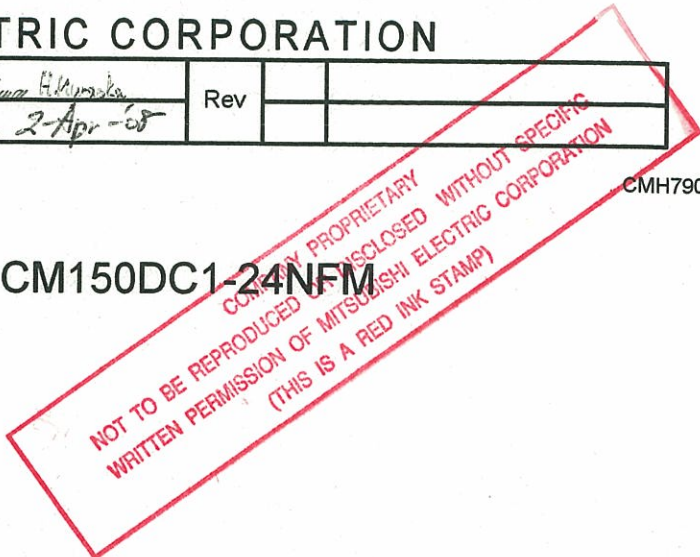


# MITSUBISHI ELECTRIC CORPORATION

APPLICATION NOTE	Prepared by	<i>S. Kuroki</i>	Rev	
	Approved by	<i>Y. Koyama 2-Apr-68</i>		

CMH7902

**Subject** Performance Curves of CM150DC1-24NFM

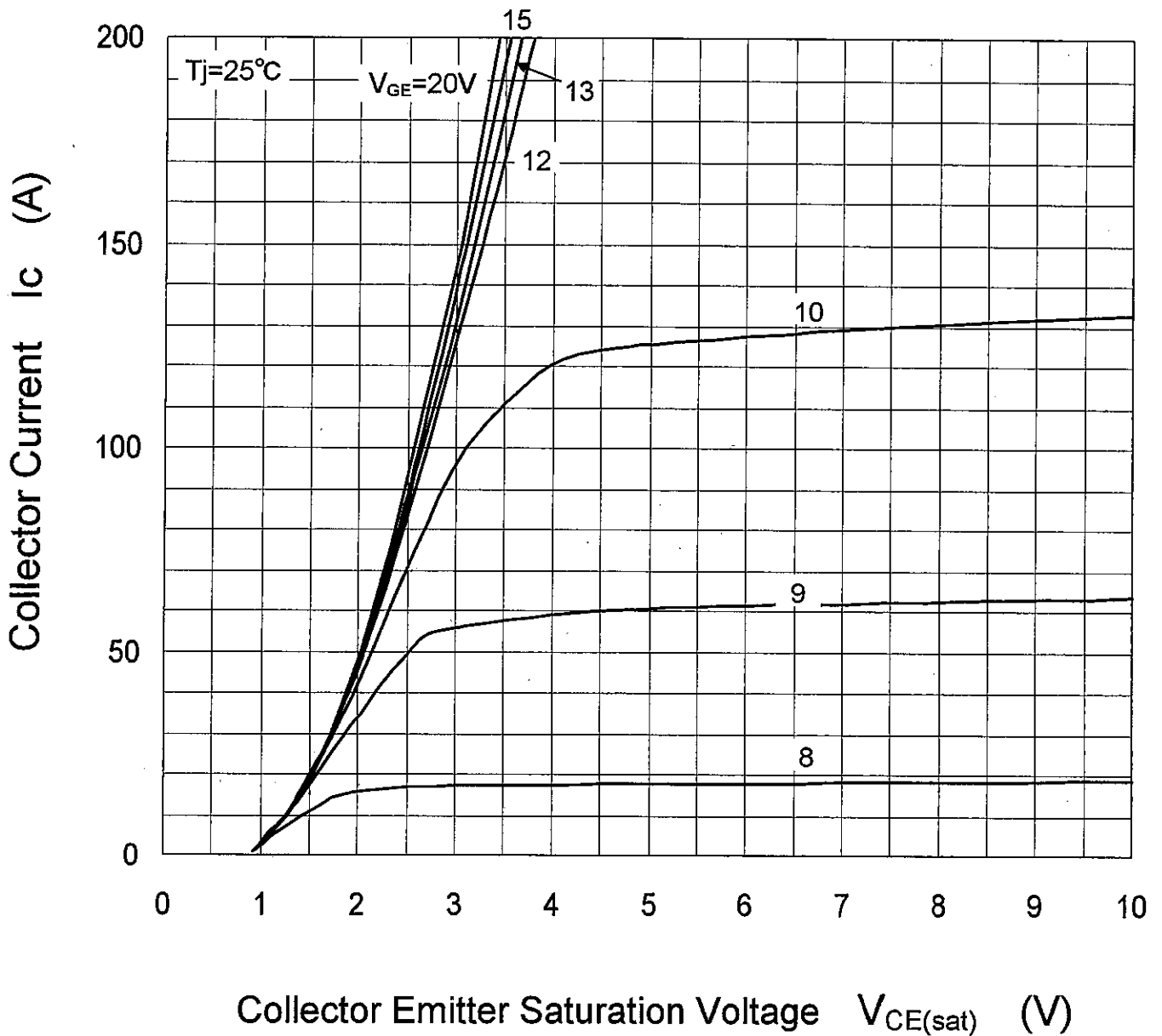


**Contents**

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

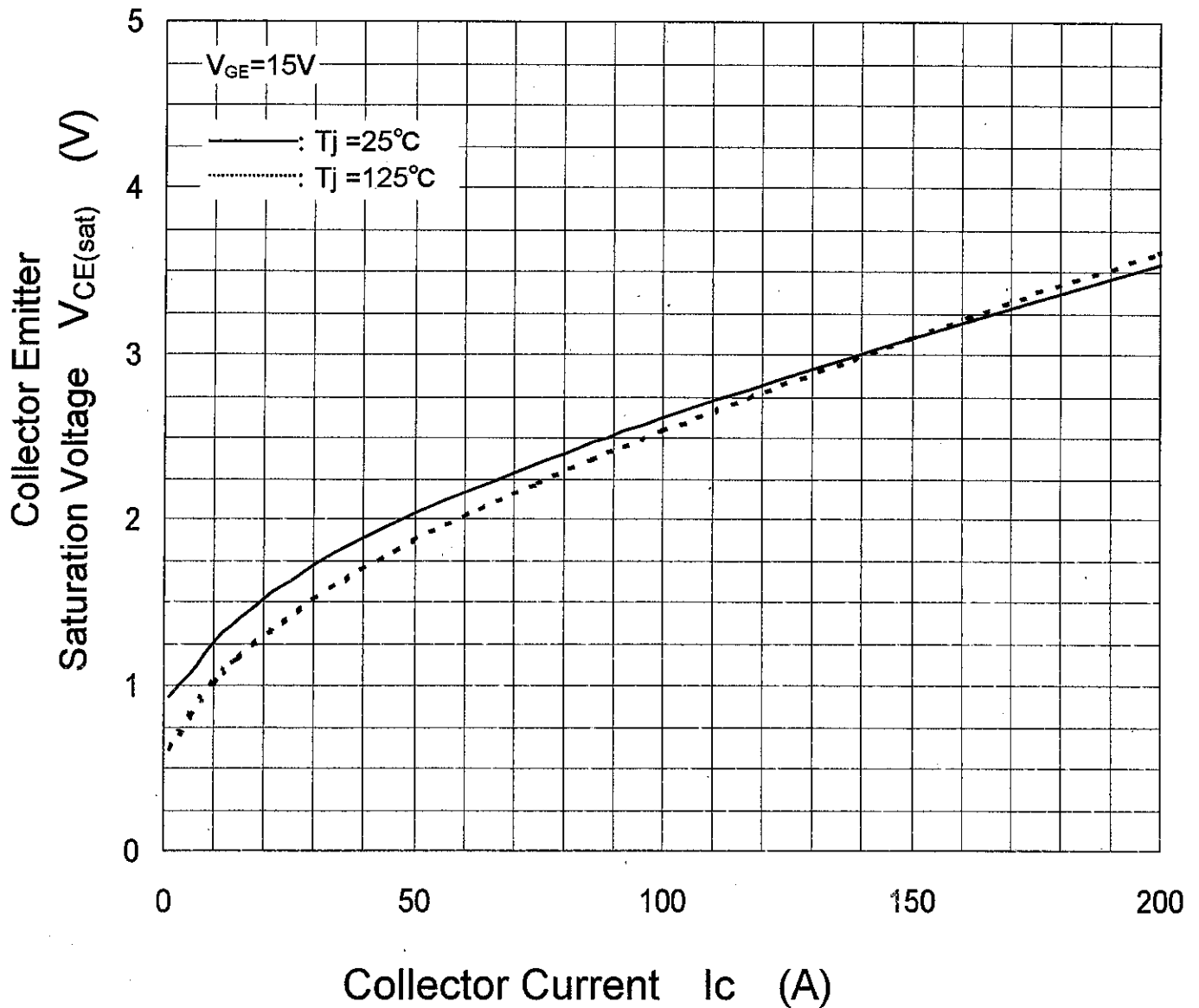
# Output Characteristics

## CM150DC1-24NFM (Typical)



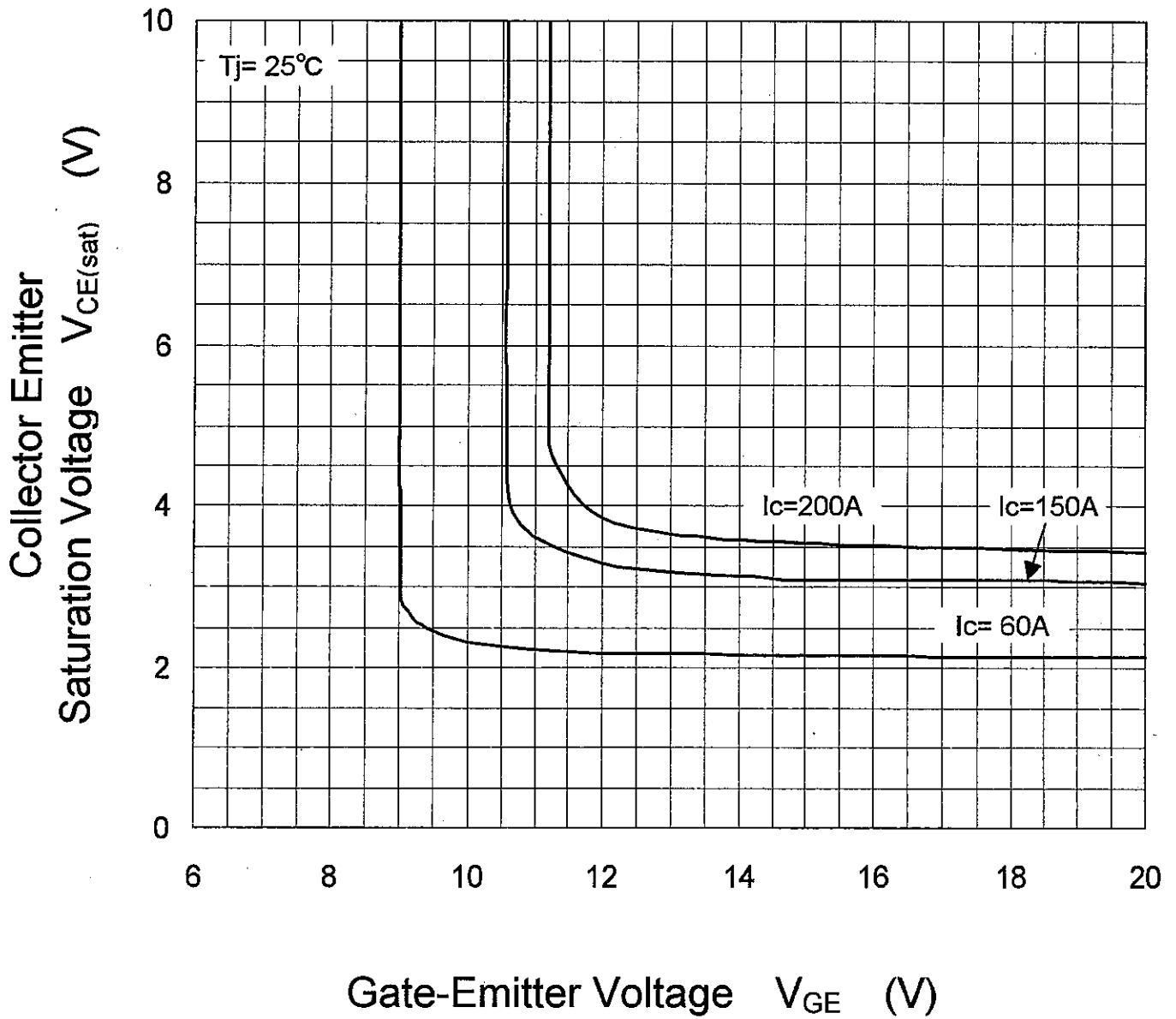
# Collector-Emitter Saturation Voltage Characteristics

## CM150DC1-24NFM (Typical)



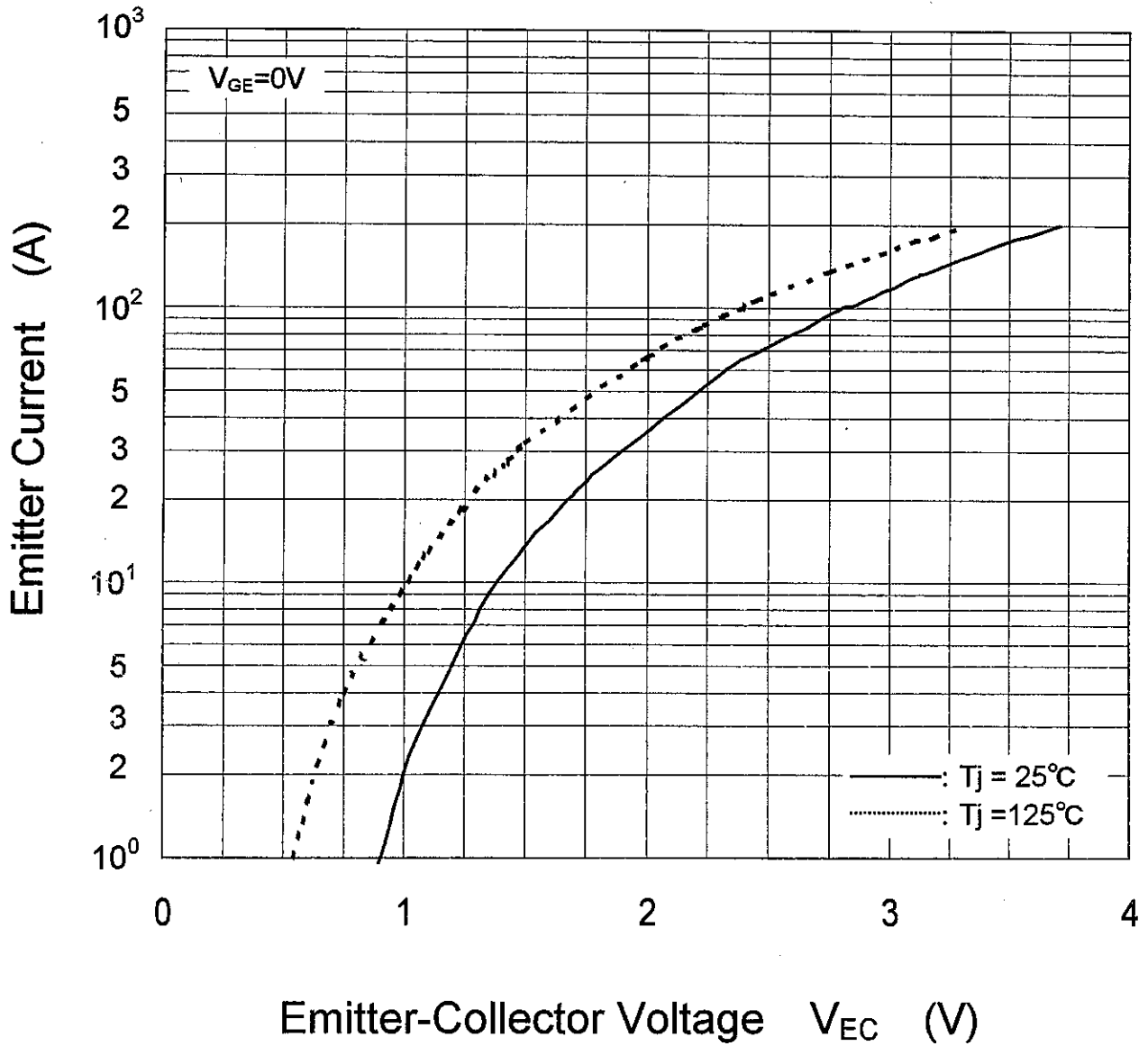
Collector-Emitter Saturation Voltage Characteristics

CM150DC1-24NFM  
(Typical)



Free-Wheel Diode Forward Characteristics

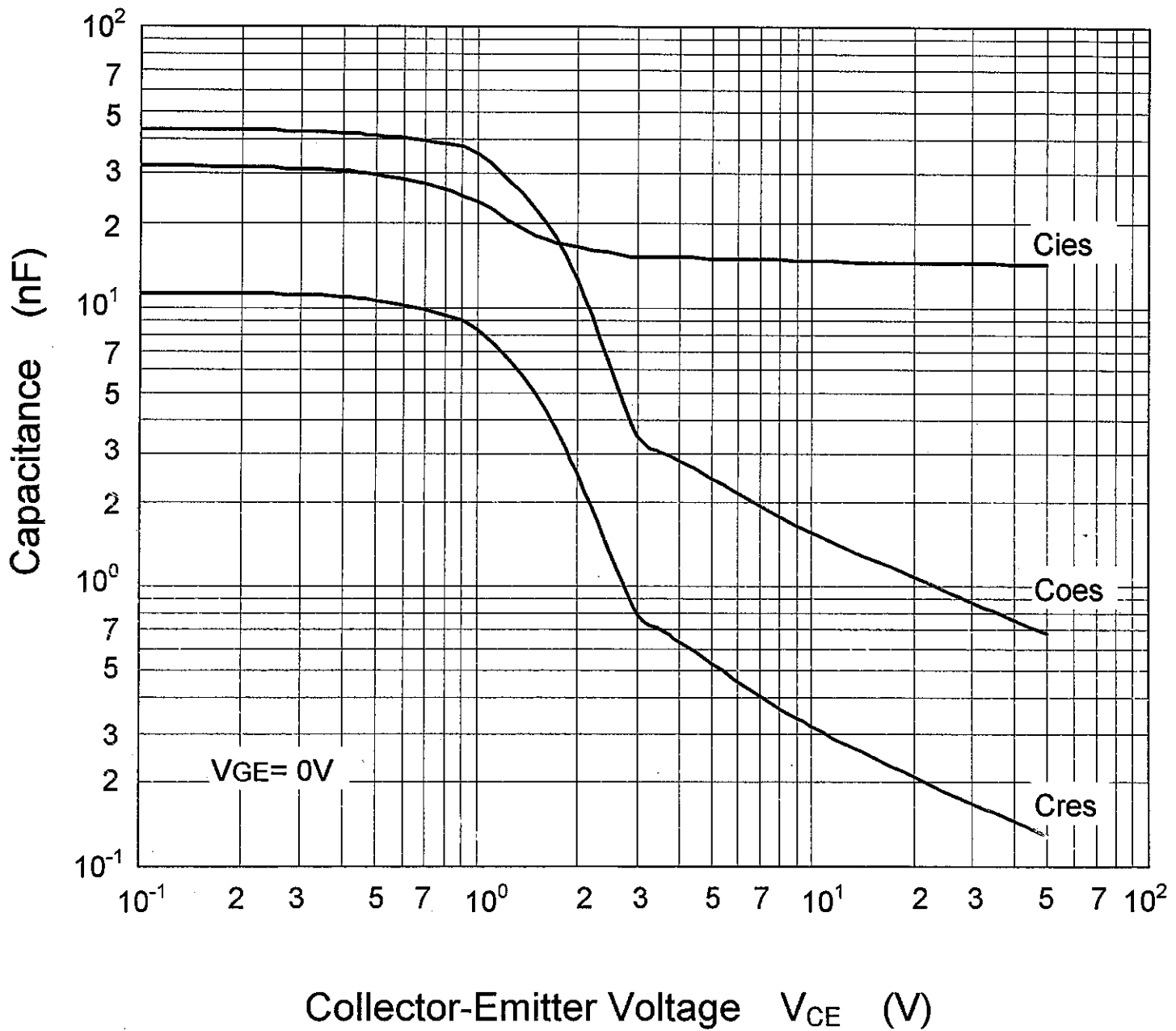
CM150DC1-24NFM  
(Typical)



Capacitance- $V_{CE}$  Characteristics

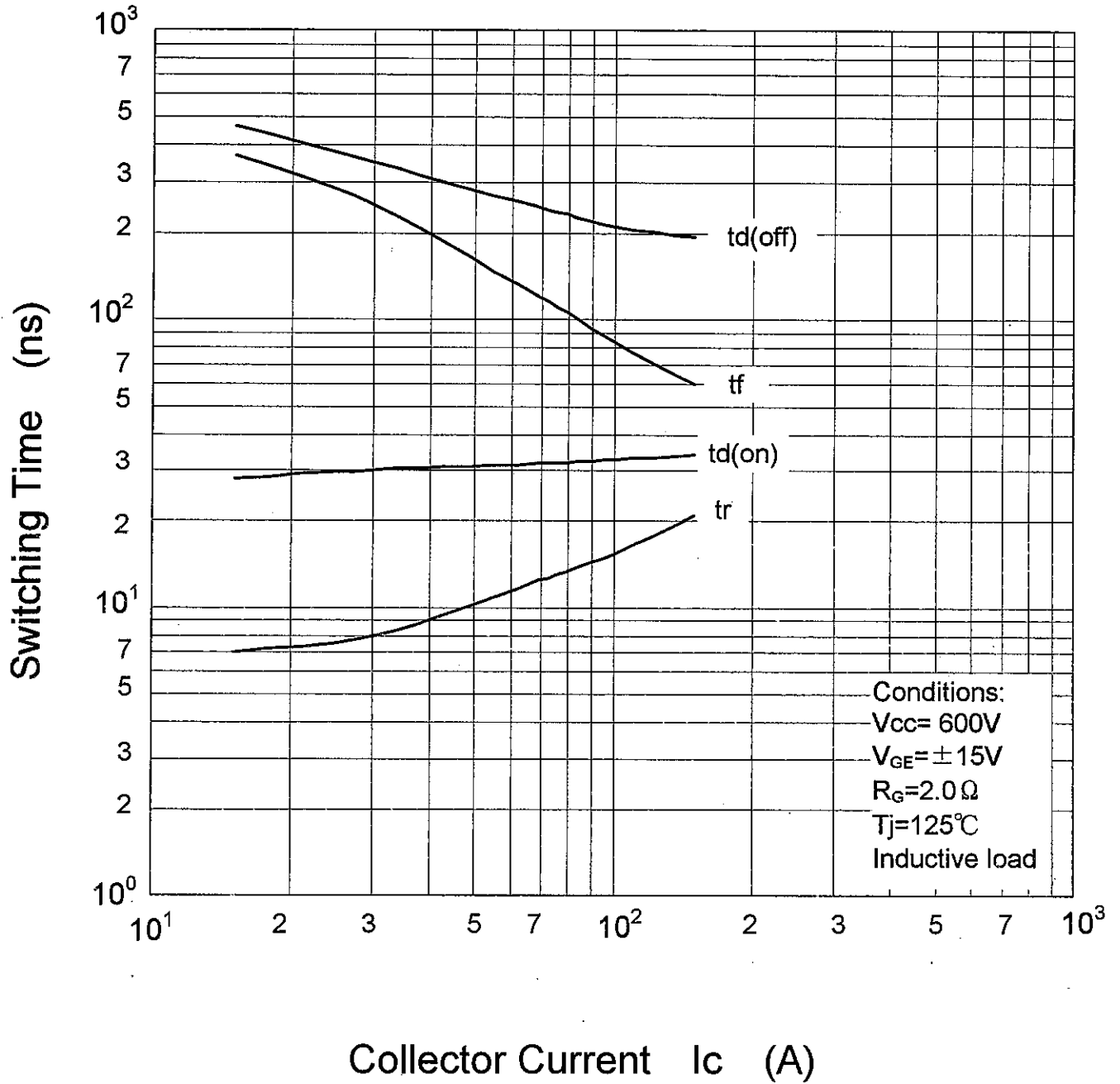
CM150DC1-24NFM

(Typical)



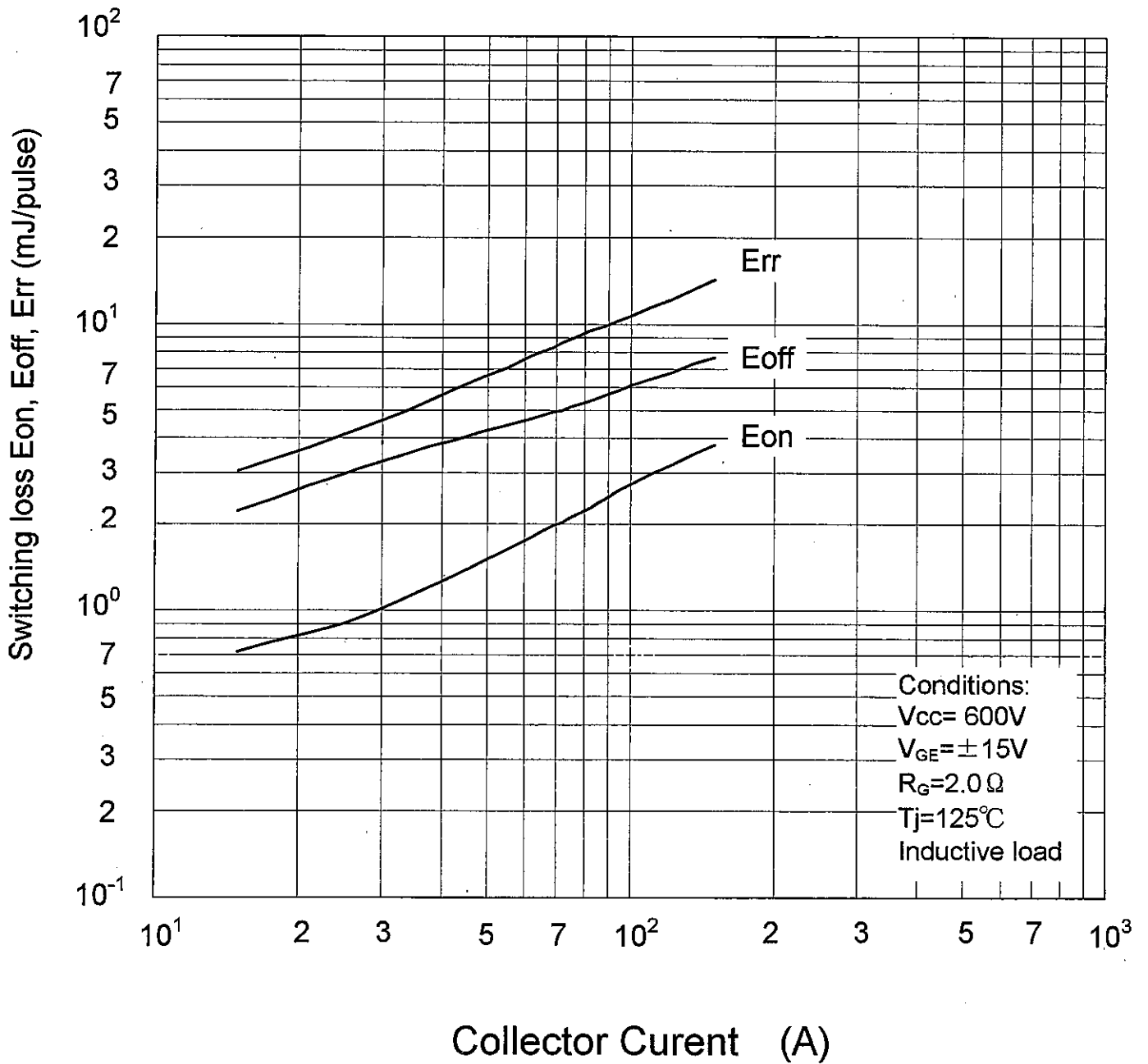
# Half-Bridge Switching Characteristics

## CM150DC1-24NFM (Typical)



Half-Bridge switching characteristics  
 - Switching loss vs. Collector current

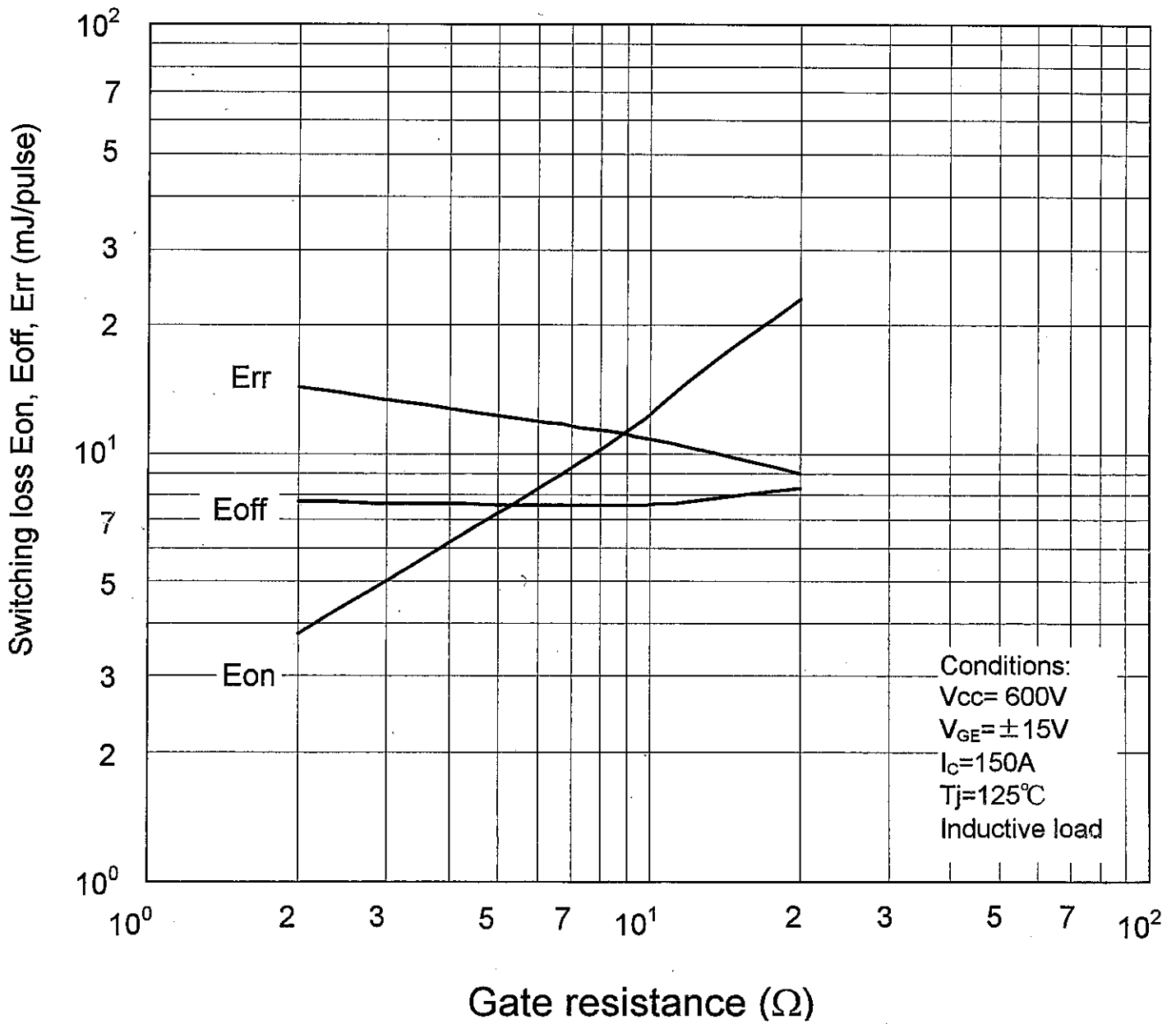
CM150DC1-24NFM  
 (Typical)





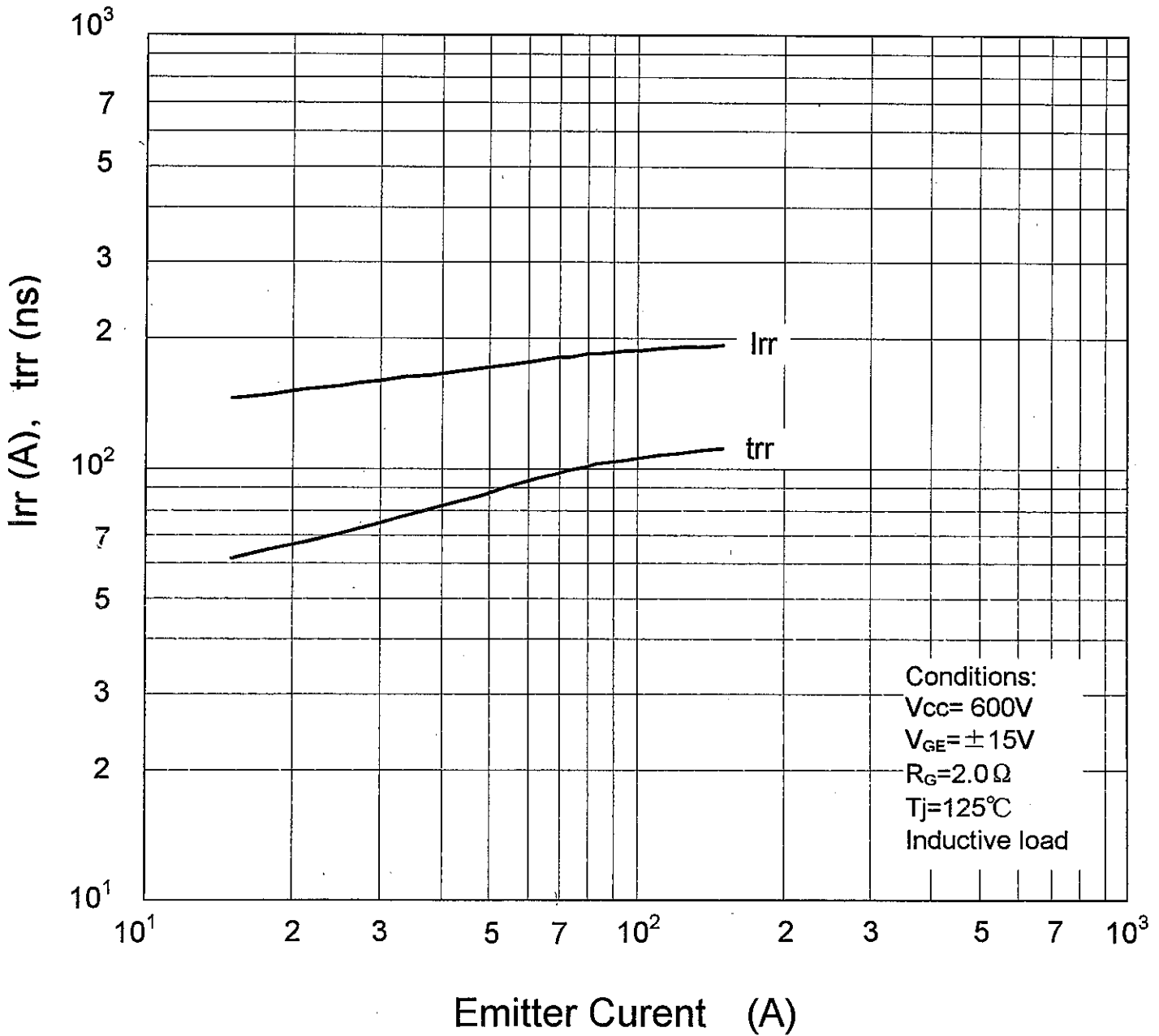
Half-Bridge switching characteristics  
 - Switching loss vs. Gate resistance

CM150DC1-24NFM  
 (Typical)

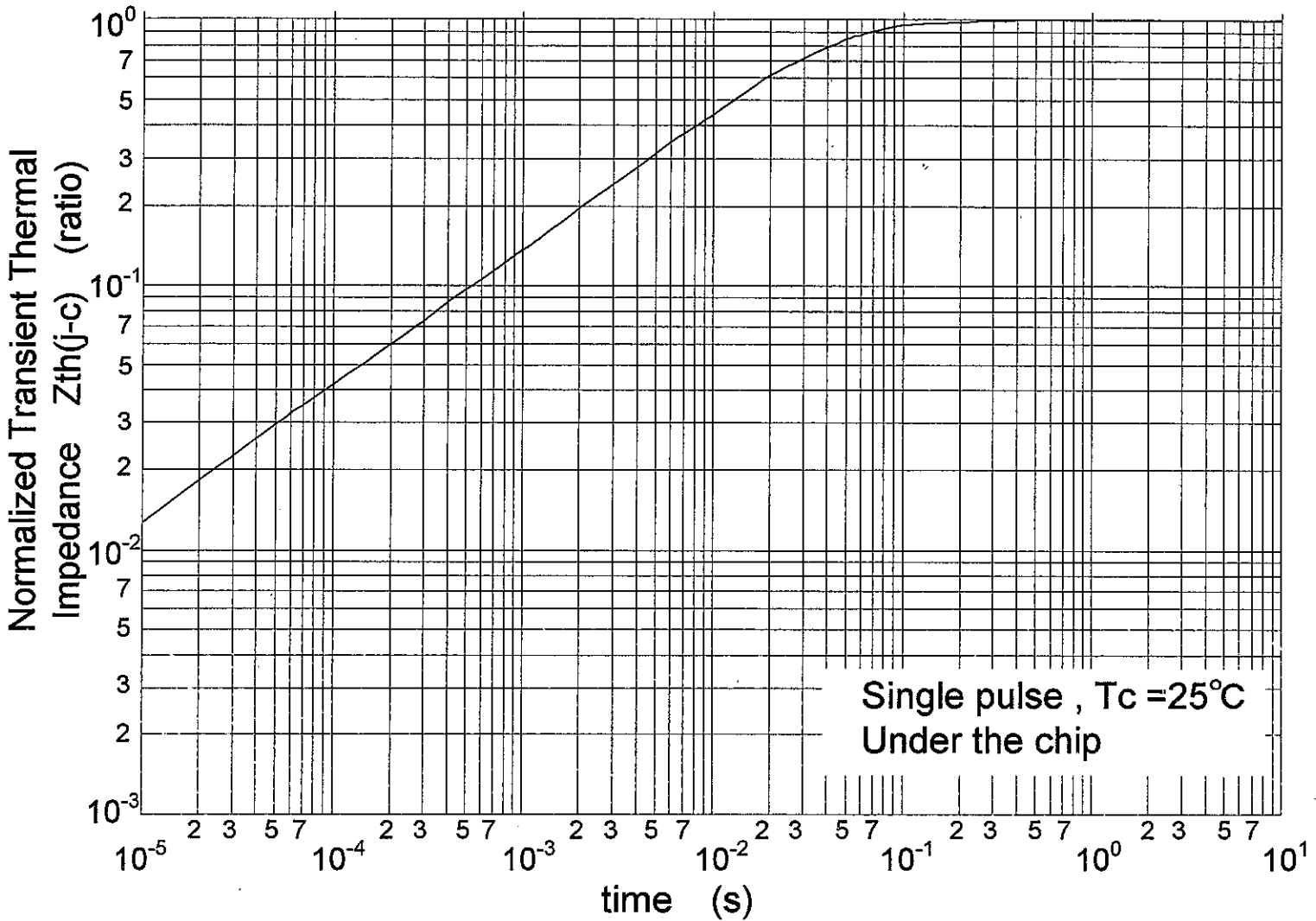


Reverse Recovery Characteristics  
of Free-Wheel Diode

CM150DC1-24NFM  
(Typical)



Transient Thermal Impedance Characteristics  
 (IGBT part & FWDi part)  
 CM150DC1-24NFM



IGBT part :

Per unit base= $R_{th(j-c)}=0.13^\circ\text{C/W}$

FWDi part :

Per unit base= $R_{th(j-c)}=0.29^\circ\text{C/W}$

$T_c$  measured point is just under the chips.

# Gate Charge Characteristics

## CM150DC1-24NFM (Typical)

