

**MITSUBISHI ELECTRIC CORPORATION**

APPLICATION NOTE	Prepared by	<i>K. Kurachi</i>	Rev	
	Approved by	<i>M. Takata 31-Jul-'03</i>		

Cmh5522.doc

**Subject**

**Performance curves of CM1000DU-34NF**

**Contents**

- **Output characteristics(typical)**
- **Transfer characteristics(typical)**
- **Collector-Emitter saturation voltage characteristics(typical)**
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- **Free-Wheel Diode forward characteristics(typical)**
- **Capacitance- $V_{CE}$  characteristics(typical)**
- **Half-Bridge switching characteristics    Switching time vs.  $I_c$  (typical)**
- **Reverse recovery characteristics of Free-Wheel Diode(typical)**
- **Transient thermal impedance characteristics (IGBT part & FWDi part)**
- **Gate charge characteristics(typical)**
- **Switching loss vs. Collector current characteristics**
- **Switching loss vs. Gate resistance characteristics**

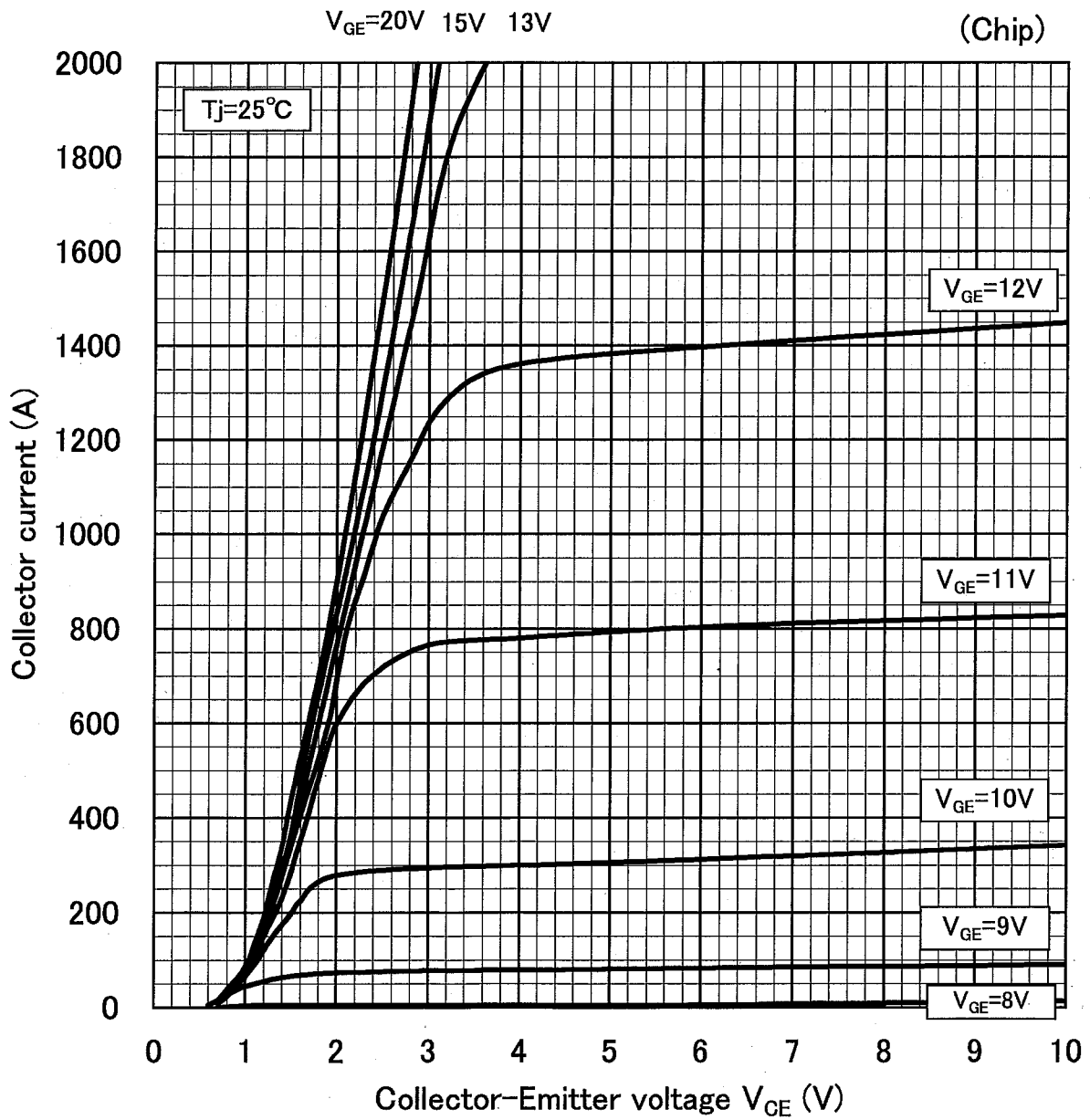
Don't measure these static characteristics yourself by curve tracer.

Usually, curve tracer has too much wiring inductance and device will be damaged by over voltage from oscillation.

IGBT Module	CMH-5522	APPLICATION NOTE
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# CM1000DU-34NF

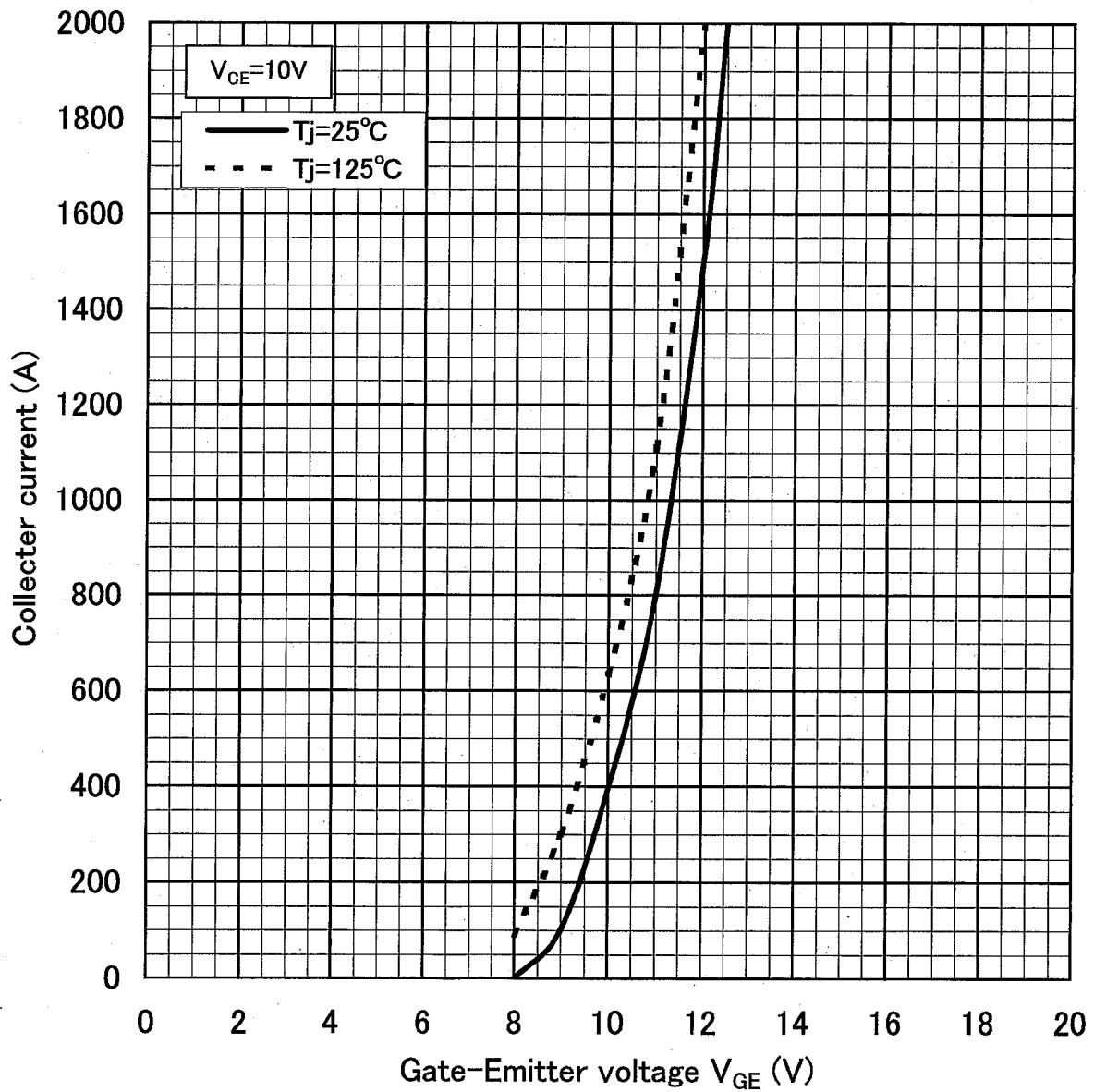
## Output characteristics (Typical)



# CM1000DU-34NF

## Transfer characteristics (Typical)

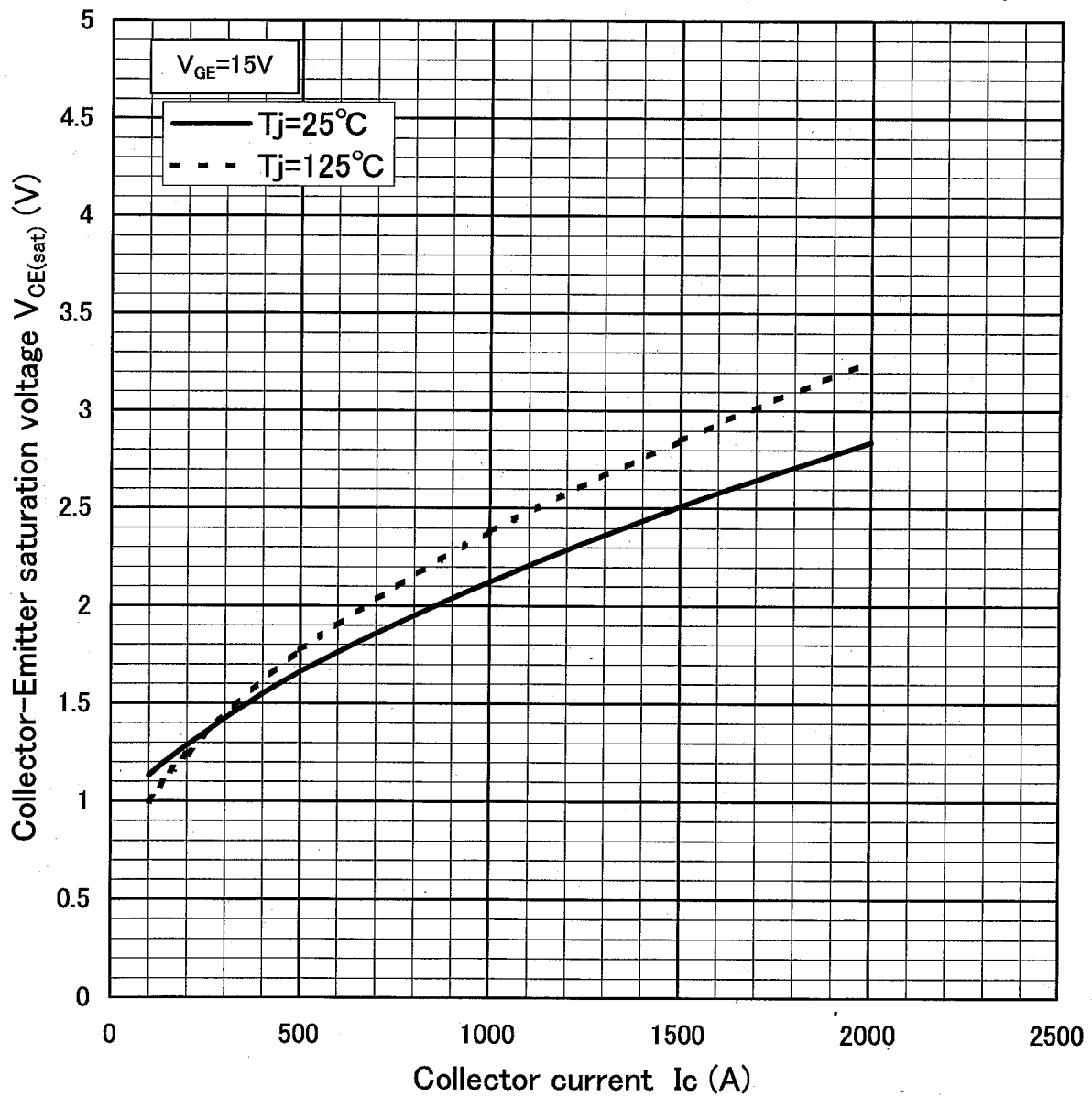
(Chip)



# CM1000DU-34NF

## Collector-Emitter saturation voltage characteristics (Typical)

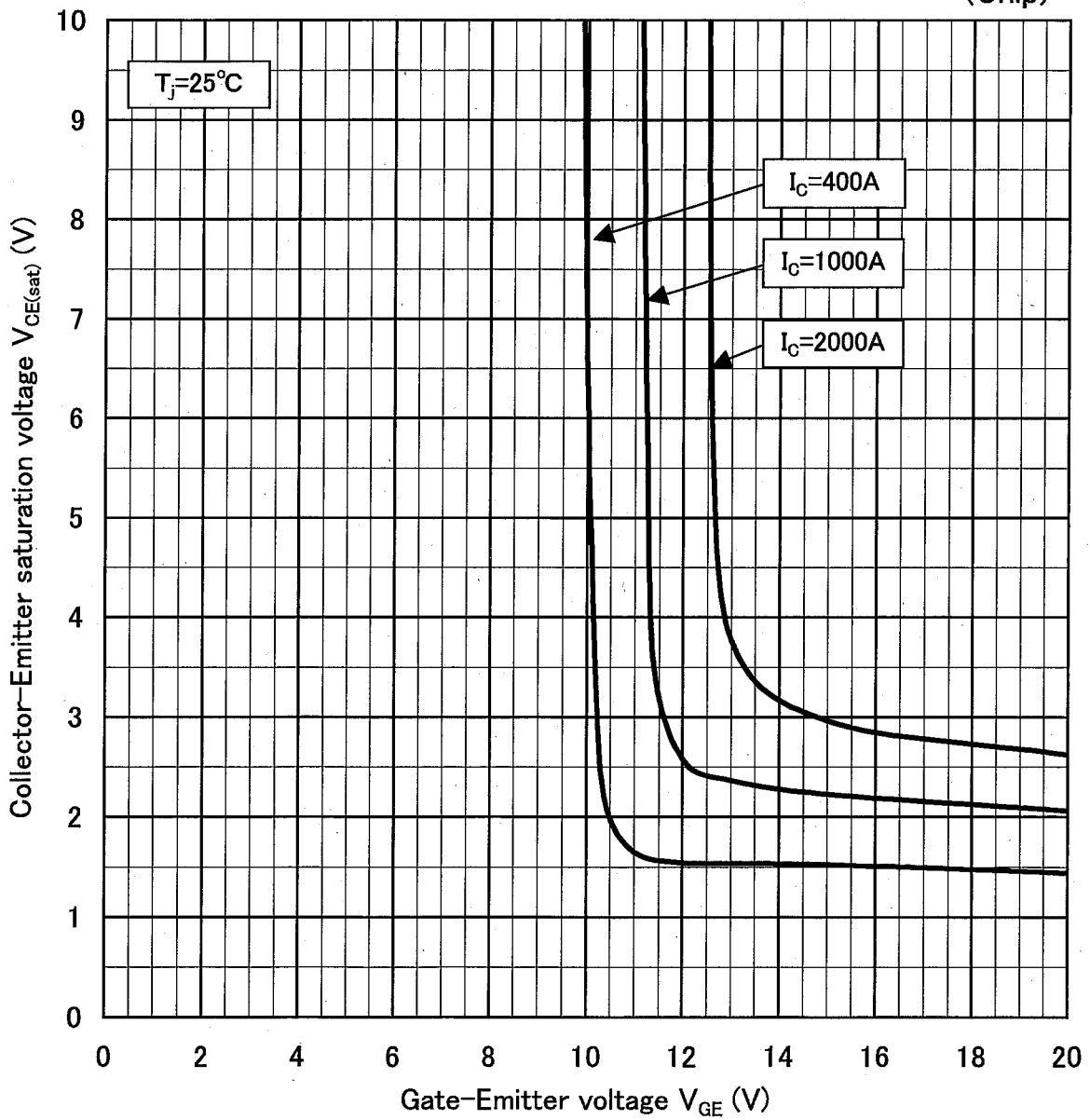
(Chip)



# CM1000DU-34NF

## Collector-Emitter saturation voltage characteristics (Typical)

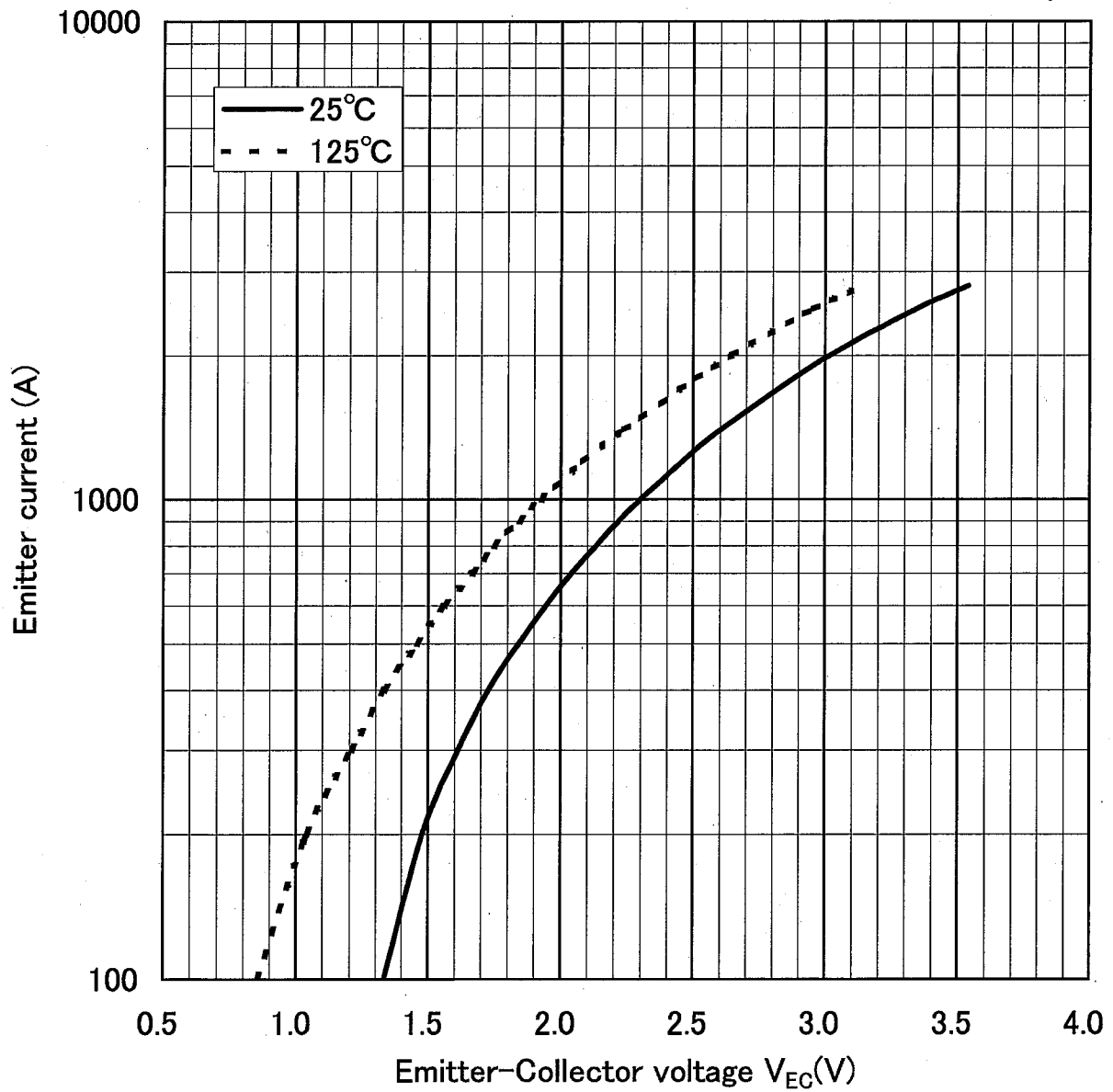
(Chip)



# CM1000DU-34NF

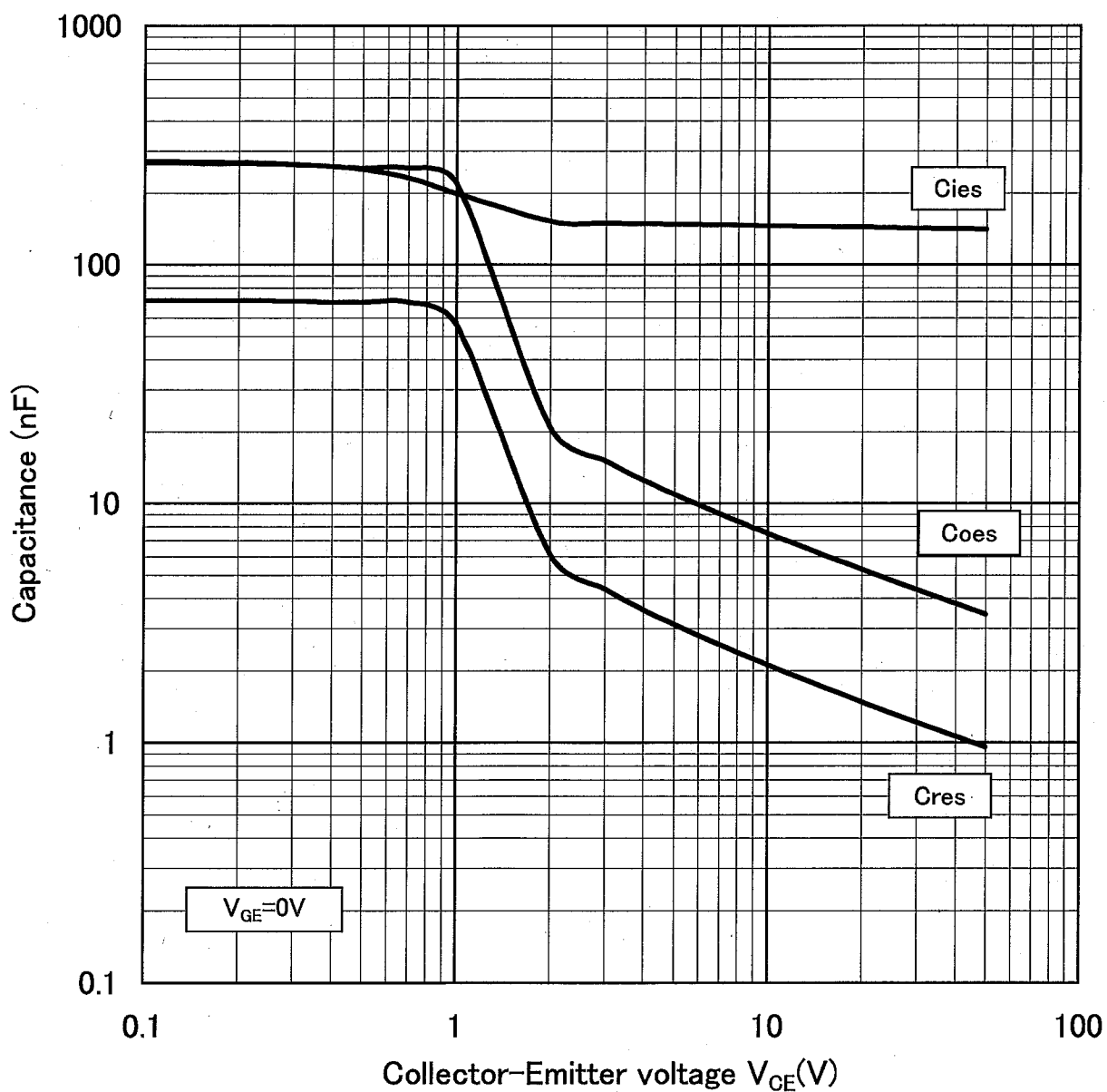
## Free-Wheel Diode forward characteristics (Typical)

(Chip)



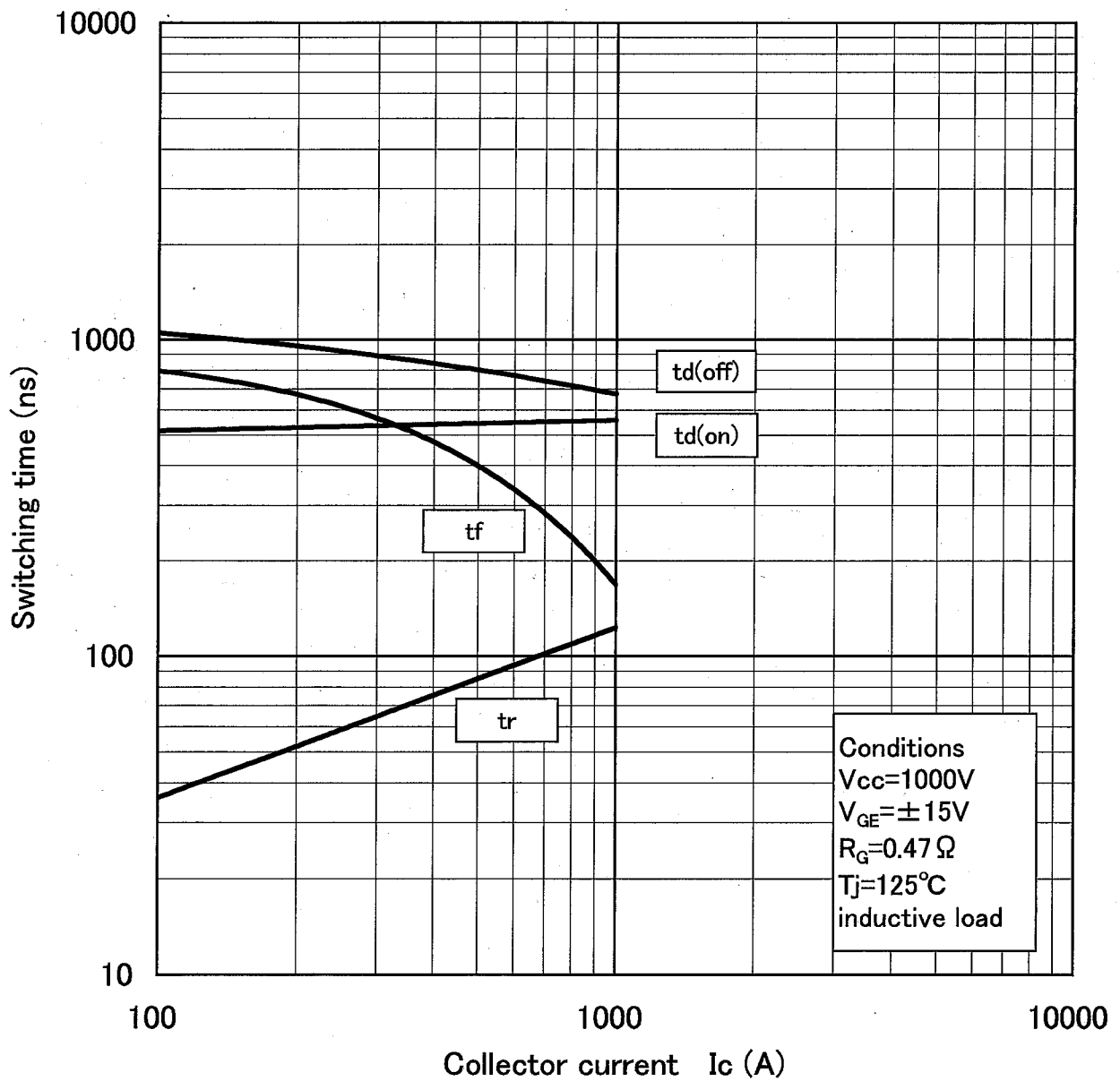
# CM1000DU-34NF

## Capacitance- $V_{CE}$ characteristics (Typical)



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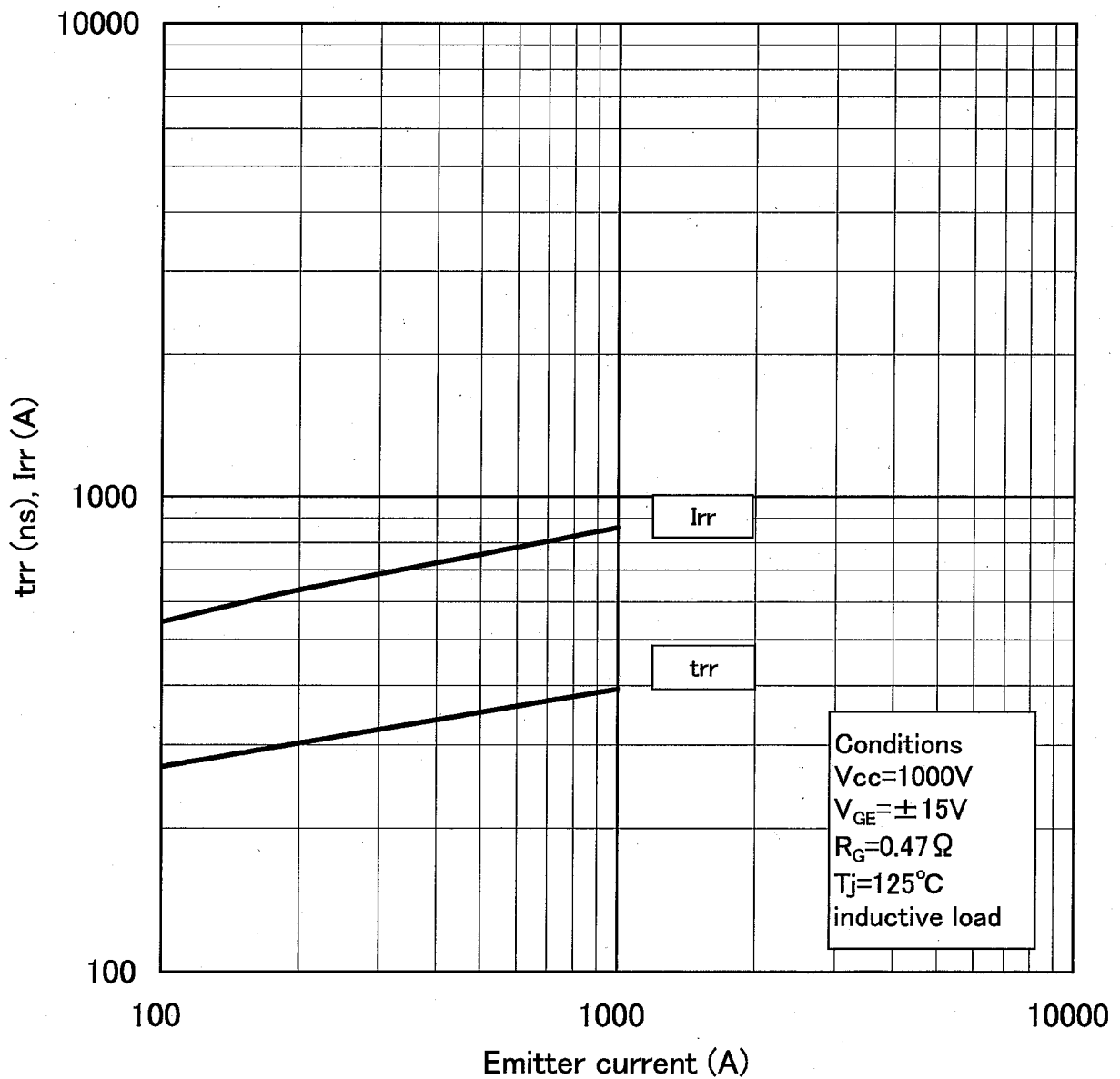
## Half-Bridge switching characteristics (Typical)





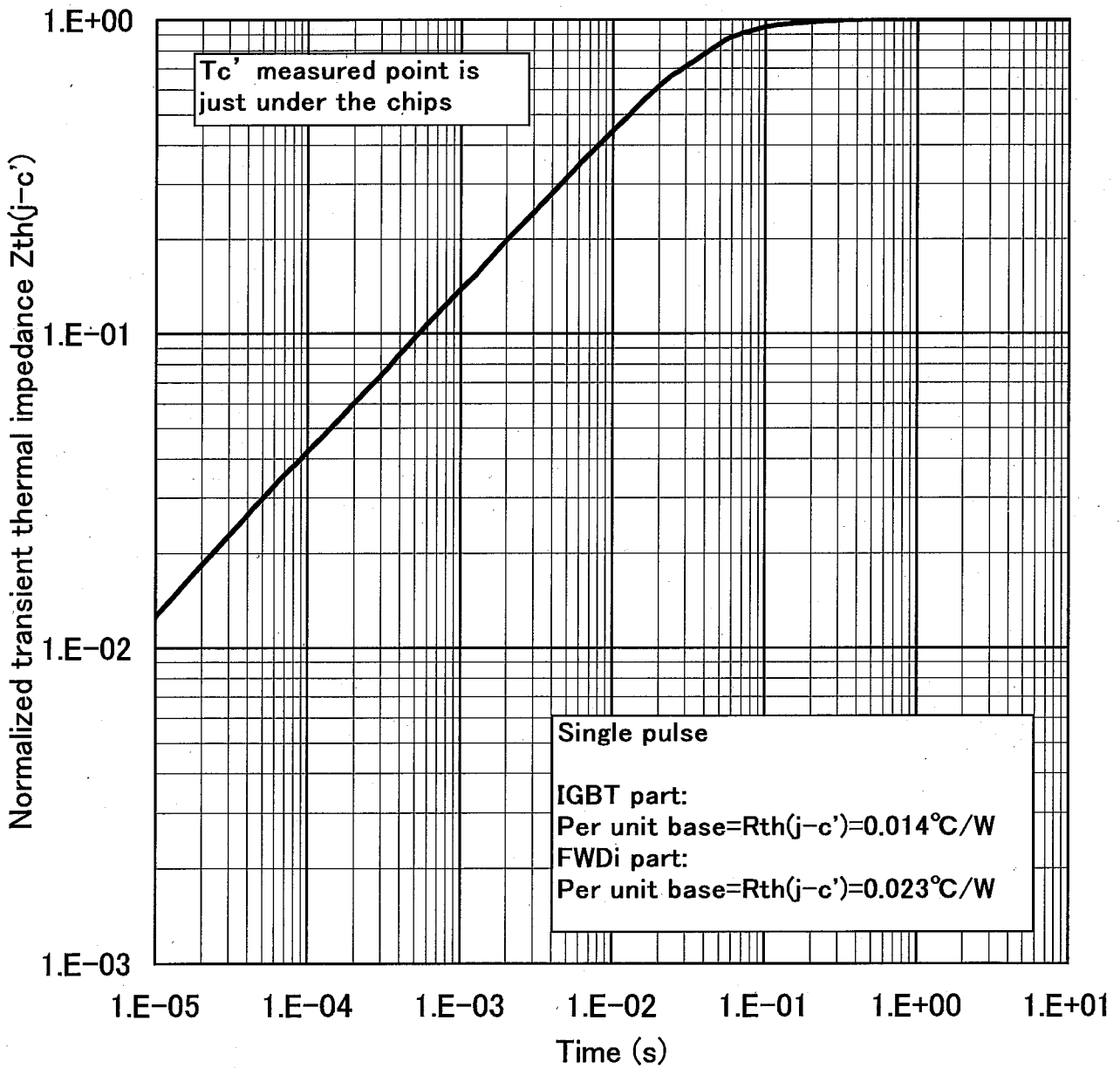
# CM1000DU-34NF

## Reverse recovery characteristics of Free-Wheel Diode (Typical)



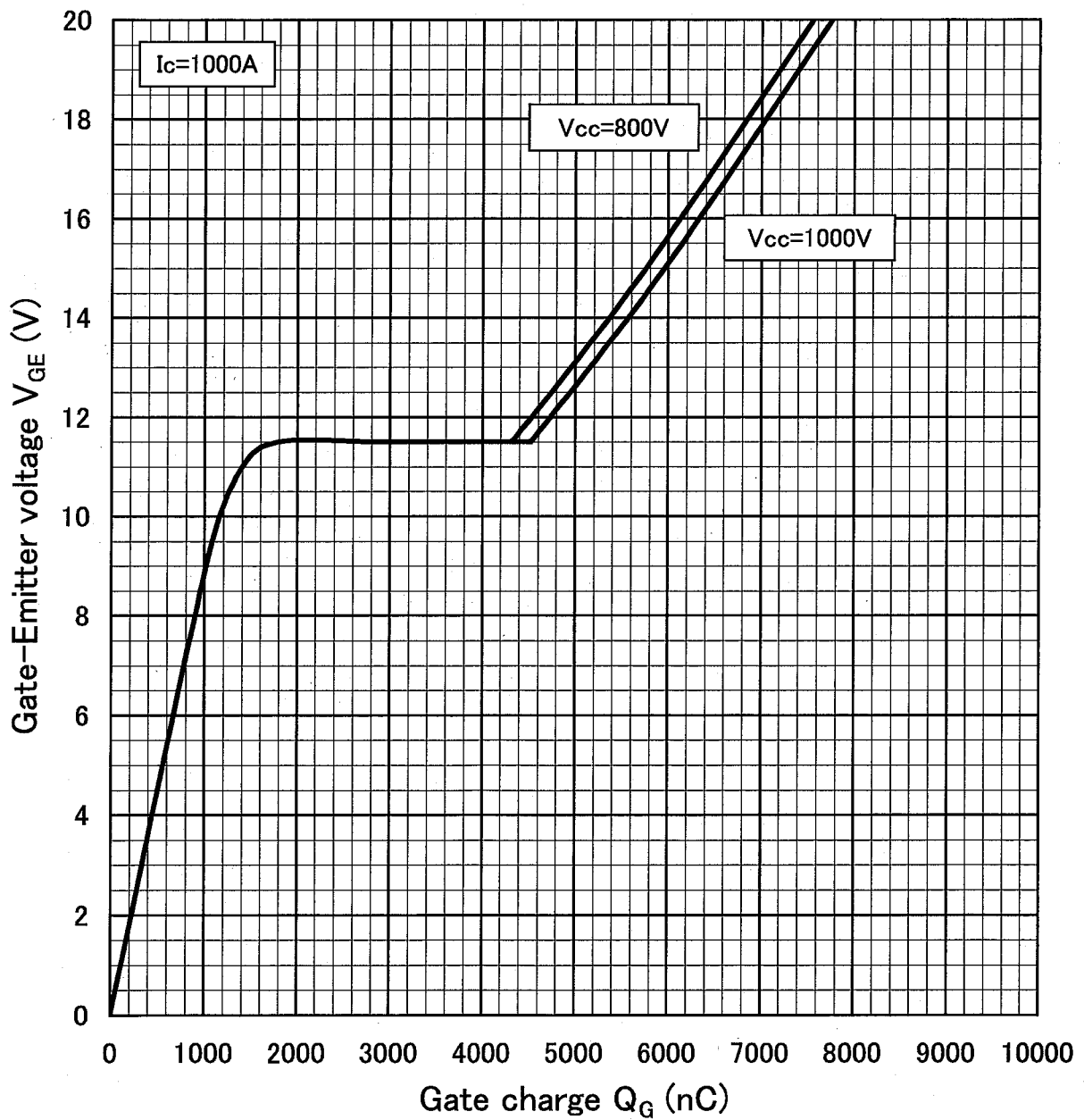
# CM1000DU-34NF

## Transient thermal impedance characteristics (IGBT part & FWDi part)



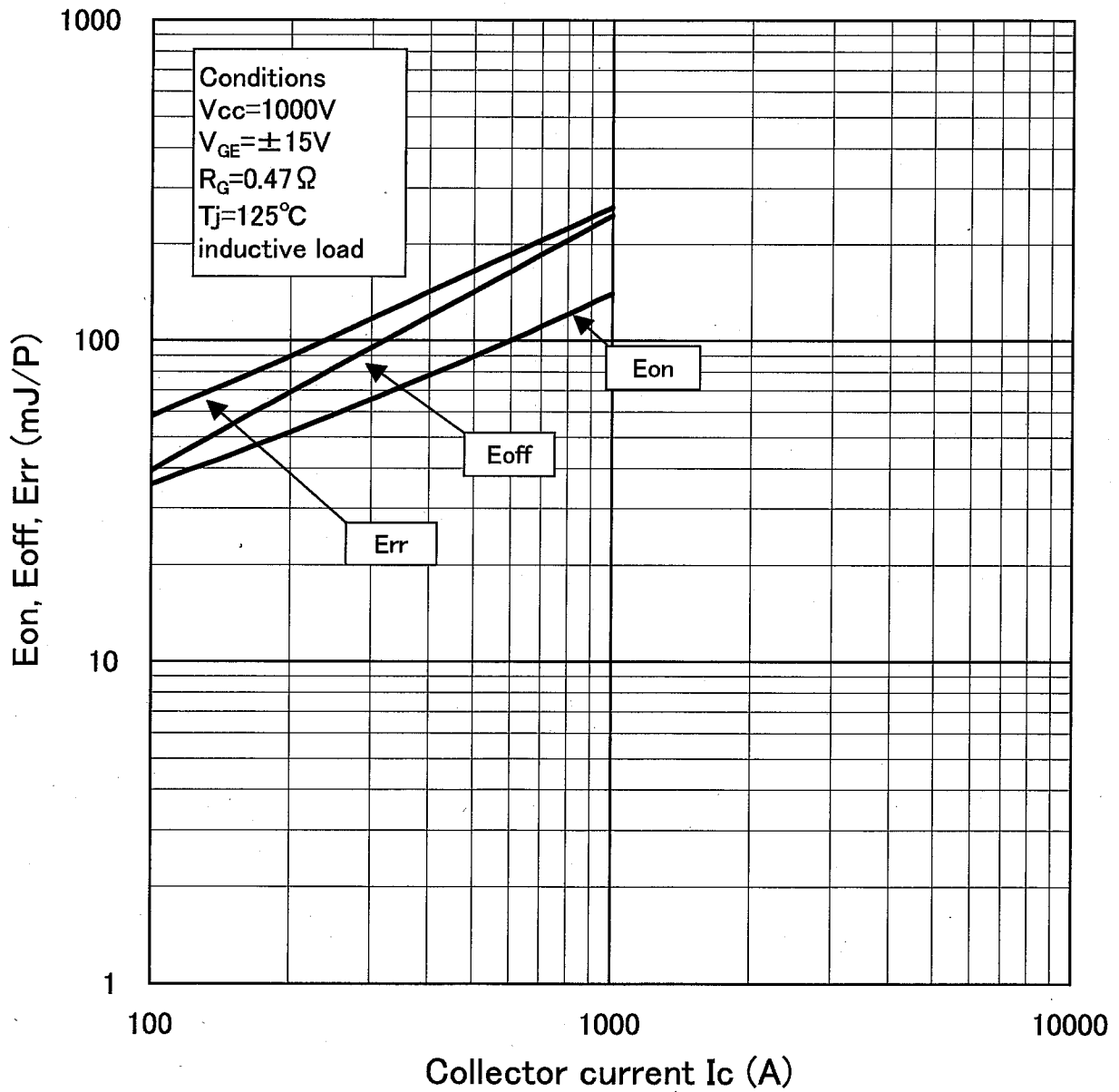
# CM1000DU-34NF

## Gate charge characteristics (Typical)



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## Switching loss-Collector current characteristics (typical)



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## Switching loss-Gate resistance characteristics (typical)

