

MITSUBISHI ELECTRIC CORPORATION

|                  |             |                              |     |  |
|------------------|-------------|------------------------------|-----|--|
| APPLICATION NOTE | Prepared by | <i>S. Uchida</i>             | Rev |  |
|                  | Approved by | <i>M. Yamamoto Nov 1 '02</i> |     |  |

CMH5102.doc

**Subject** Performance Curves of CM600DY-12NF

**Contents**

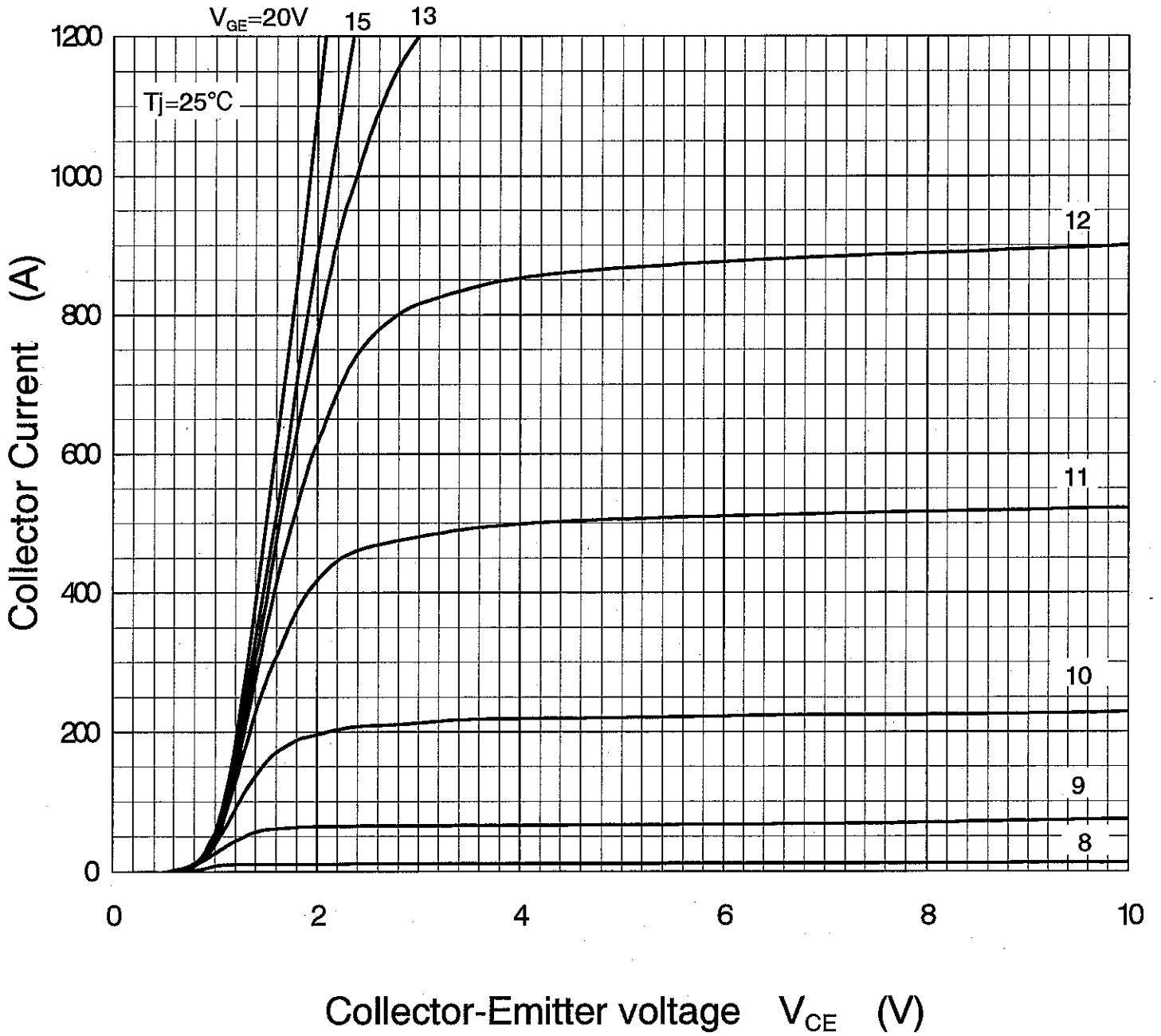
- Output Characteristics(typical)
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- Gate Charge Characteristics(typical)

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.

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|-------------|-----------|------------------|
| IGBT Module | CMH-5102- | APPLICATION NOTE |
|-------------|-----------|------------------|

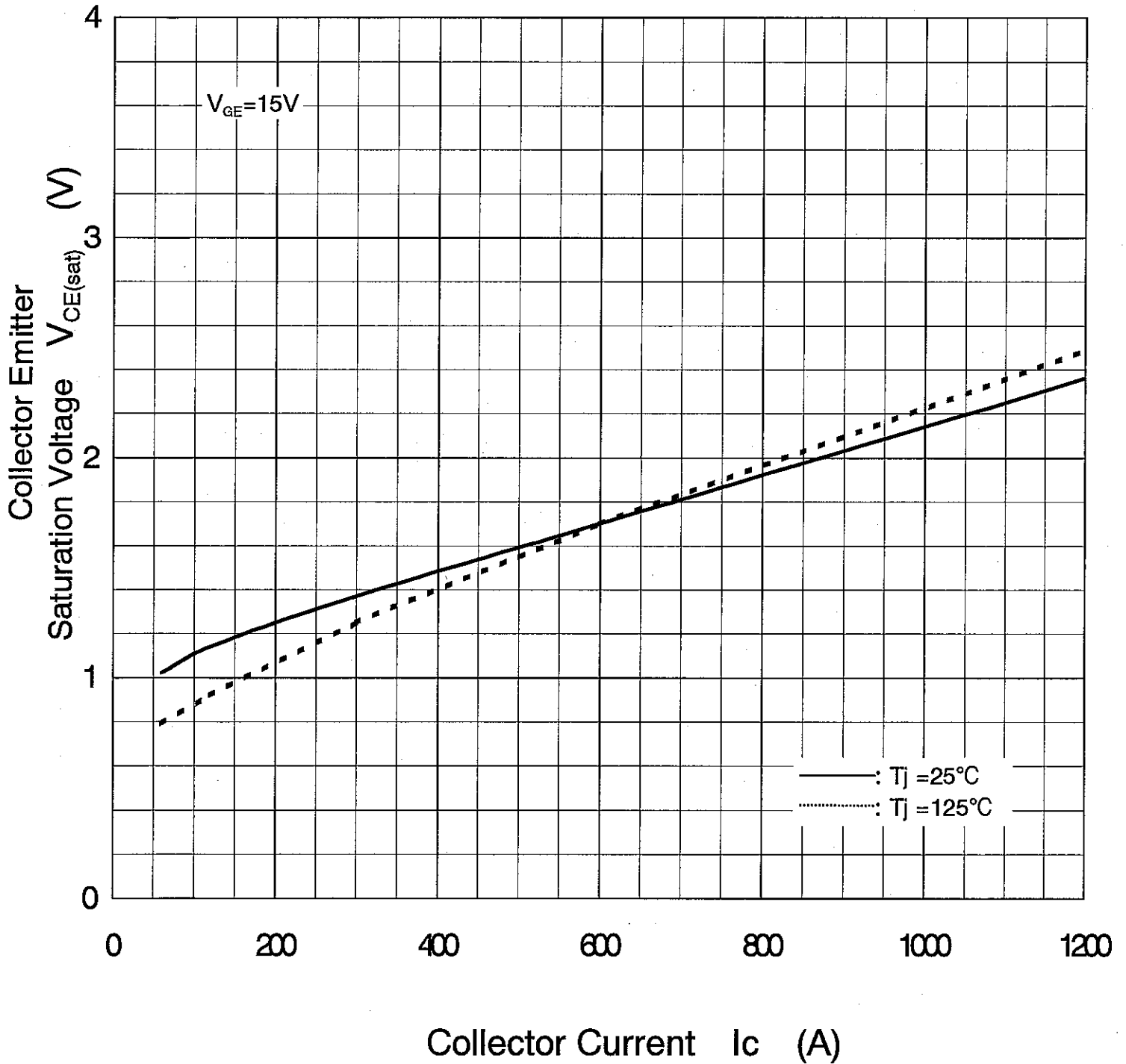
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## Output Characteristics (Typical) CM600DY-12NF



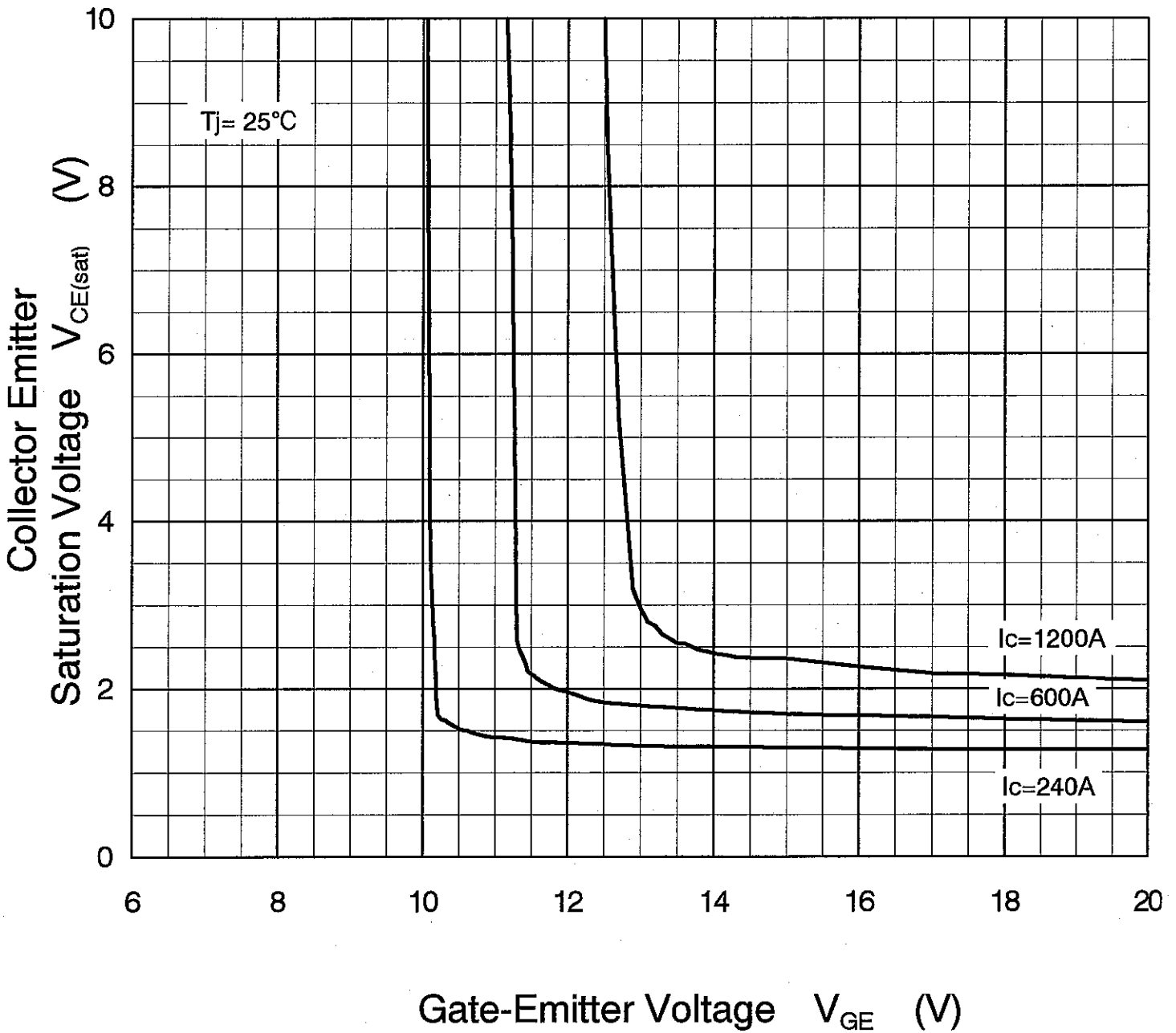
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## Collector-Emitter Saturation Voltage Characteristics (Typical) CM600DY-12NF



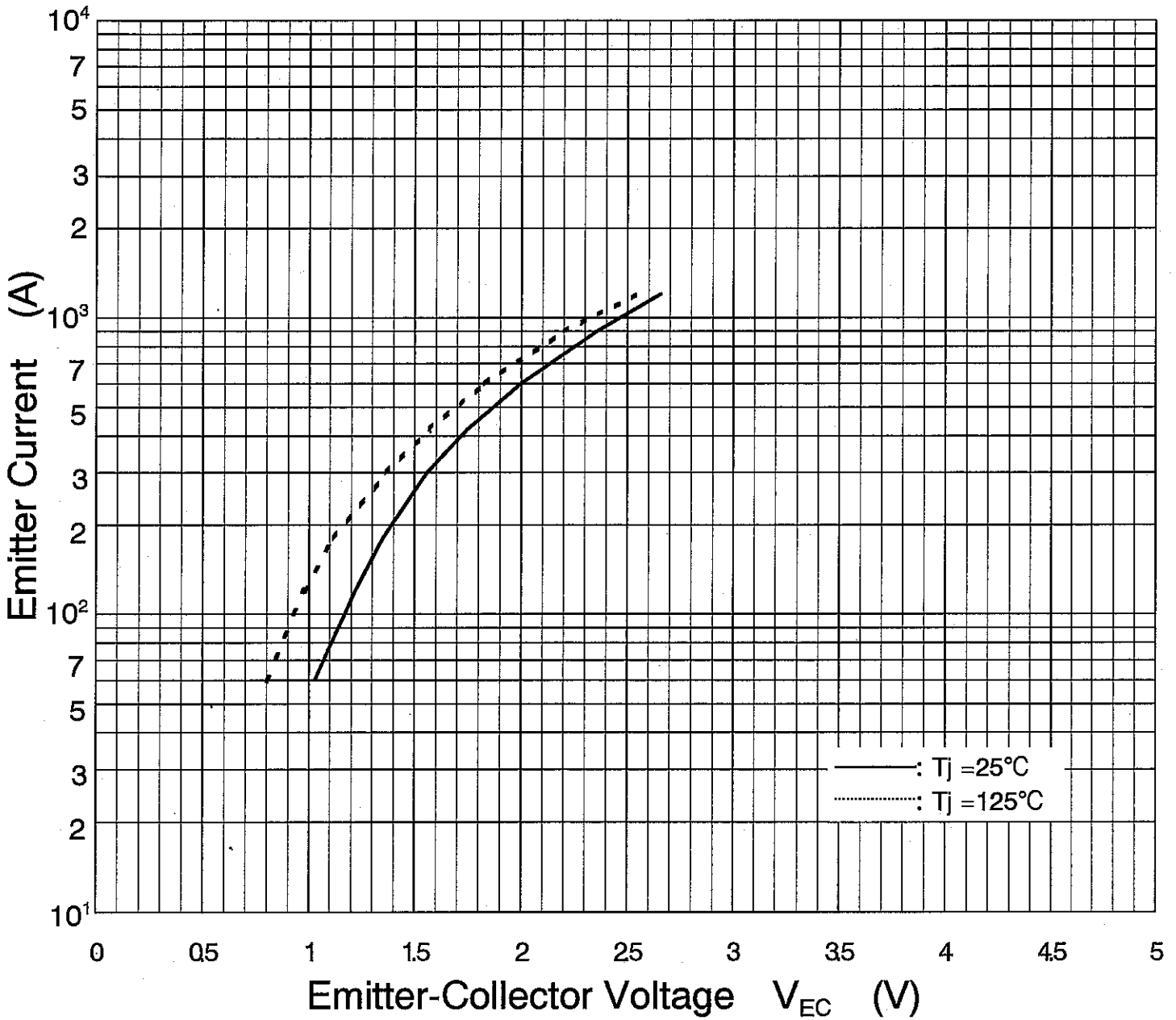
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## Collector-Emitter Saturation Voltage Characteristics (Typical) CM600DY-12NF



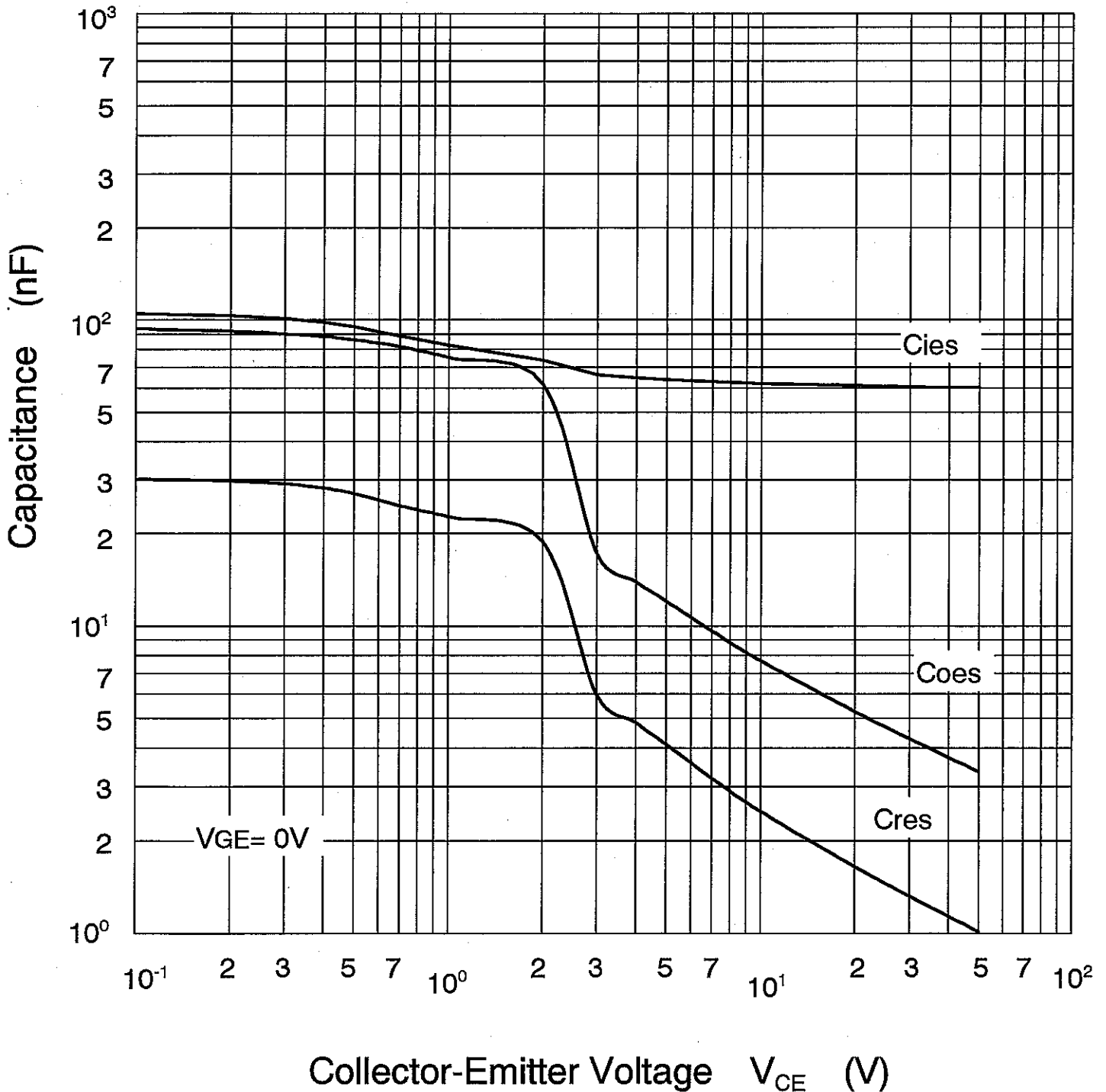
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## Free-Wheel Diode Forward Characteristic (typical) CM600DY-12NF



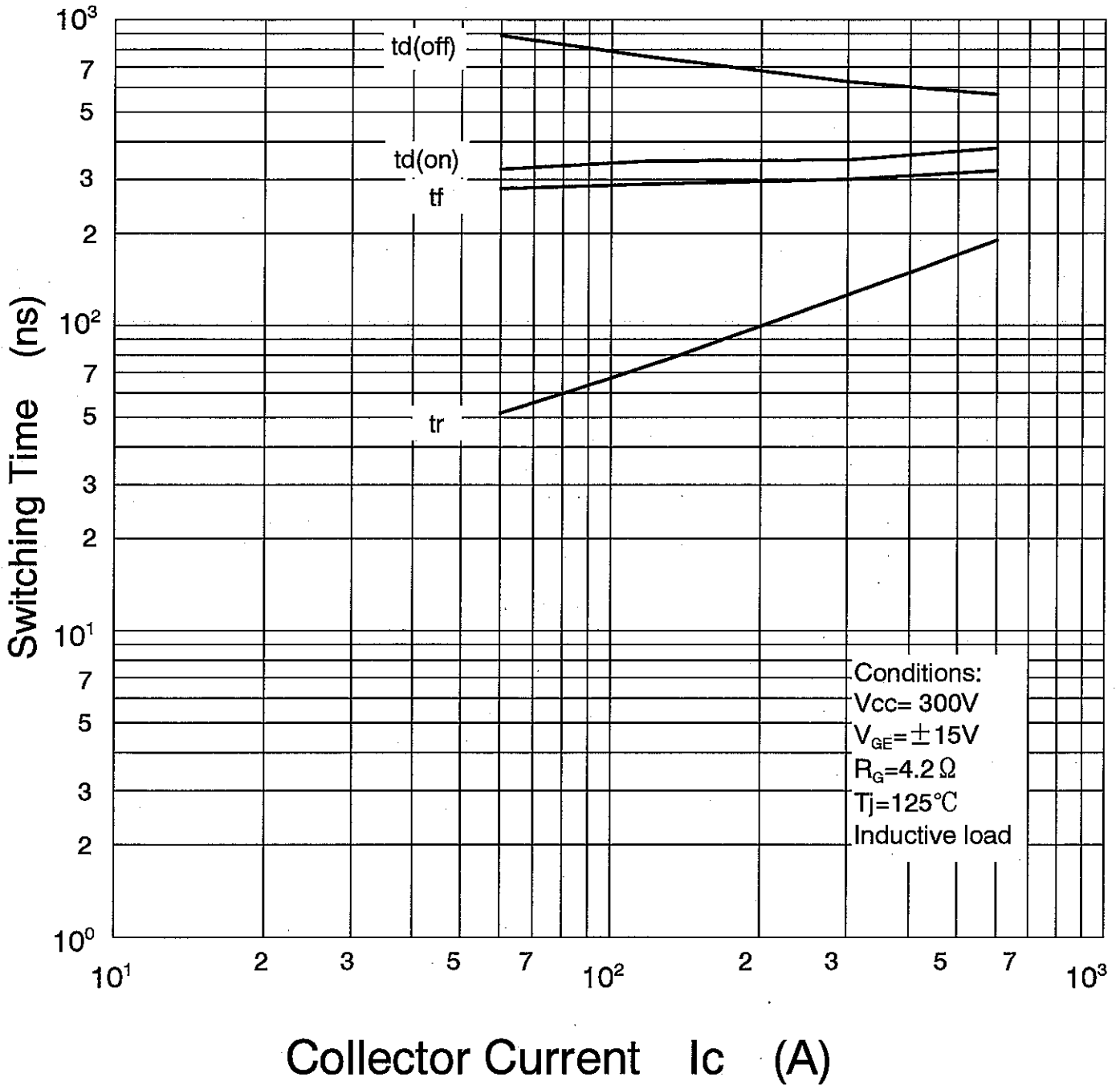
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## Capacitance- $V_{CE}$ Characteristics (typical) CM600DY-12NF



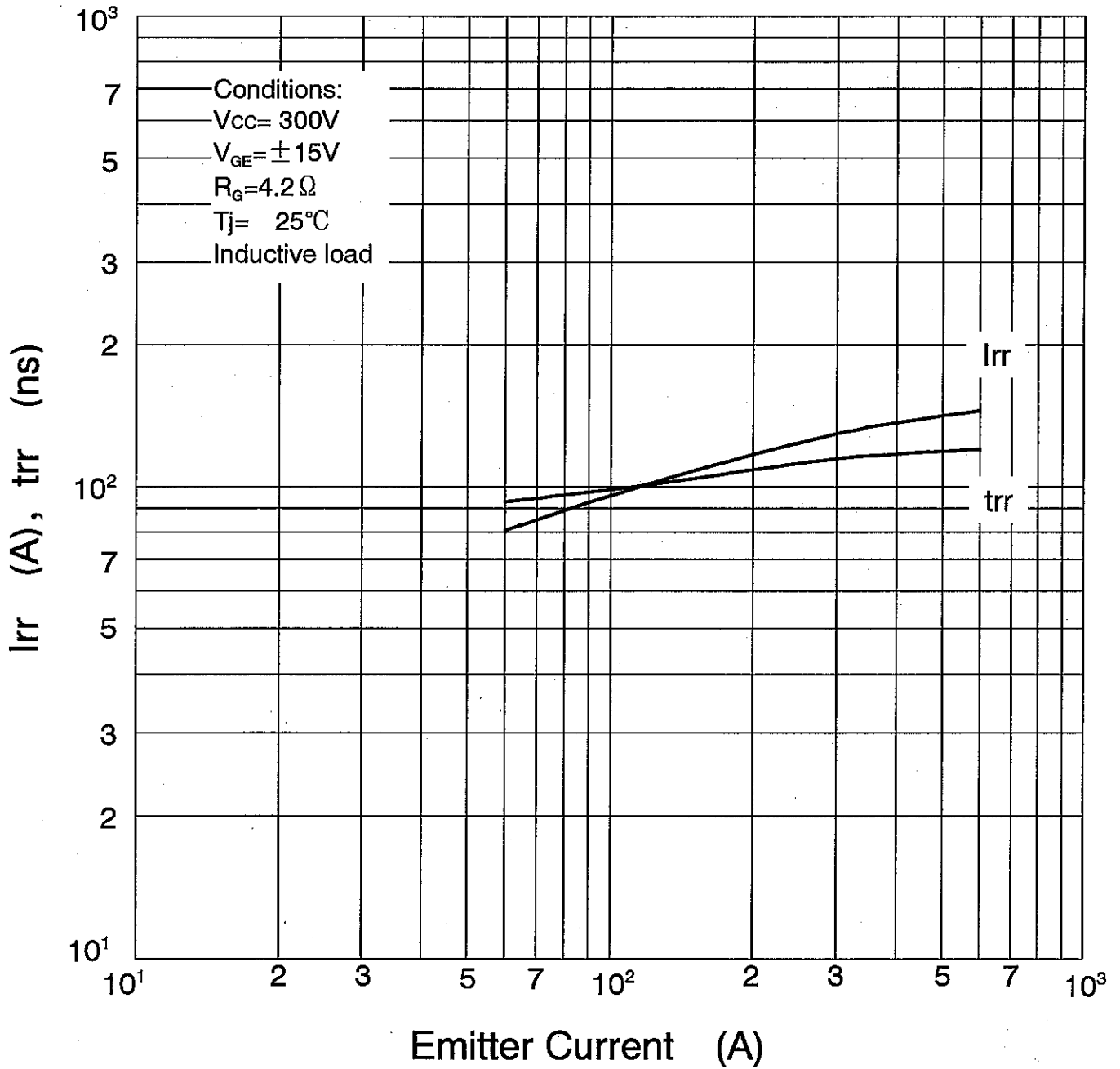
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## Half-Bridge Switching Characteristics (typical) CM600DY-12NF



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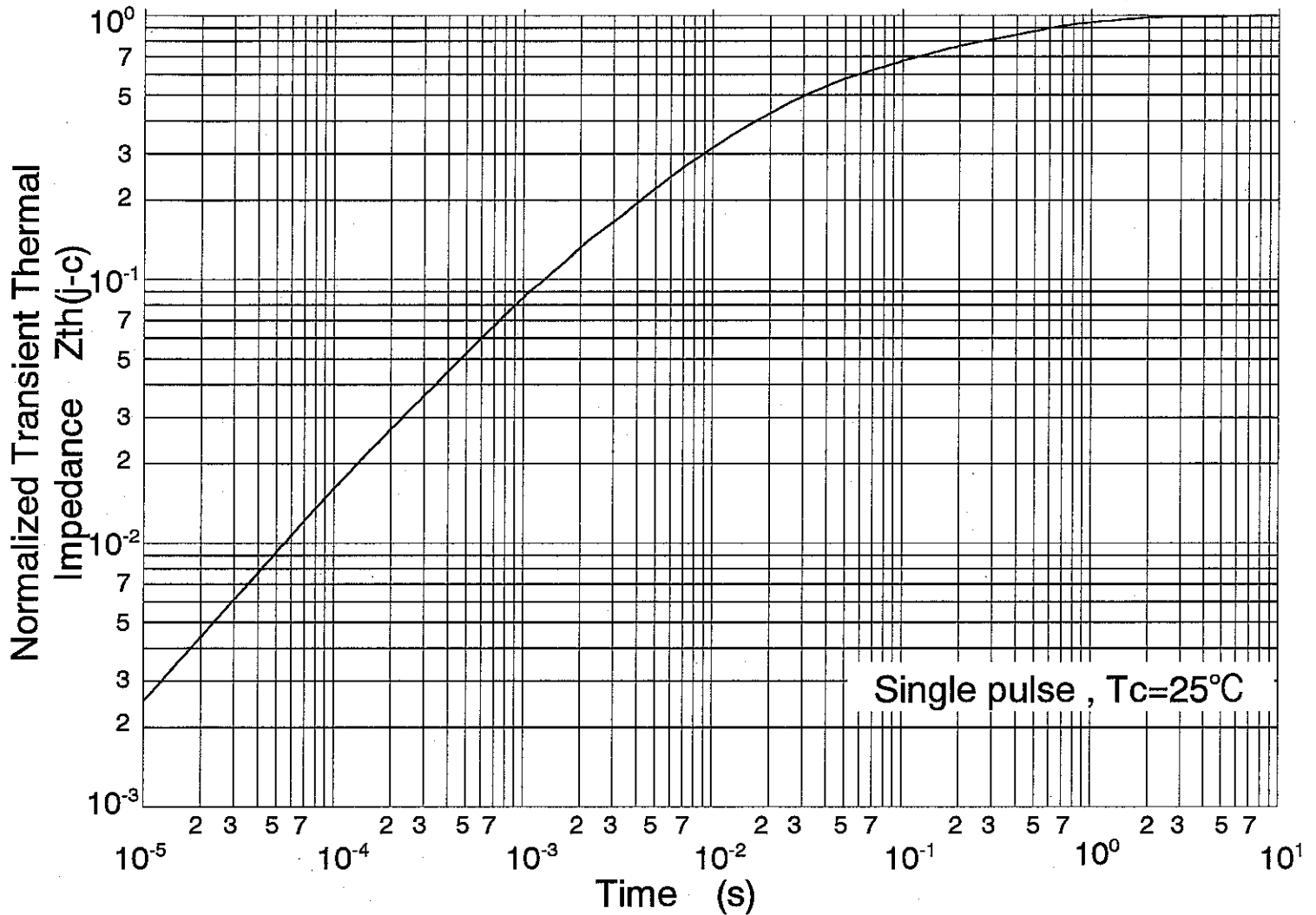
## Reverse Recovery Characteristics of Free-Wheel Diode (typical) CM600DY-12NF





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## Transient Thermal Impedance Characteristics (IGBT part & FWD part) CM600DY-12NF



IGBT part :

Per unit base= $R_{th(j-c)}=0.11^{\circ}\text{C/W}$

FWD part :

Per unit base= $R_{th(j-c)}=0.18^{\circ}\text{C/W}$

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**Gate Charge Characteristics**  
 (typical)  
**CM600DY-12NF**

