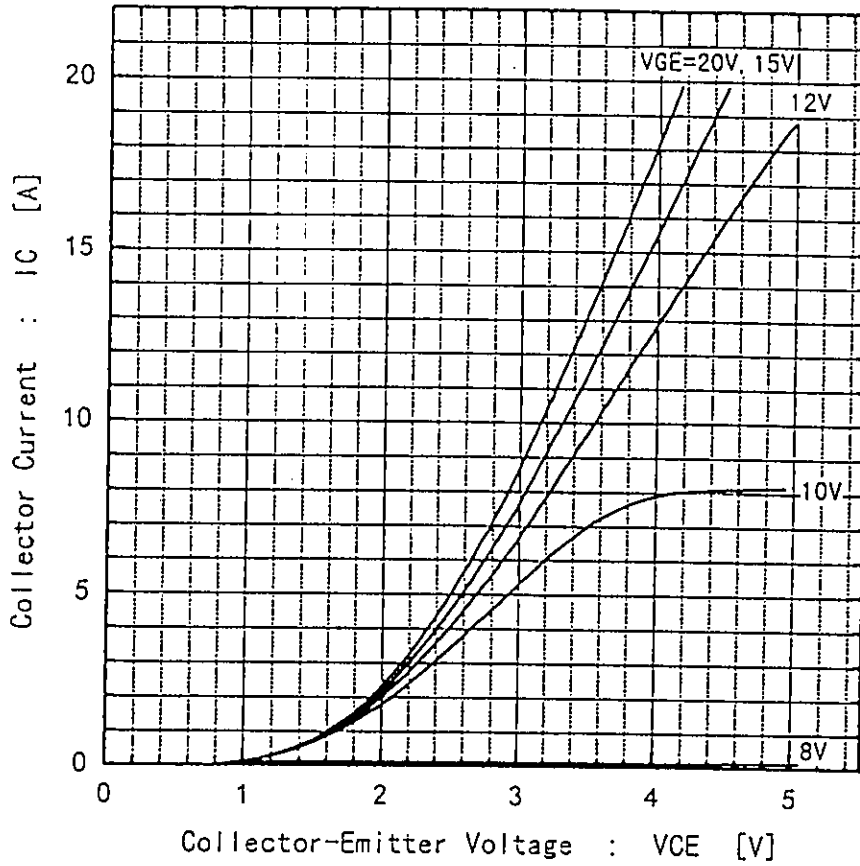


Collector Current vs. Collector-Emitter Voltage
 $T_j = 25^\circ\text{C}$

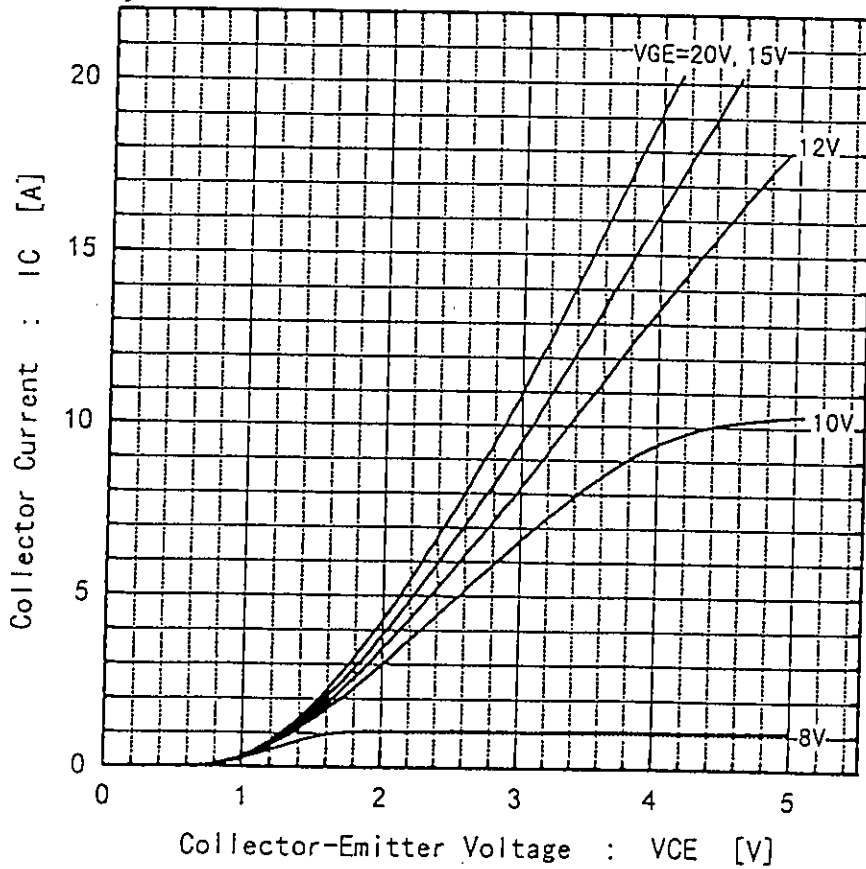


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Collector Current vs. Collector-Emitter Voltage
 $T_j=25^\circ\text{C}$



Collector Current vs. Collector-Emitter Voltage
 $T_j=25^\circ\text{C}$



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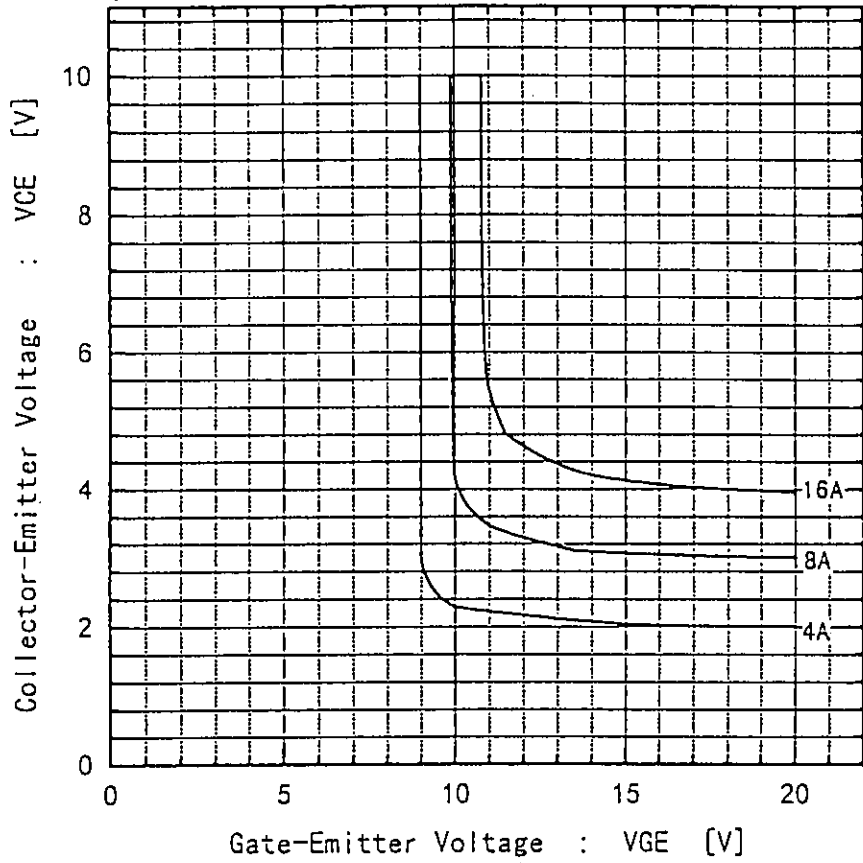
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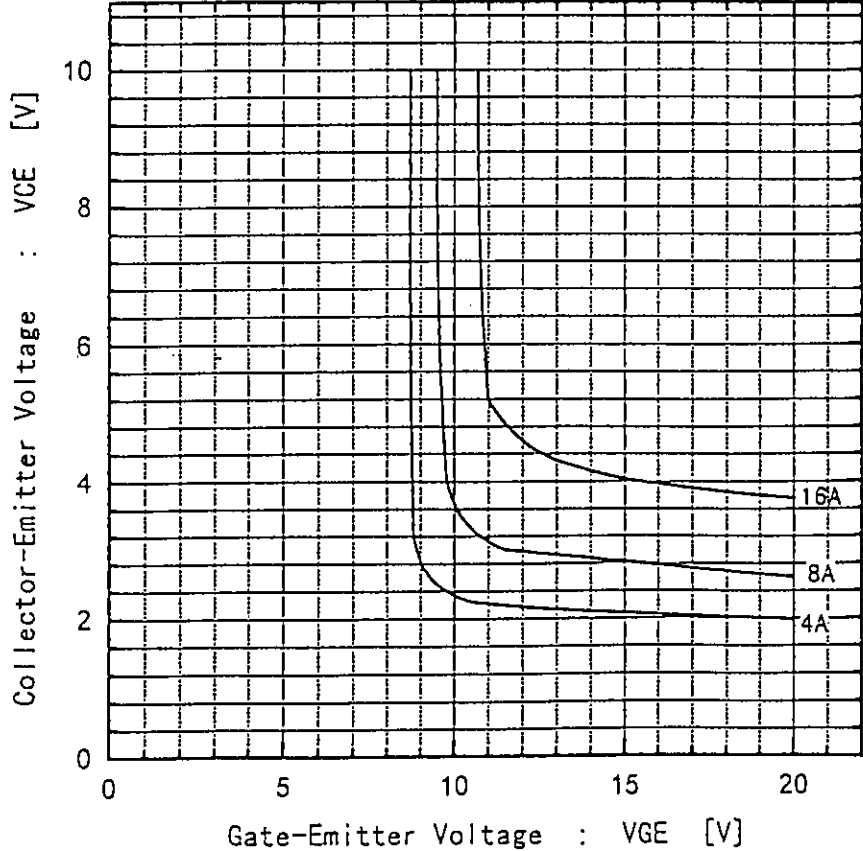
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Collector-Emitter Voltage vs Gate-Emitter Voltage
 $T_j=25^\circ\text{C}$

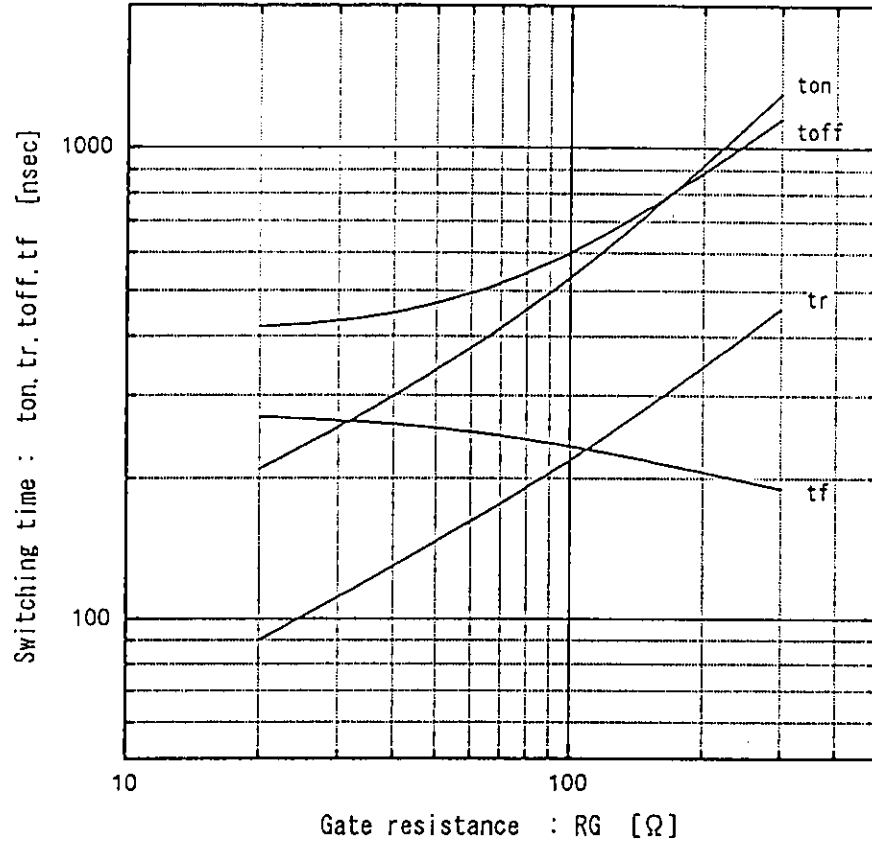


Collector-Emitter Voltage vs Gate-Emitter Voltage
 $T_j=125^\circ\text{C}$

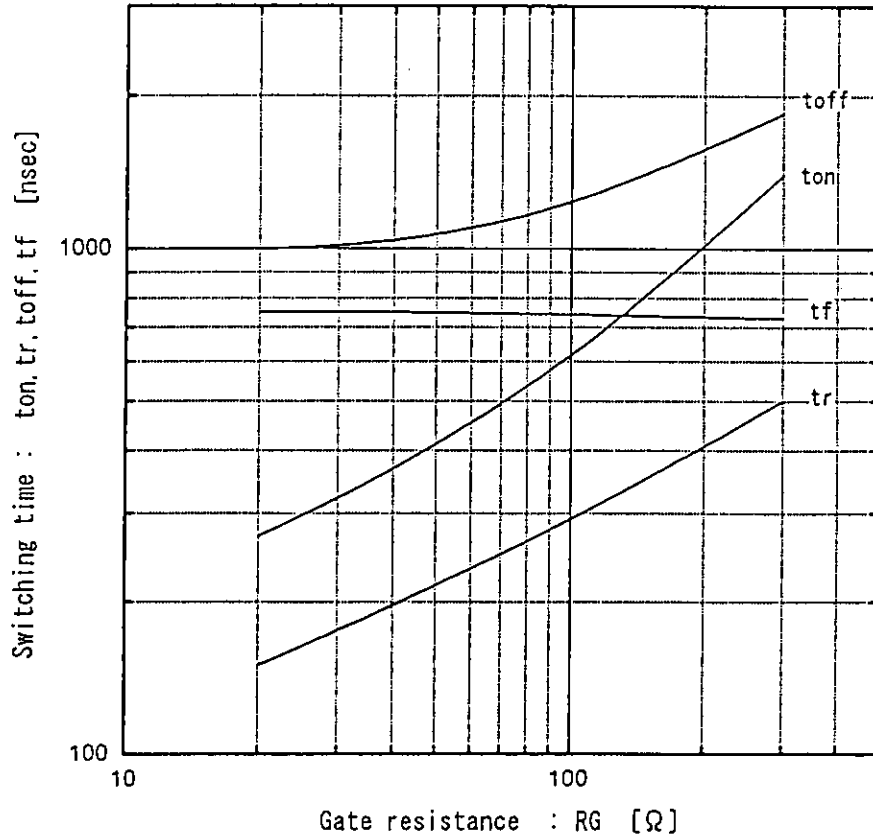


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Switching time vs. R_G
 $V_{CC}=600V, I_C=8A, V_{GE}=\pm 15V, T_j=25^\circ C$

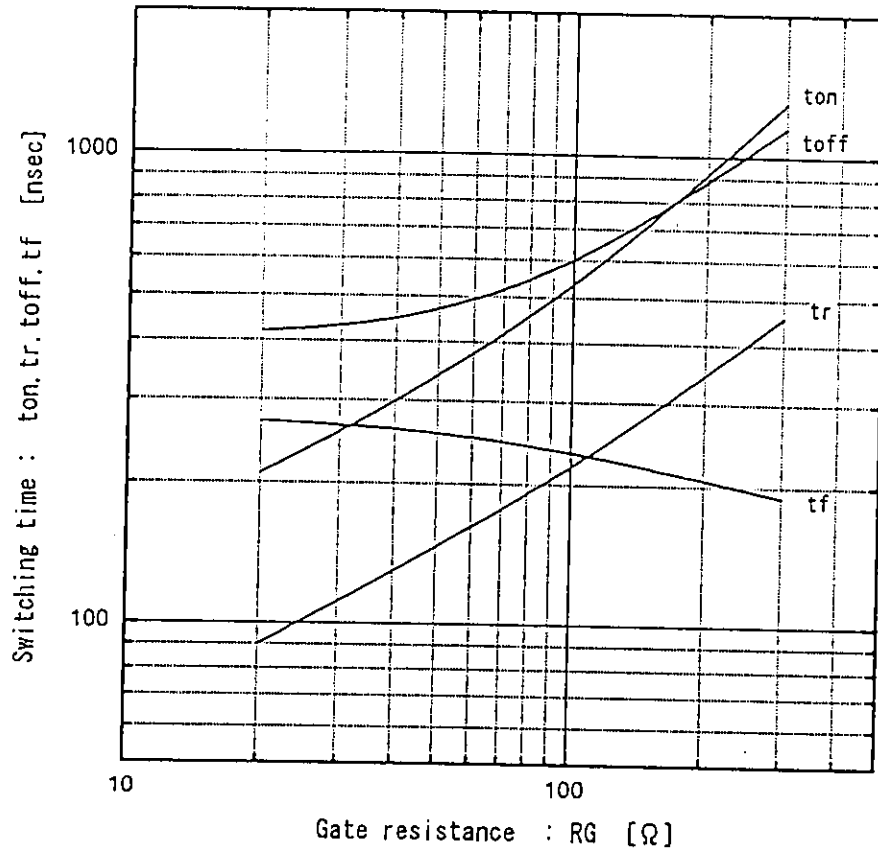


Switching time vs. R_G
 $V_{CC}=600V, I_C=8A, V_{GE}=\pm 15V, T_j=125^\circ C$

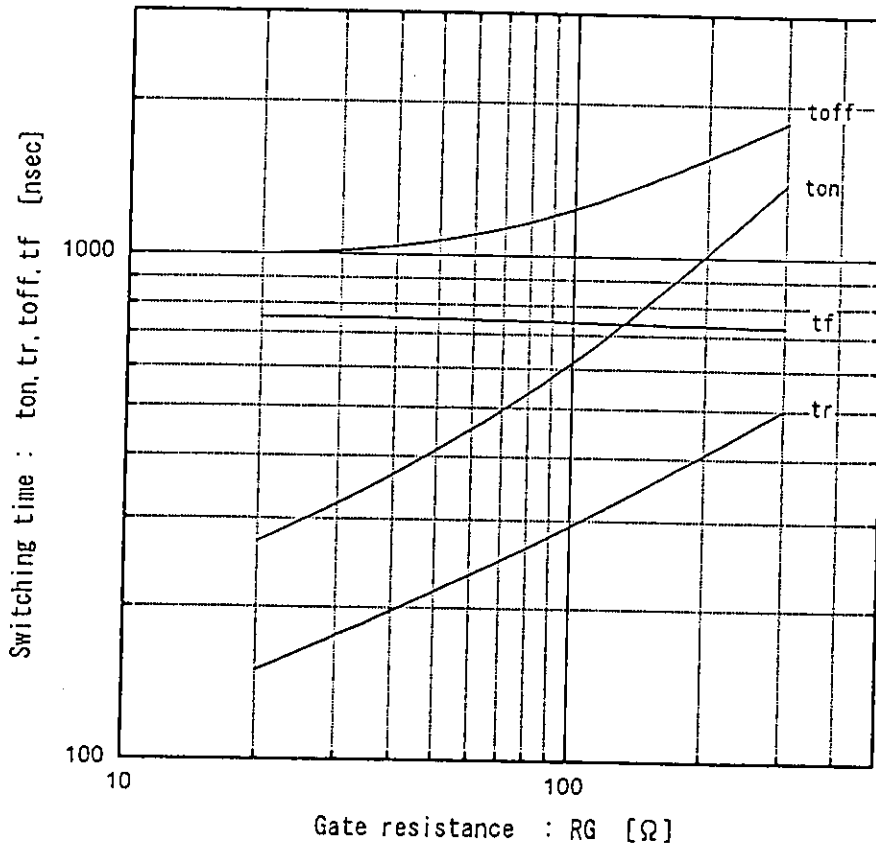


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Switching time vs. R_G
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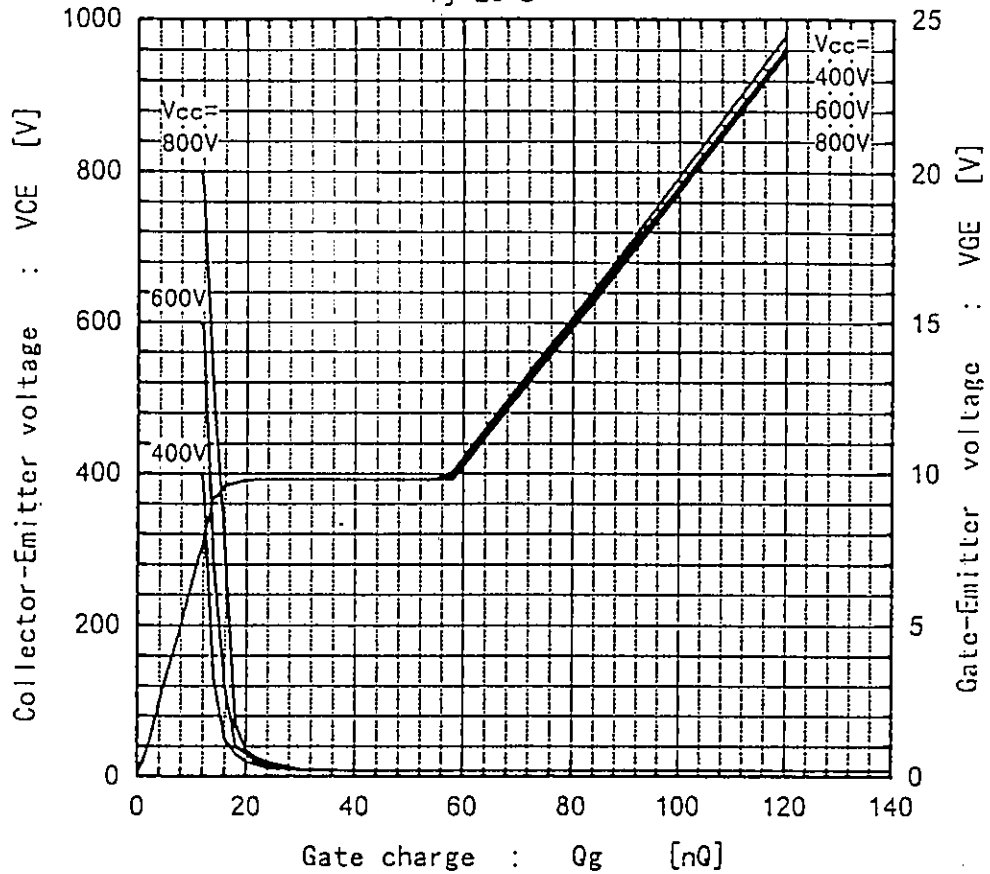
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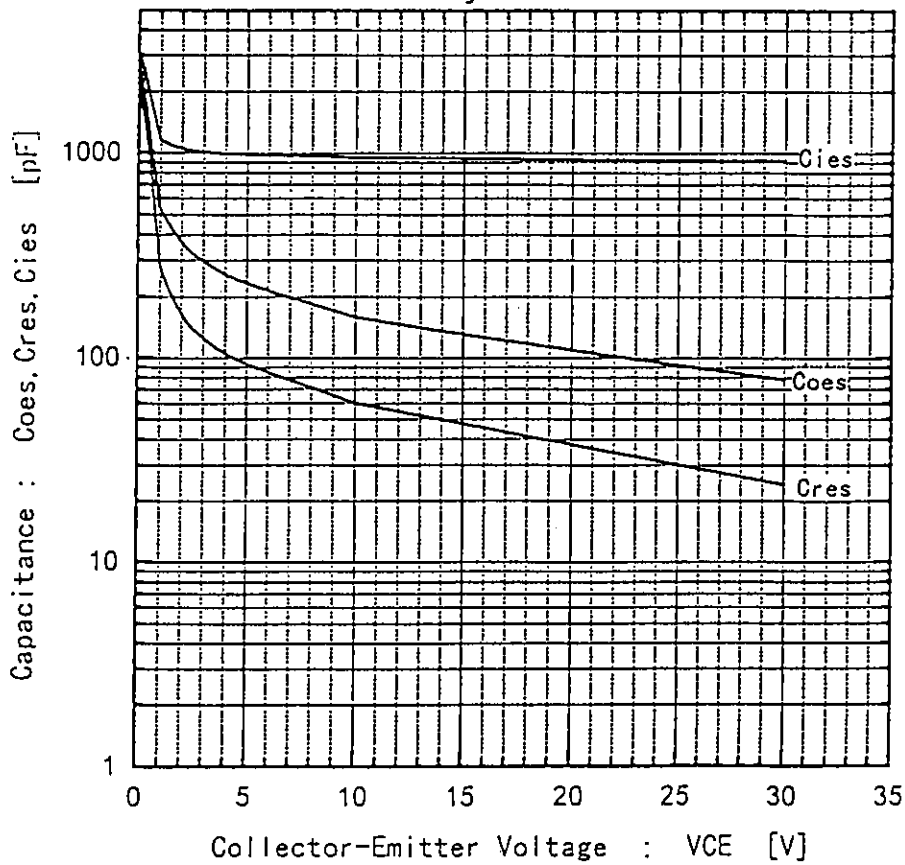
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Dynamic input characteristics

$T_j = 25^\circ\text{C}$



Capacitance vs. Collector-Emittter voltage
 $T_j = 25^\circ\text{C}$



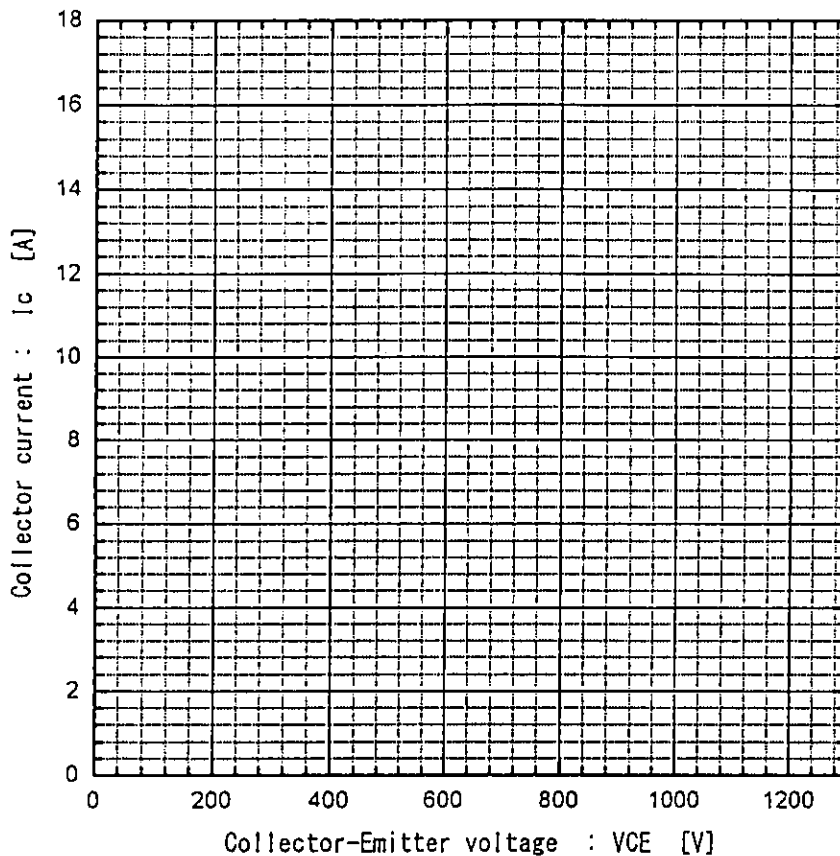
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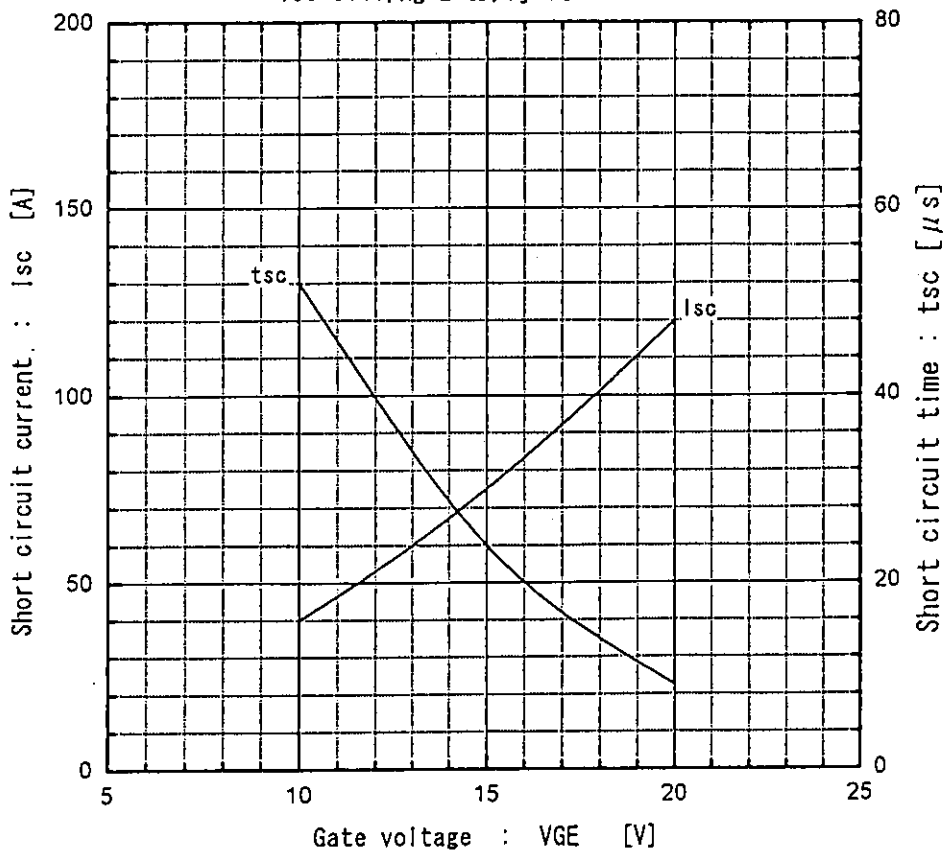
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Reverse Biased Safe Operating Area
 $+V_{GE}=15V, -V_{GE} \leq 15V, T_j \leq 125^\circ C, R_G \geq 20 \Omega$



Typical short circuit capability
 $V_{CC}=800V, R_G=20 \Omega, T_j=125^\circ C$



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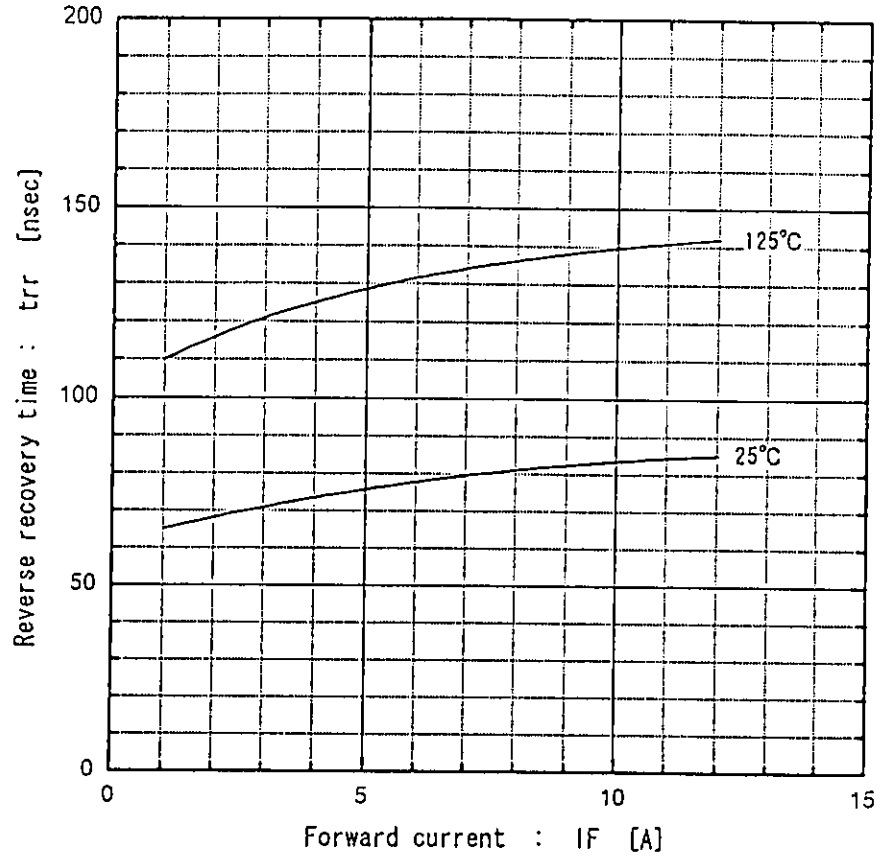
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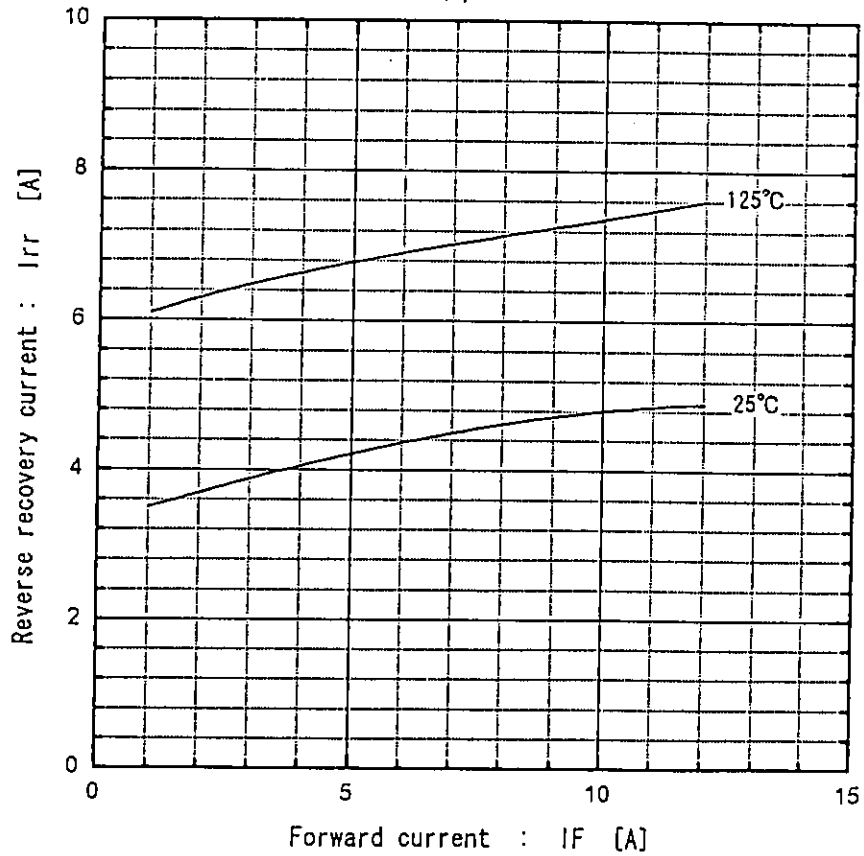
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Reverse recovery time vs. Forward current
 $VR=200V, -di/dt=100A/\mu sec$



Reverse recovery current vs. Forward current
 $VR=200V, -di/dt=100A/\mu sec$



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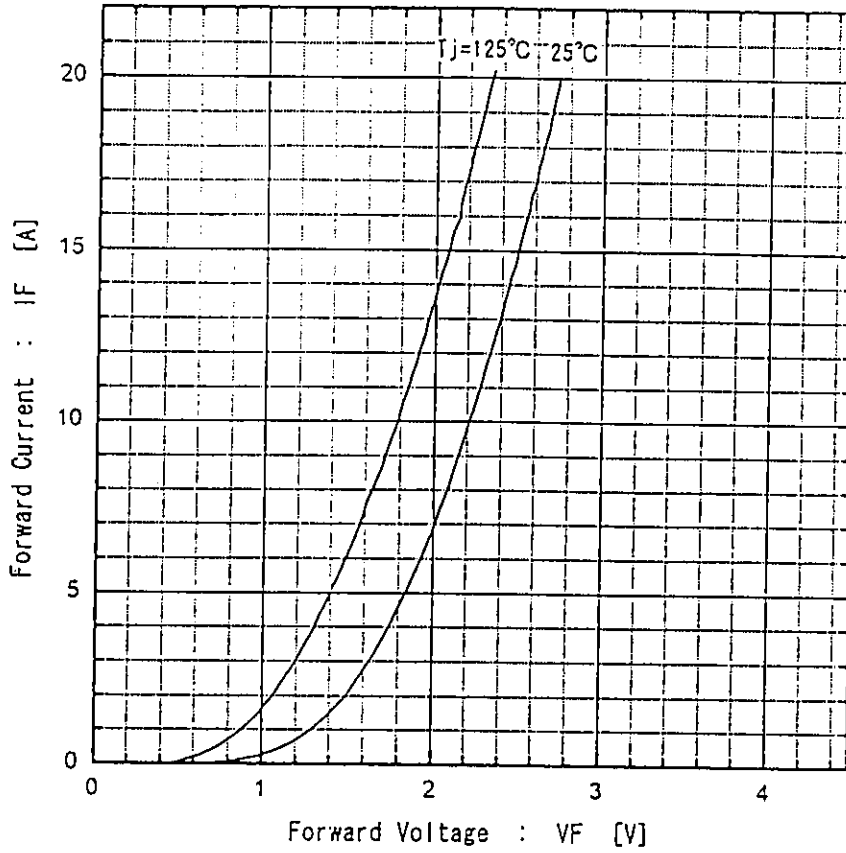
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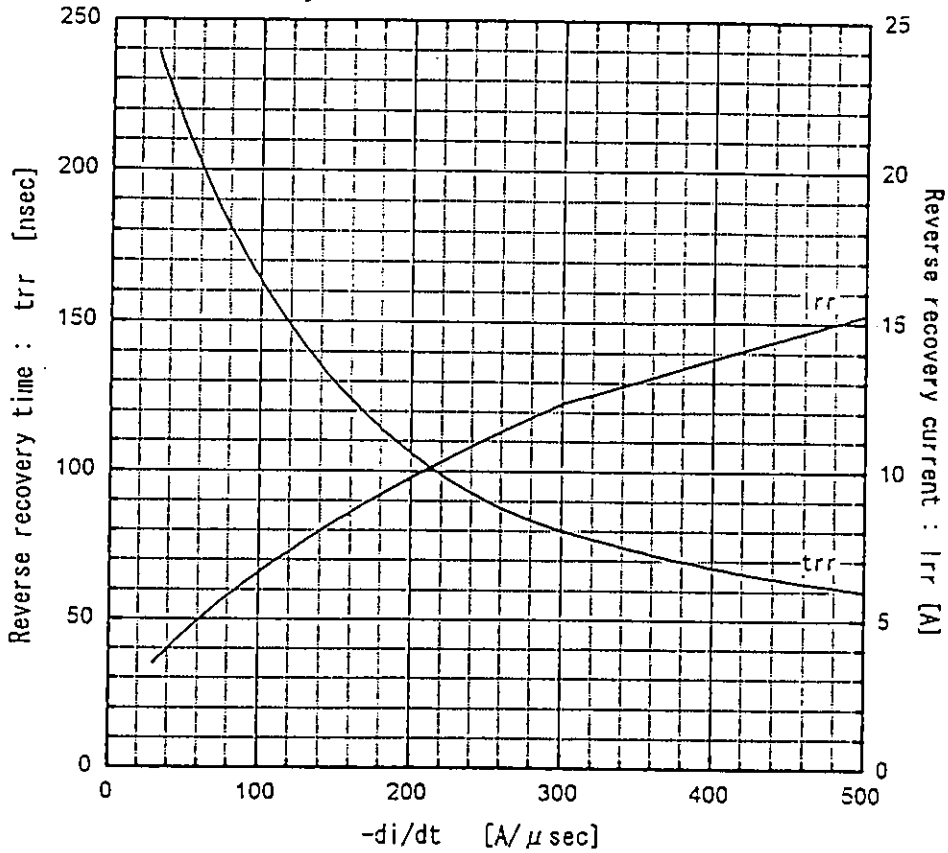
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Forward voltage vs. Forward current



Reverse recovery characteristics vs. $-di/dt$
IF=8A, Tj=125°C

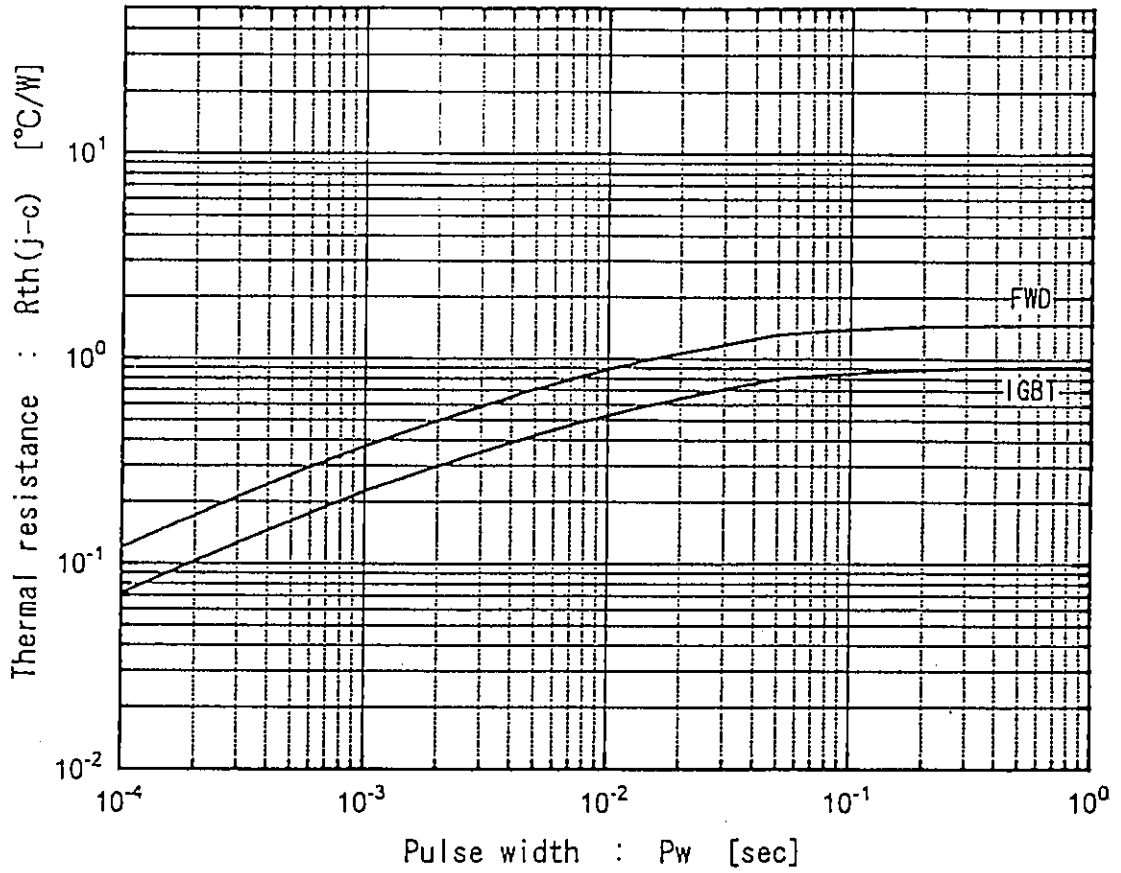


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Transient thermal resistance



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