

MITSUBISHI ELECTRIC CORPORATION

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|------------------|-------------|-----------------------------|-----|---|-------------------------------|
| APPLICATION NOTE | Prepared by | <i>S. Uchida</i> | Rev | A | <i>S. Uchida</i> |
| | Approved by | <i>M. Takata 24-Oct-'02</i> | | | <i>M. Yamamoto Nov. 1.'02</i> |

CMH5098.doc

Subject Performance Curves of CM150DY-12NF

Contents

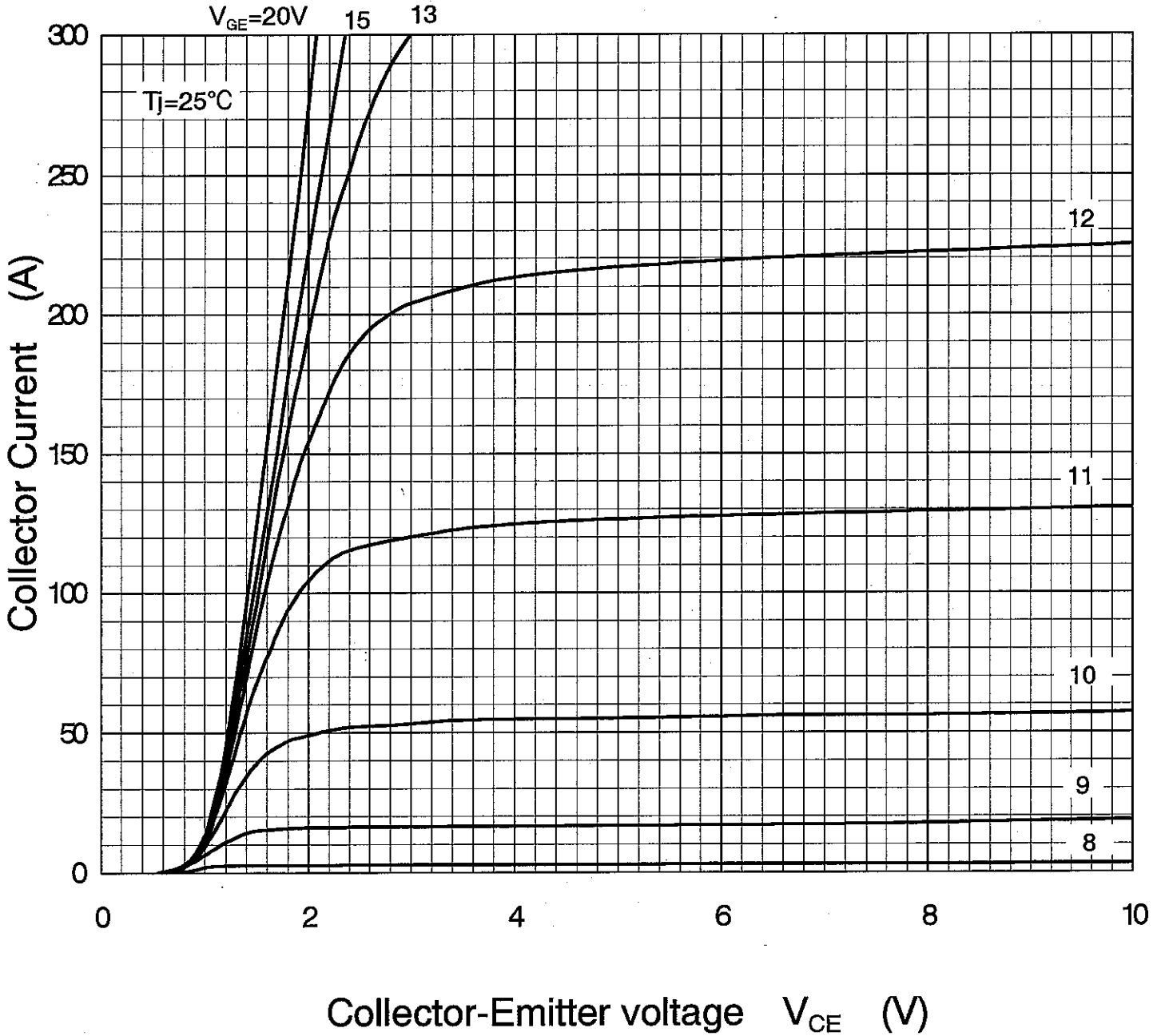
- Output Characteristics(typical)
- Collector-Emitter Saturation Voltage Characteristics(typical)
- Collector-Emitter Saturation Voltage Characteristics(typical)
- Free-Wheel Diode Forward Characteristics(typical)
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Don't measure these static characteristics 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-5098-A | APPLICATION NOTE |
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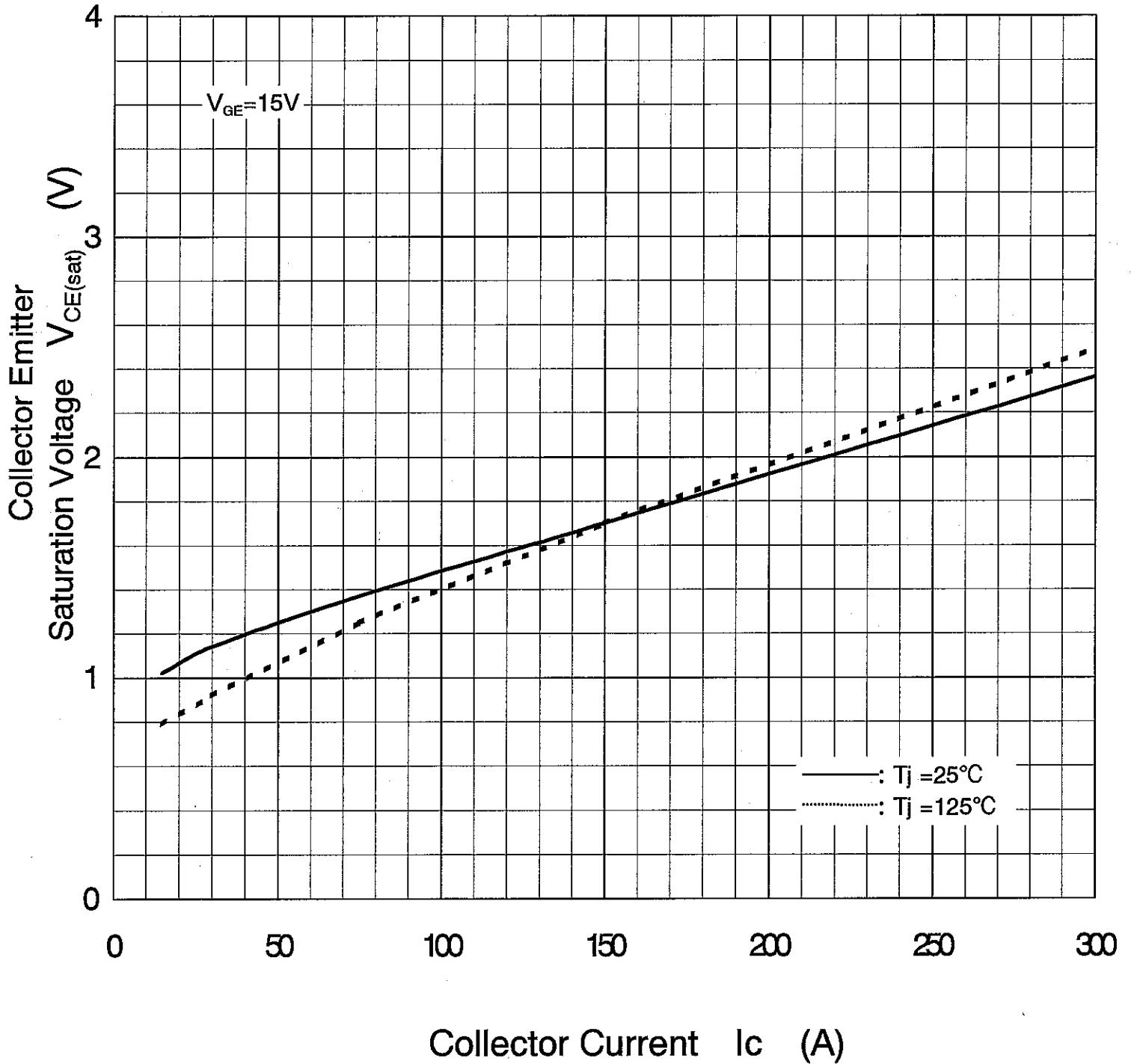
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| | Approved by | | | |

Output Characteristics (Typical) CM150DY-12NF



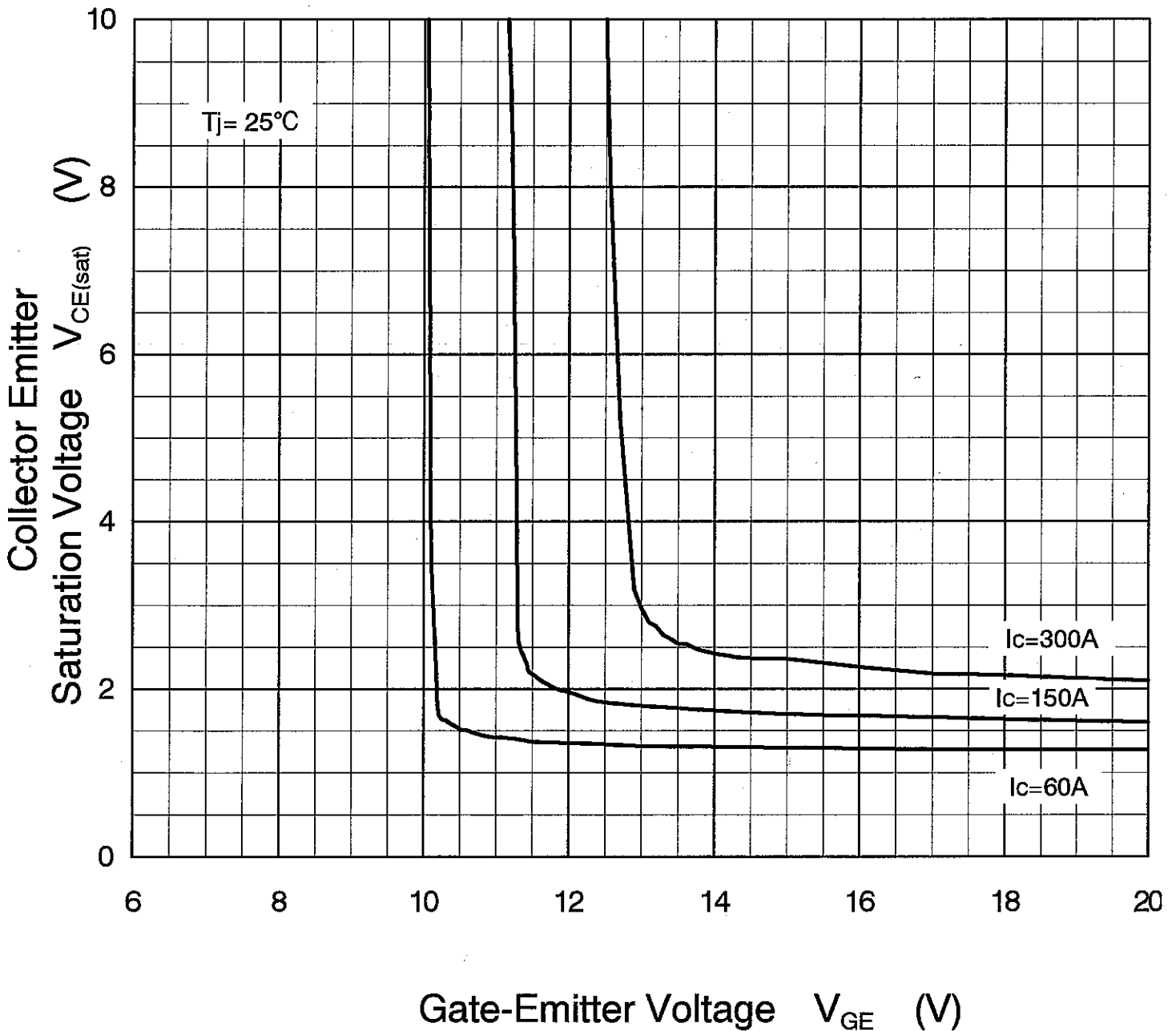
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Collector-Emitter Saturation Voltage Characteristics (Typical) CM150DY-12NF



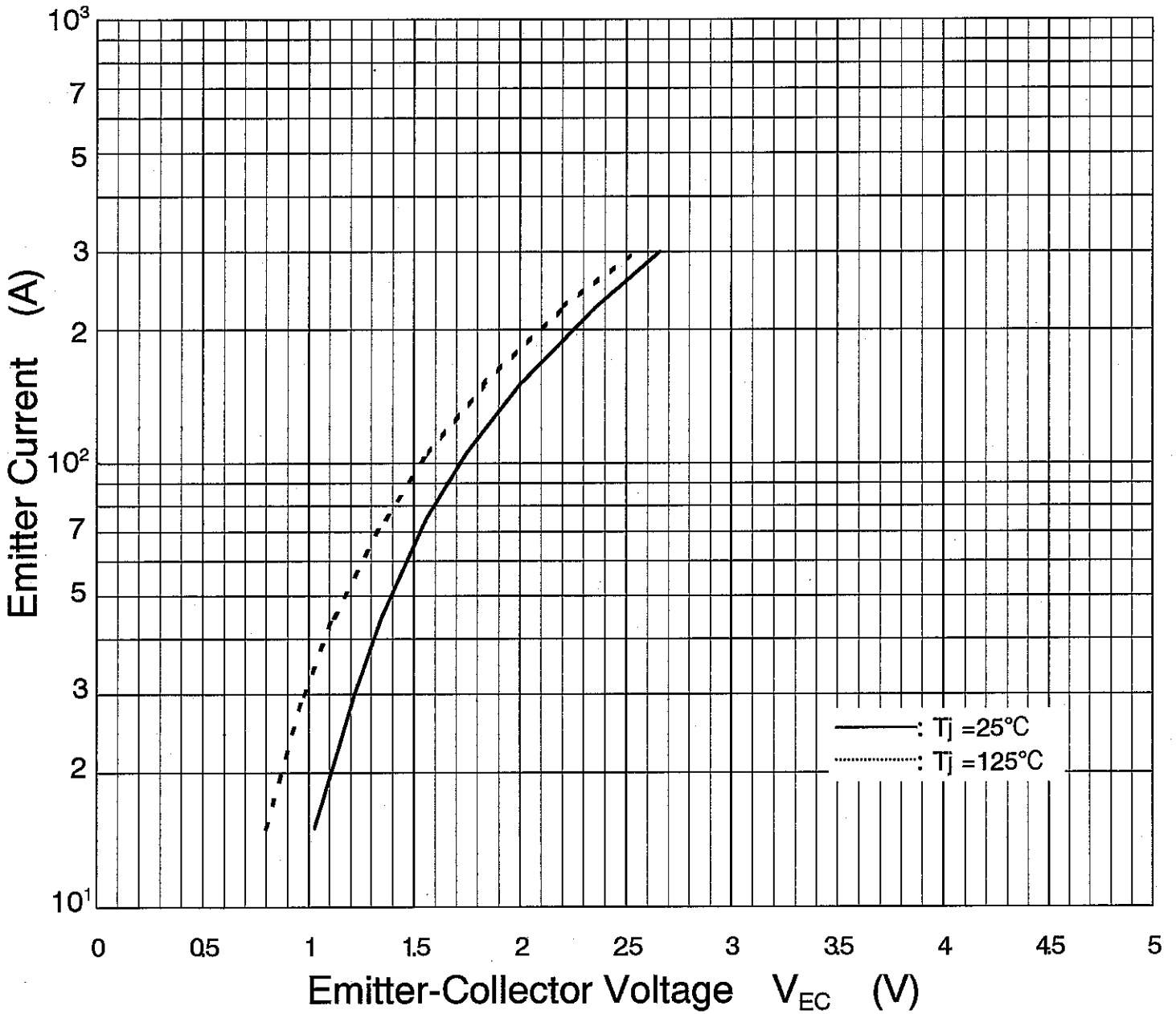
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Collector-Emitter Saturation Voltage Characteristics (Typical) CM150DY-12NF



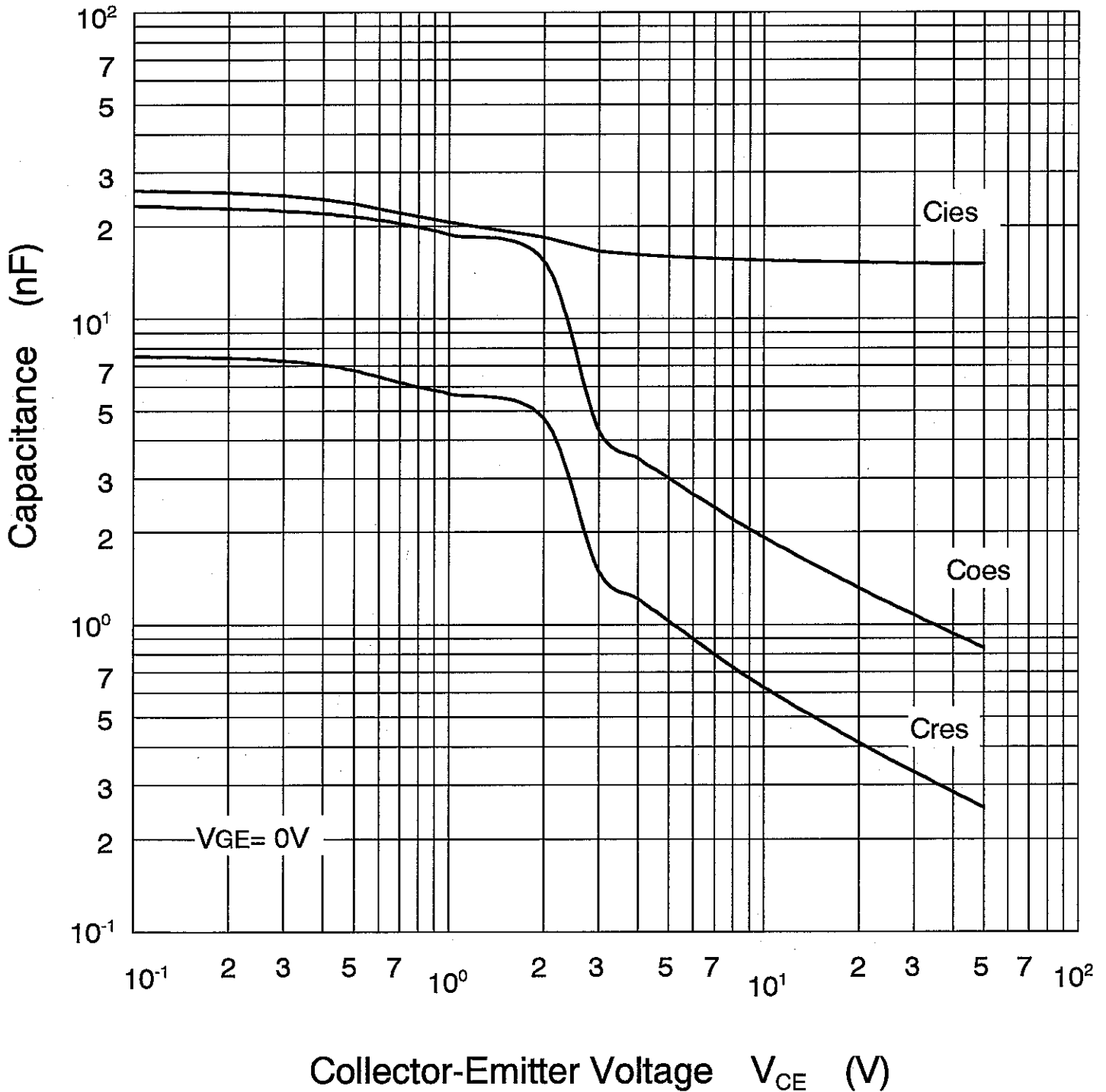
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Free-Wheel Diode Forward Characteristic (typical) CM150DY-12NF



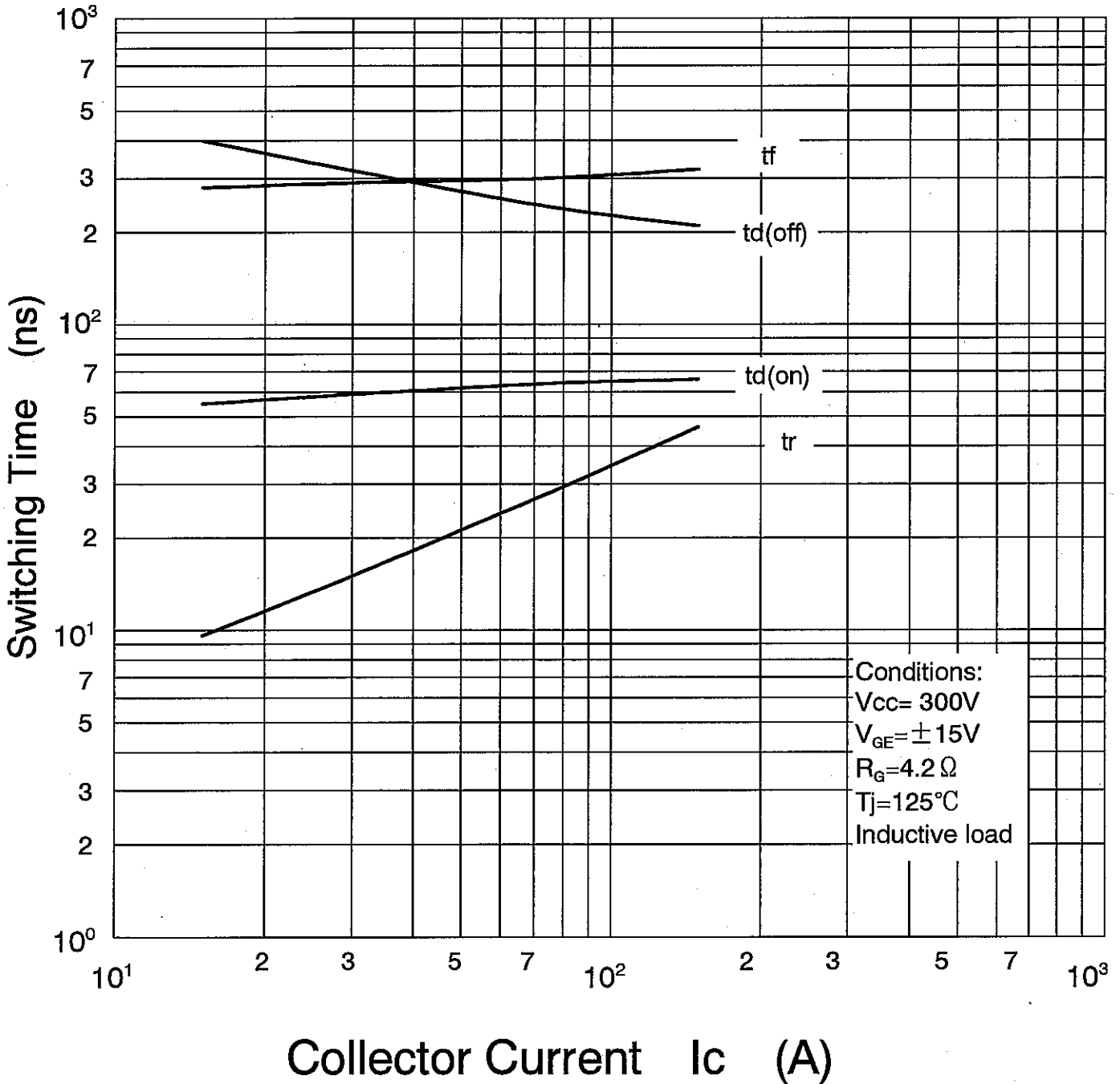
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Capacitance- V_{CE} Characteristics (typical) CM150DY-12NF



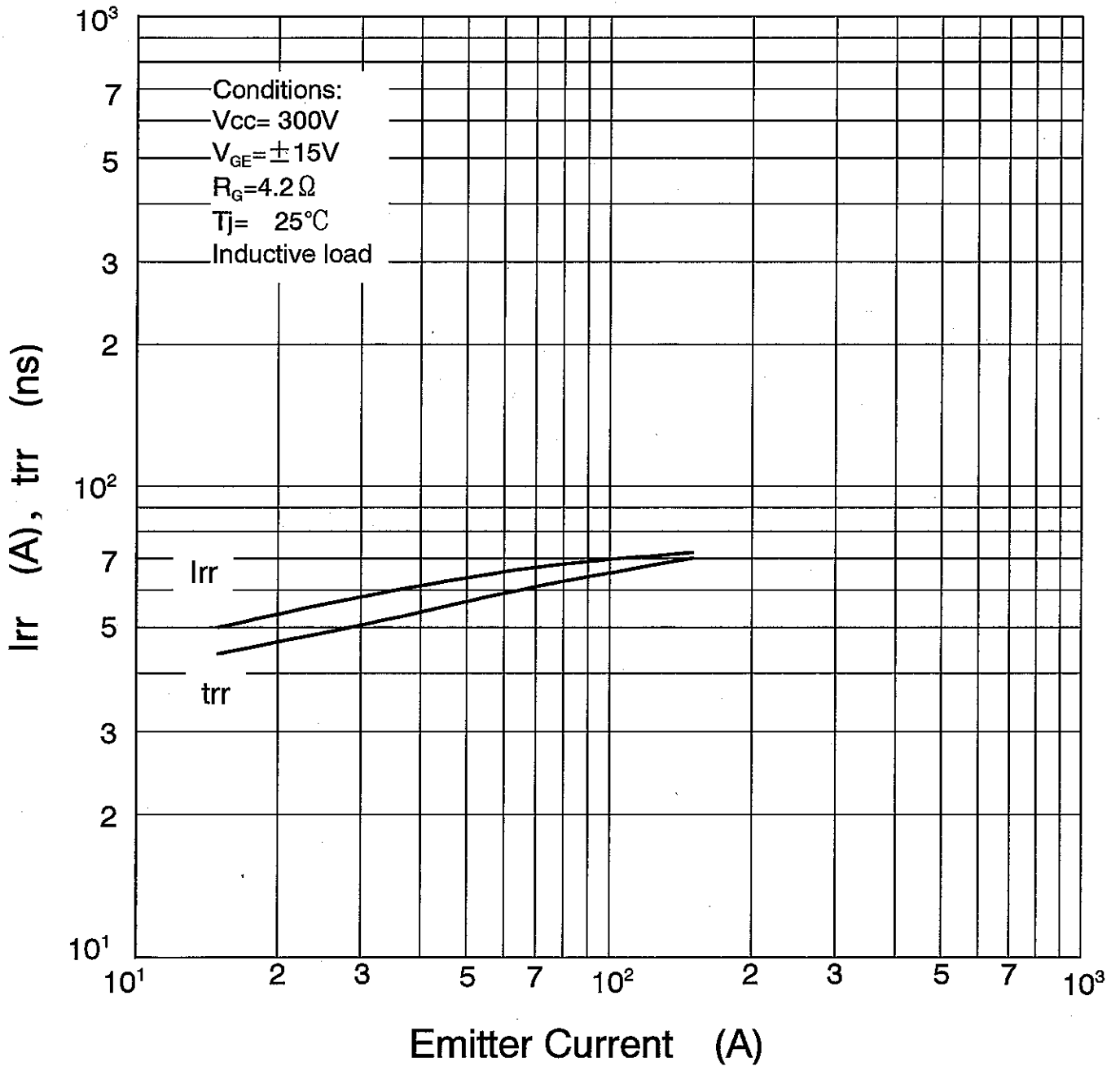
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Half-Bridge Switching Characteristics (typical) CM150DY-12NF



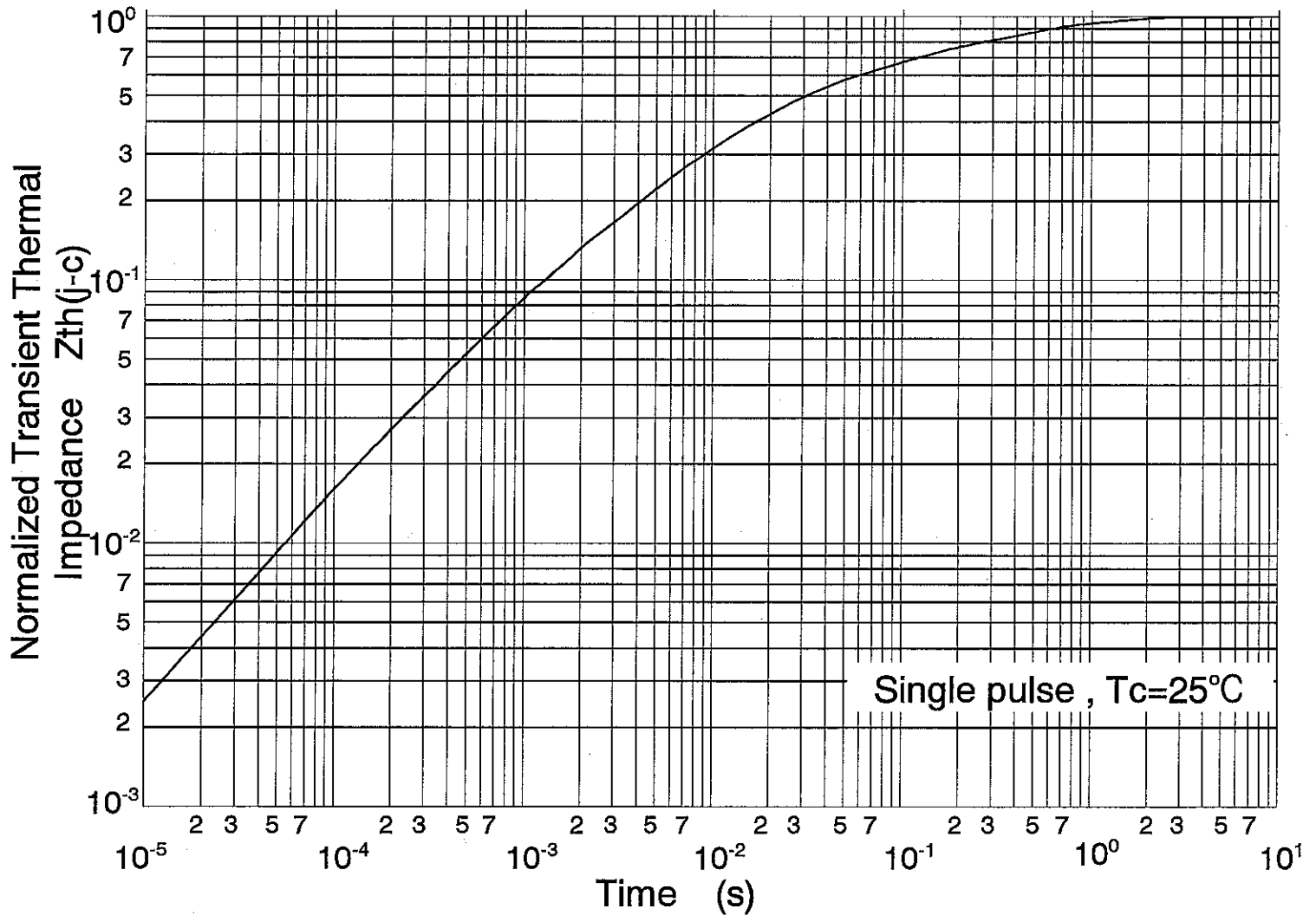
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Reverse Recovery Characteristics of Free-Wheel Diode (typical) CM150DY-12NF



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Transient Thermal Impedance Characteristics (IGBT part & FWD part) CM150DY-12NF



IGBT part :

Per unit base= $R_{th(j-c)}=0.21^{\circ}\text{C/W}$

FWD part :

Per unit base= $R_{th(j-c)}=0.47^{\circ}\text{C/W}$

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Gate Charge Characteristics
 (typical)
CM150DY-12NF

