

SPECIFICATION

DEVICE NAME : IGBT

TYPE NAME : 1MBH08D-120

SPEC. No. :

DATE :

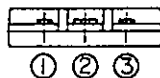
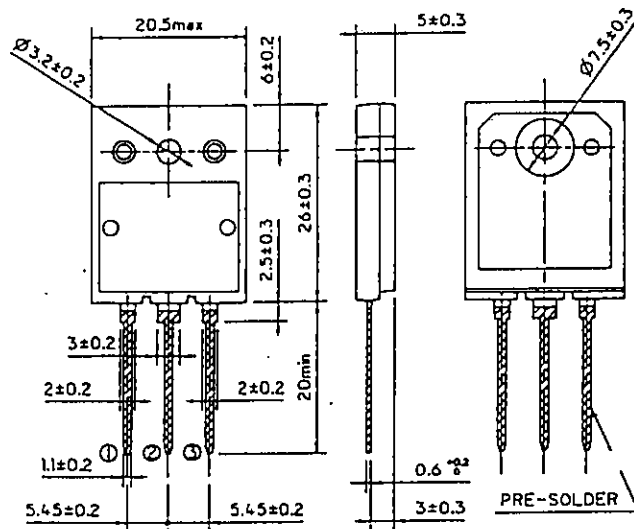
Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

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

1MBH08D-120

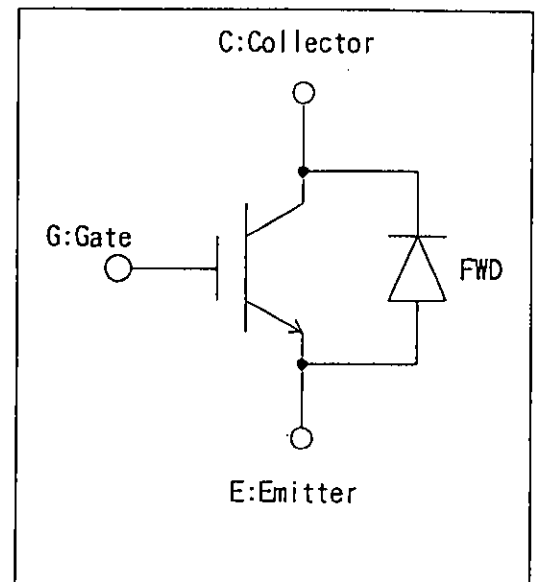
1. Outline Drawing



CONNECTION

- ① GATE
② COLLECTOR
③ EMITTER

2. Equivalent circuit

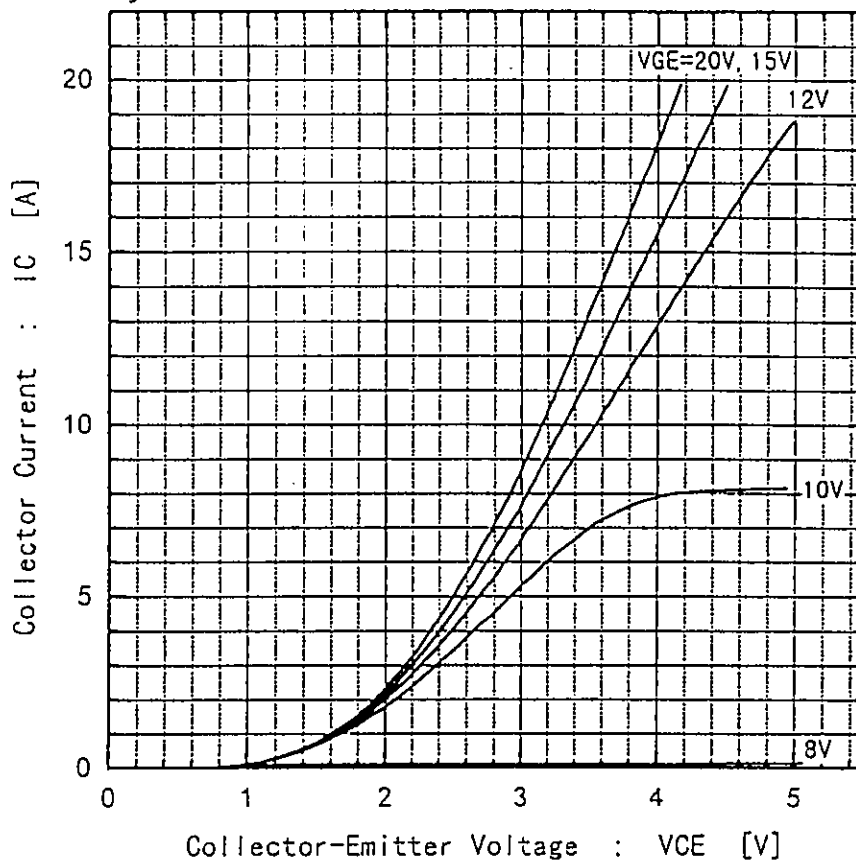


3. Absolute maximum ratings (Tc=25°C)

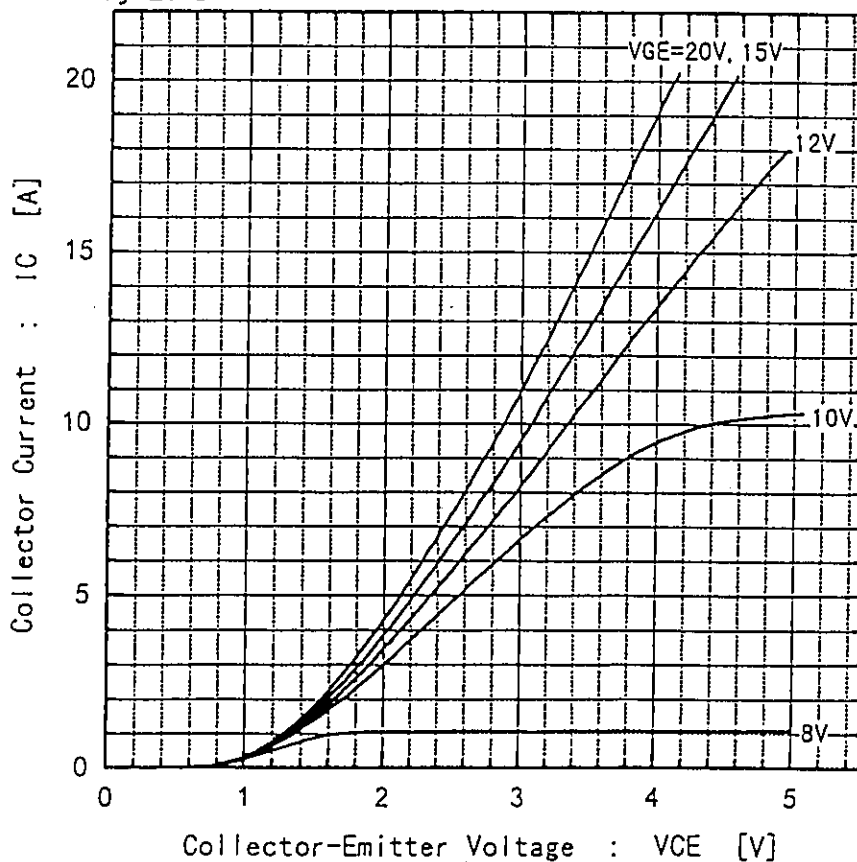
Items			Symbols	Ratings	Units
Collector-Emitter Voltage			V_{CES}	1200	V
Gate-Emitter Voltage			V_{GES}	± 20	V
Collector Current	DC	Tc=25 °C	I_{C25}	15	A
		Tc=105°C	I_{C105}	8	A
	1ms	Tc=25 °C	I_{cp}	39	A
IGBT Max. Power Dissipation			P_c	135	W
FWD Max. Power Dissipation			P_c	85	W
Operating Temperature			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
 $T_j = 25^\circ\text{C}$

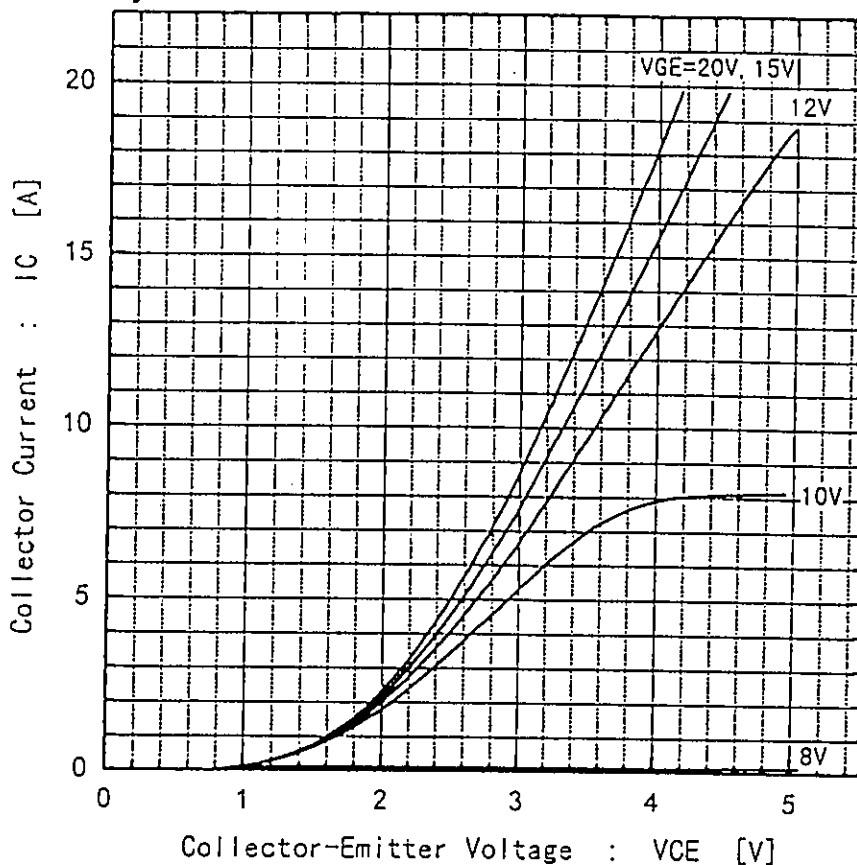


Collector Current vs. Collector-Emitter Voltage
 $T_j = 25^\circ\text{C}$

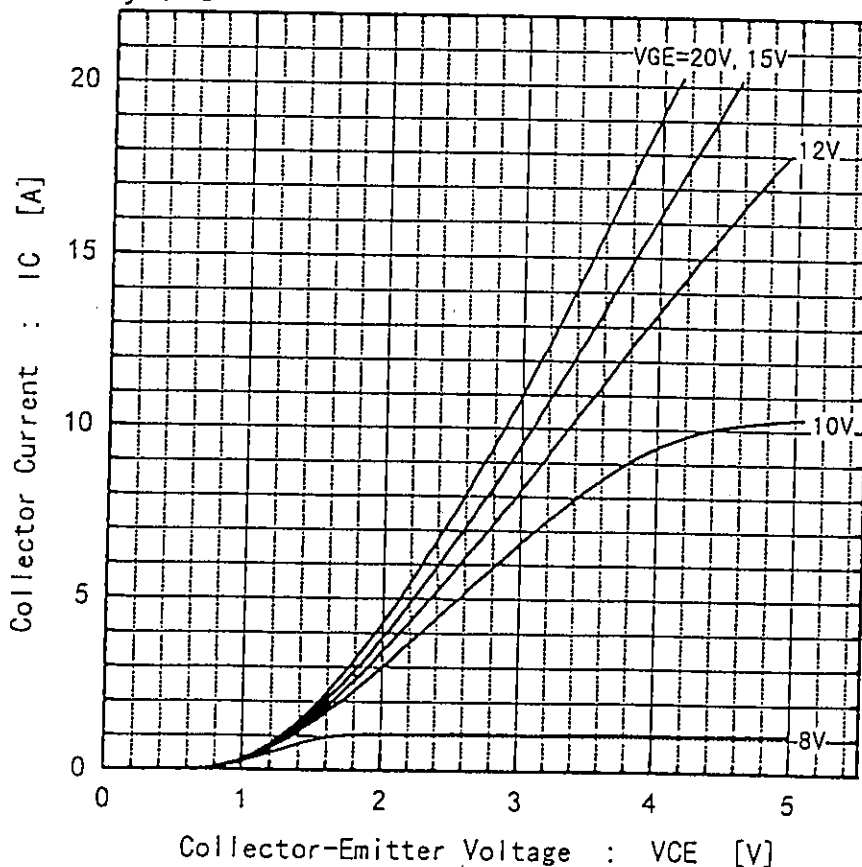


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Collector Current vs. Collector-Emitter Voltage
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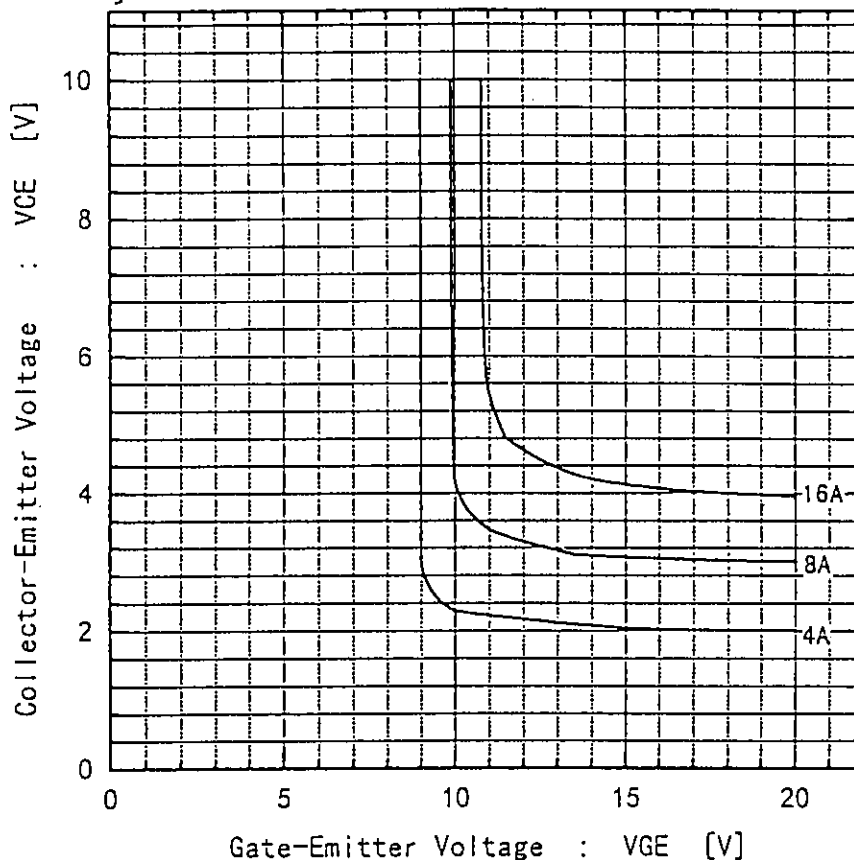


Collector Current vs. Collector-Emitter Voltage
 $T_j = 25^\circ\text{C}$

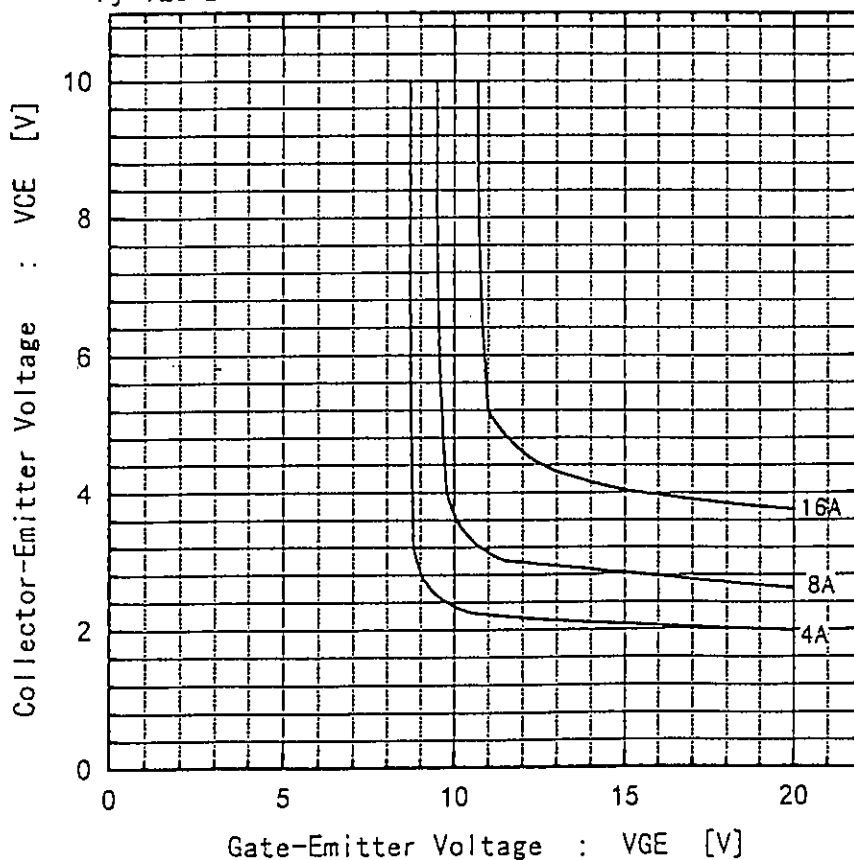


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Collector-Emitter Voltage vs Gate-Emitter Voltage
Tj=25°C

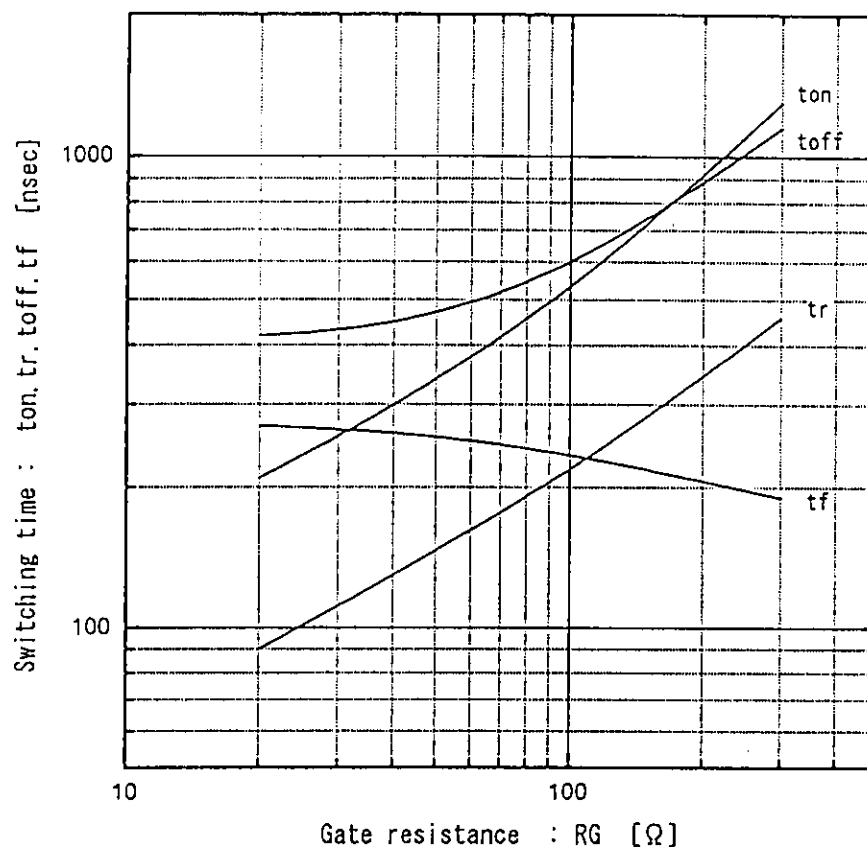


Collector-Emitter Voltage vs Gate-Emitter Voltage
Tj=125°C

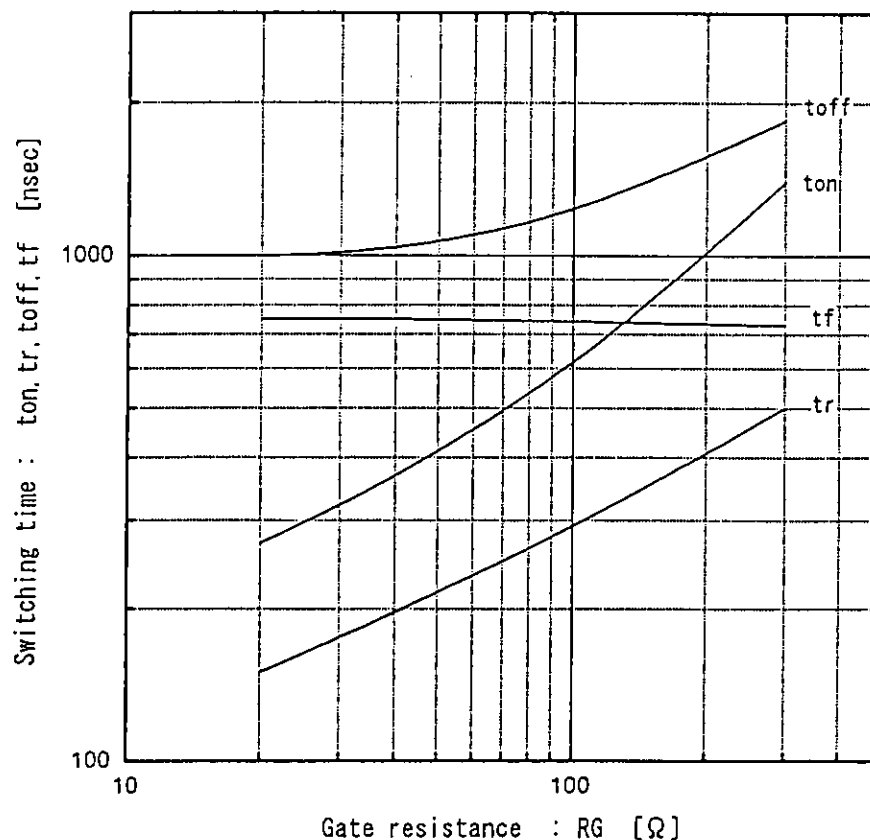


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Switching time vs. R_G
 $V_{CC}=600V, I_C=8A, V_{GE}=\pm 15V, T_j=25^\circ C$

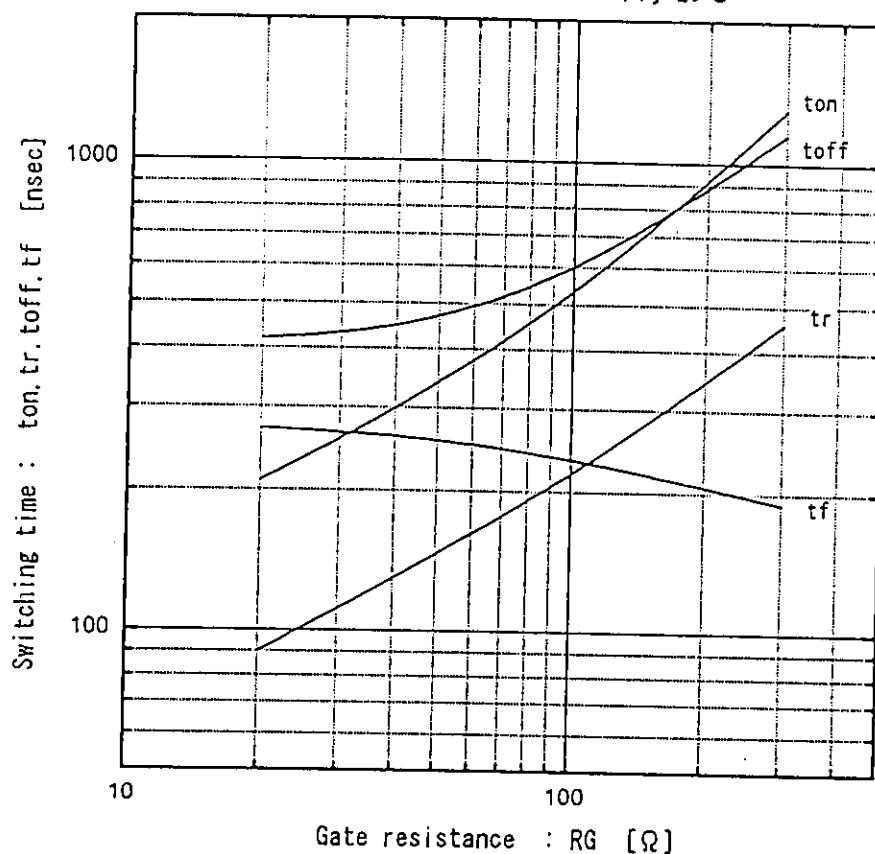


Switching time vs. R_G
 $V_{CC}=600V, I_C=8A, V_{GE}=\pm 15V, T_j=125^\circ C$

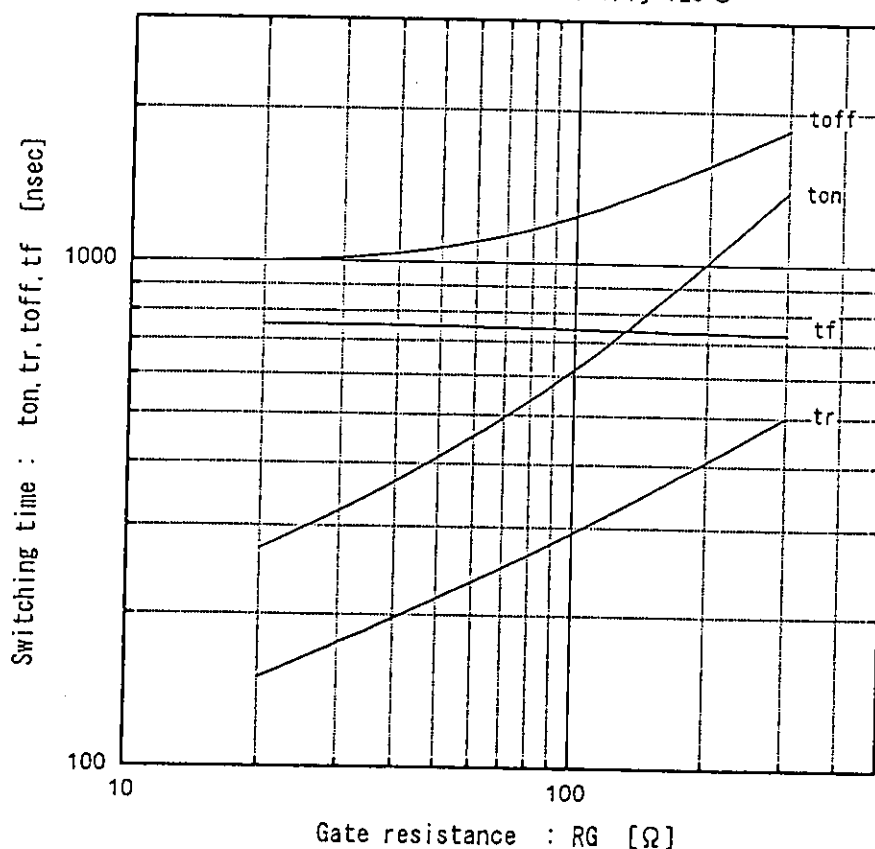


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Switching time vs. R_G
 $V_{CC}=600V$, $I_C=8A$, $V_{GE}=\pm 15V$, $T_j=25^\circ C$



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



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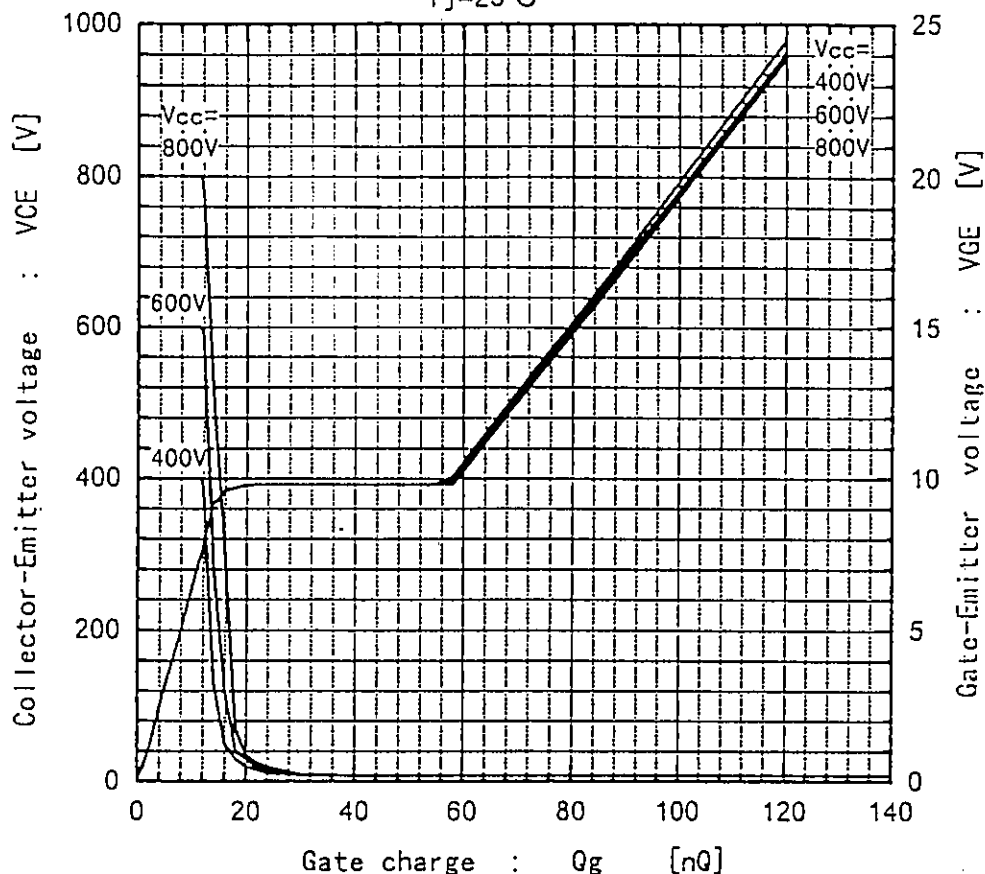
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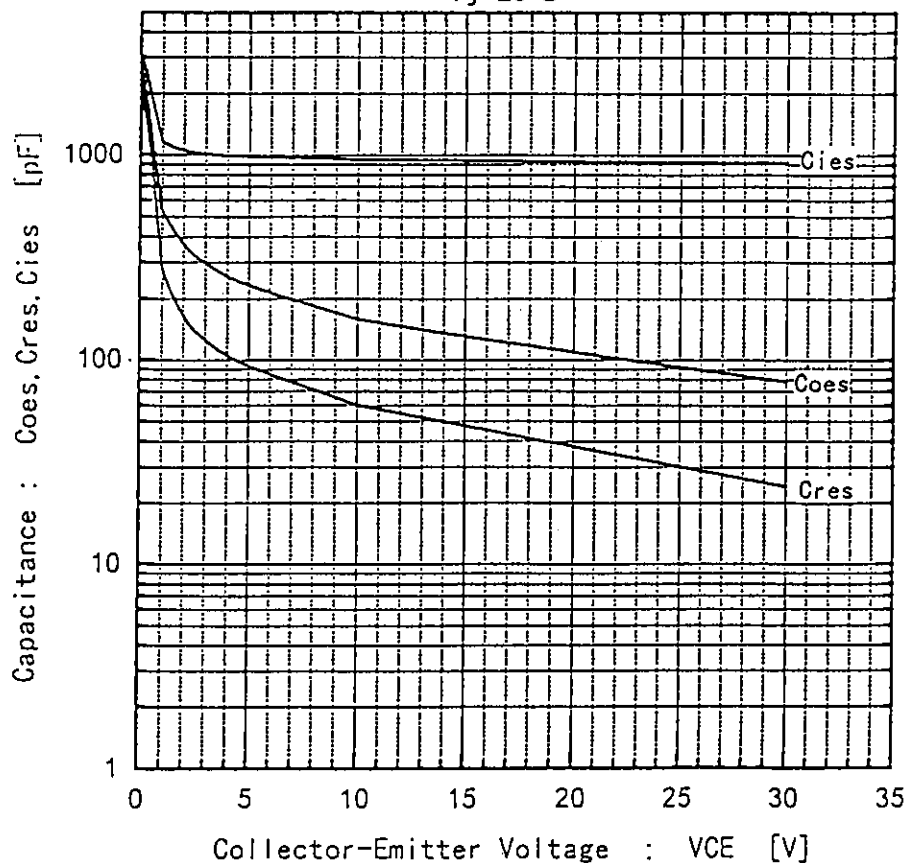
Dynamic input characteristics

Tj=25°C



Capacitance vs. Collector-Emitter voltage

Tj=25°C



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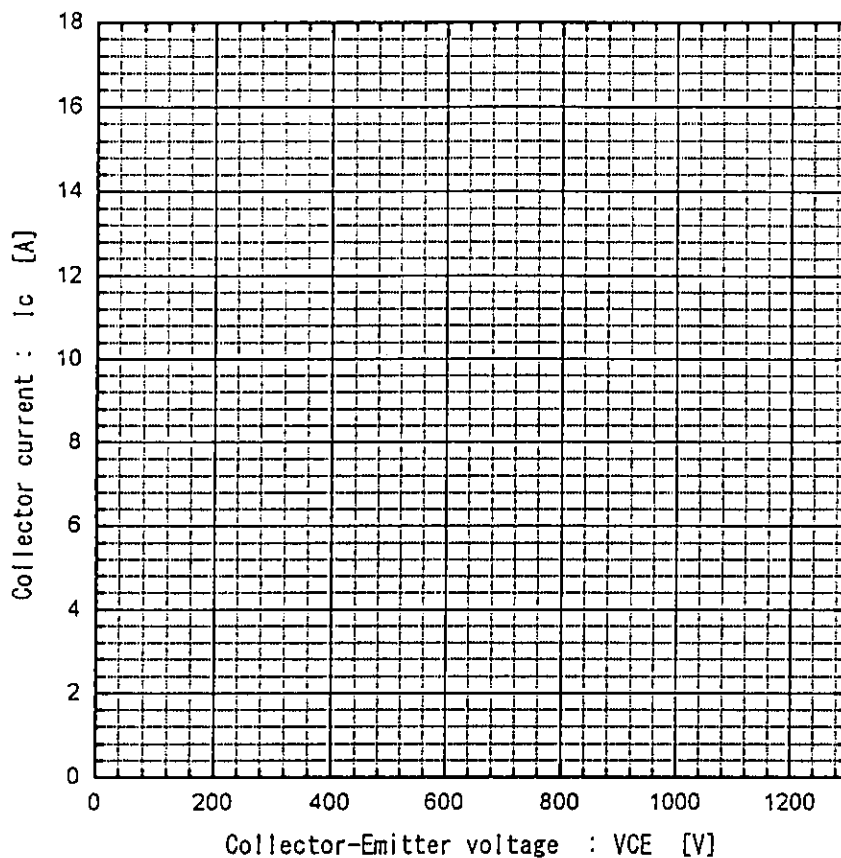
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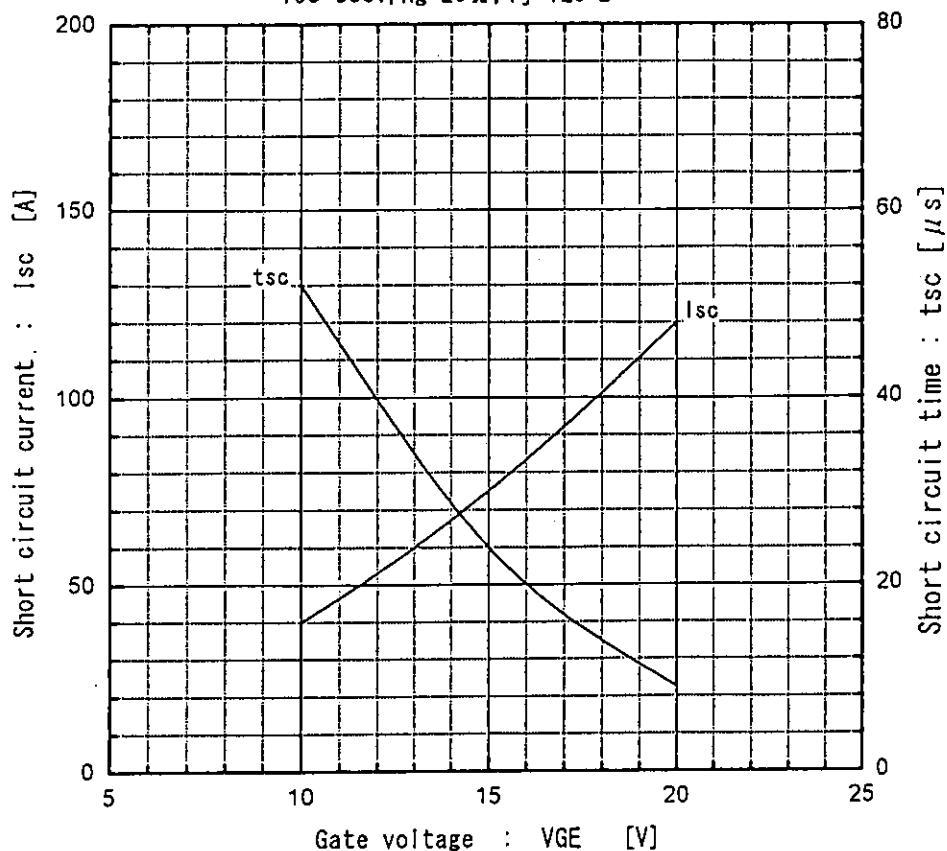
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Reverse Biased Safe Operating Area
 $+V_{GE}=15V, -V_{GE} \leq 15V, T_j \leq 125^\circ C, R_G \geq 20\Omega$



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



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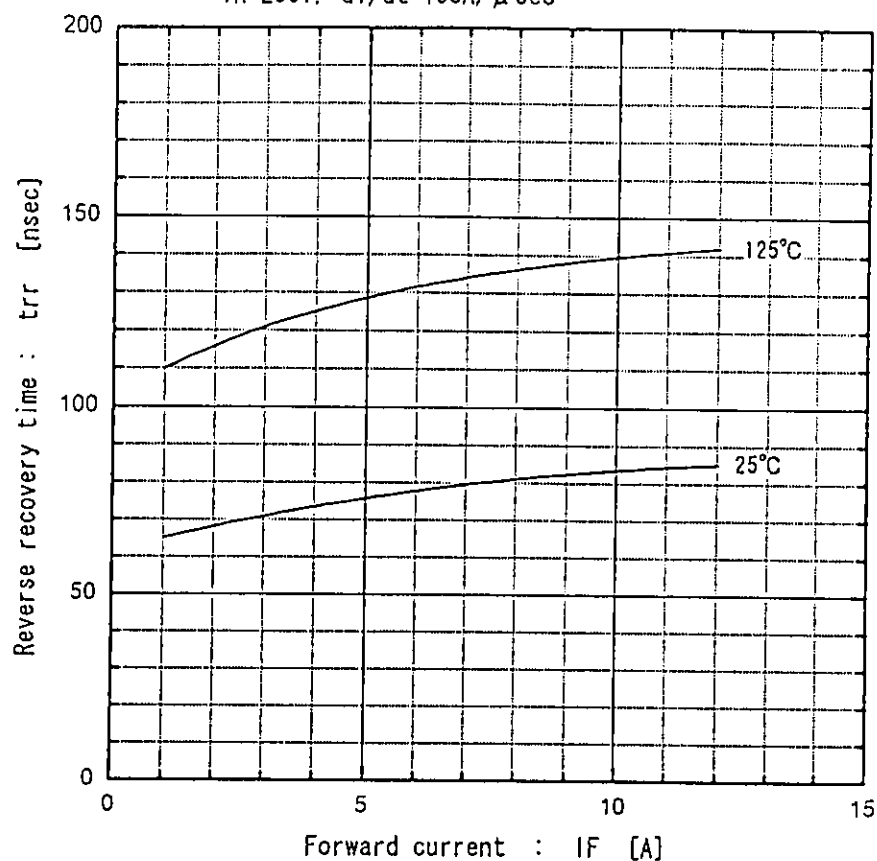
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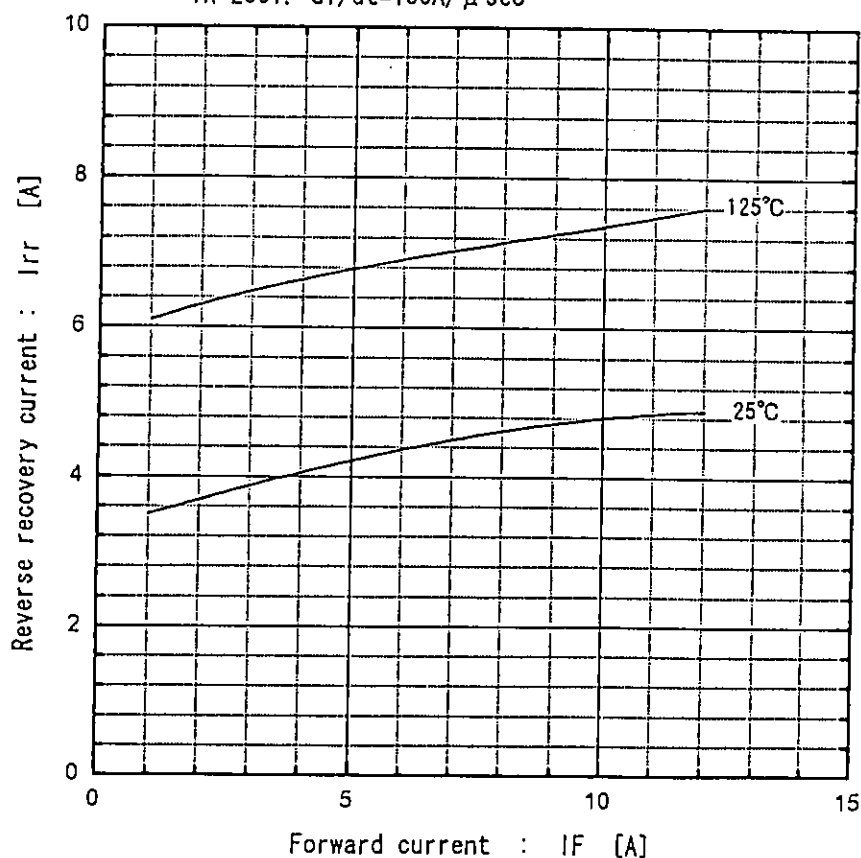
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Reverse recovery time vs. Forward current
VR=200V, $-di/dt=100A/\mu\text{sec}$



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



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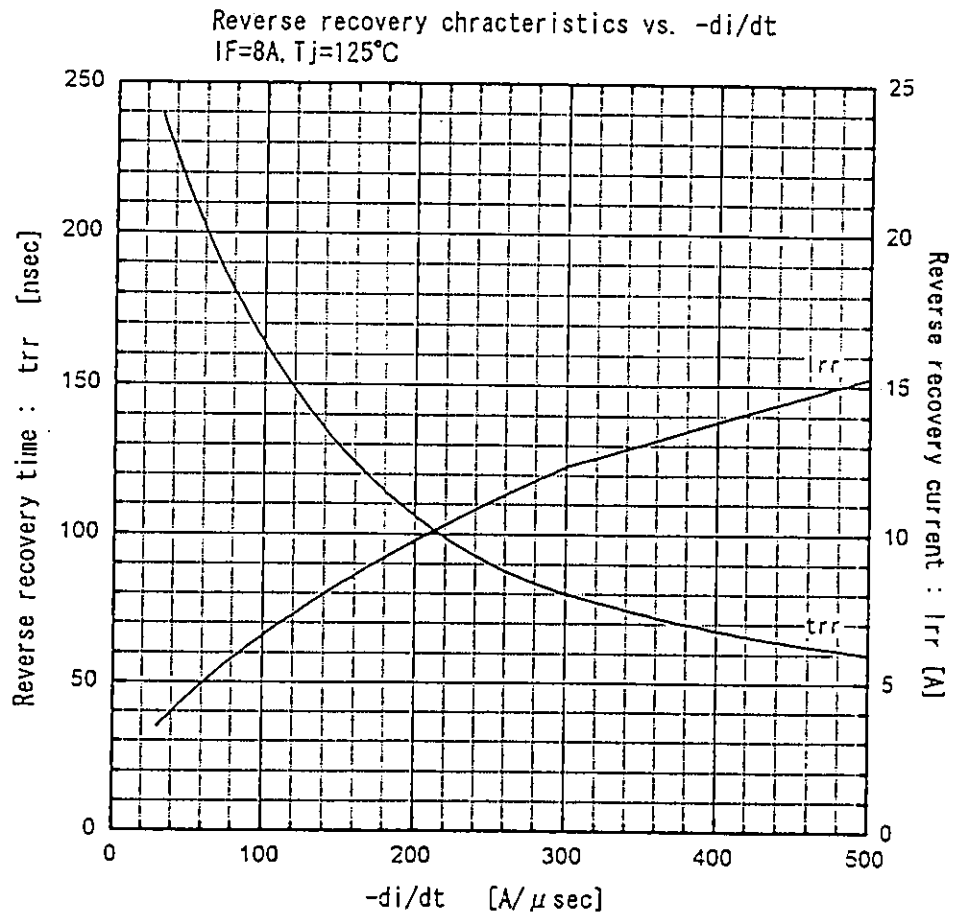
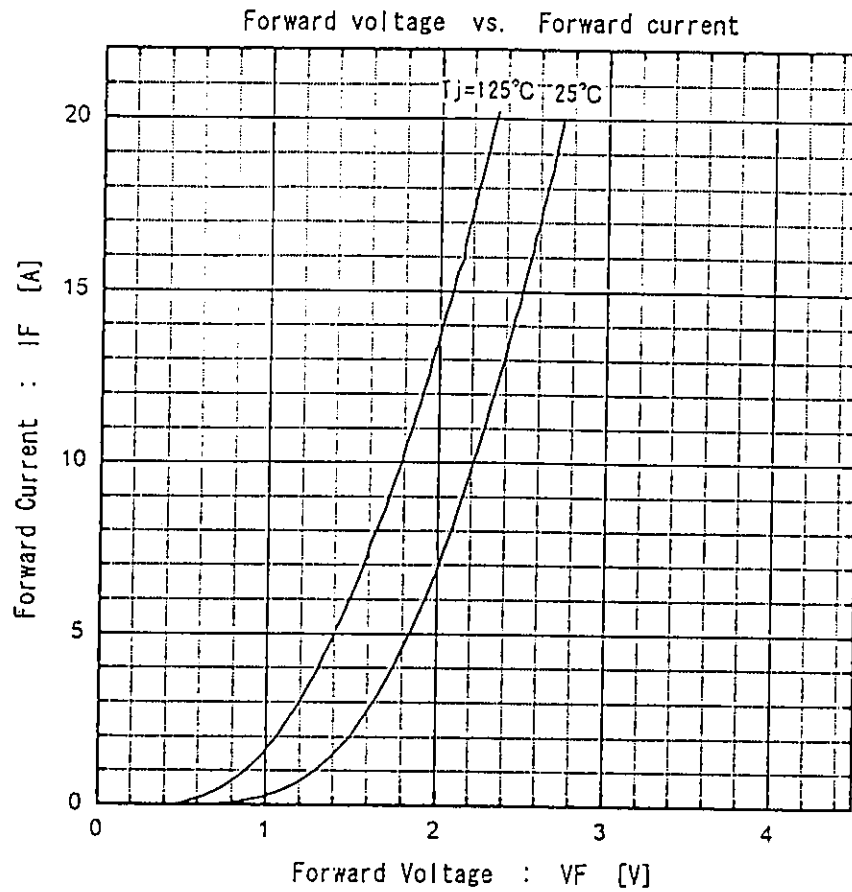
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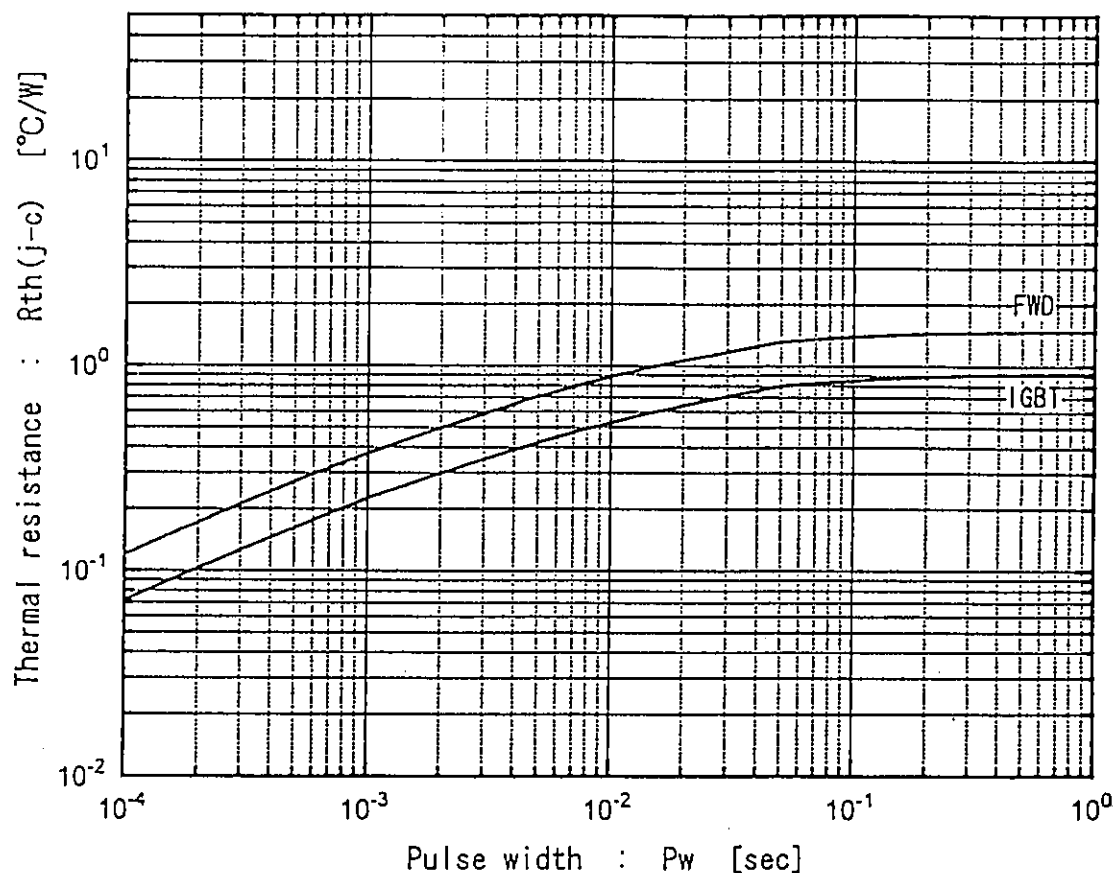
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Transient thermal resistance



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