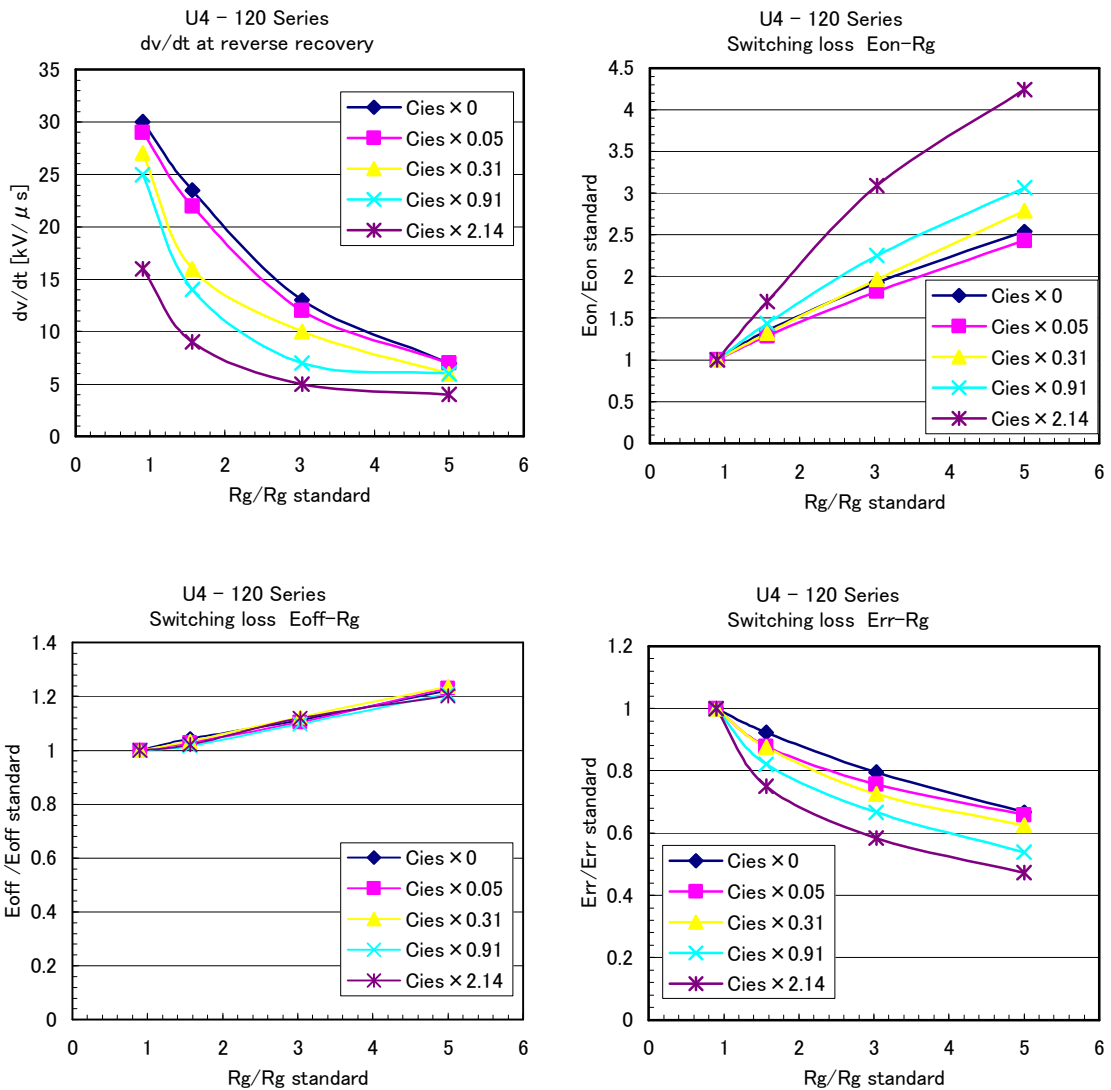


FUJI IGBT Modules U4-120 Series
Switching loss, dv/dt vs. C_{GE} , R_G

Sample: 2MBI200U4H-120

Conditions: Reverse recovery dv/dt: $V_{CC}=600V$, $I_C=20A$, $V_{GE}=+15V/-8V$, $T_j=RT$

Switching loss: $V_{CC}=600V$, $I_C=20A$, $V_{GE}=+15V/-8V$, $T_j=RT$

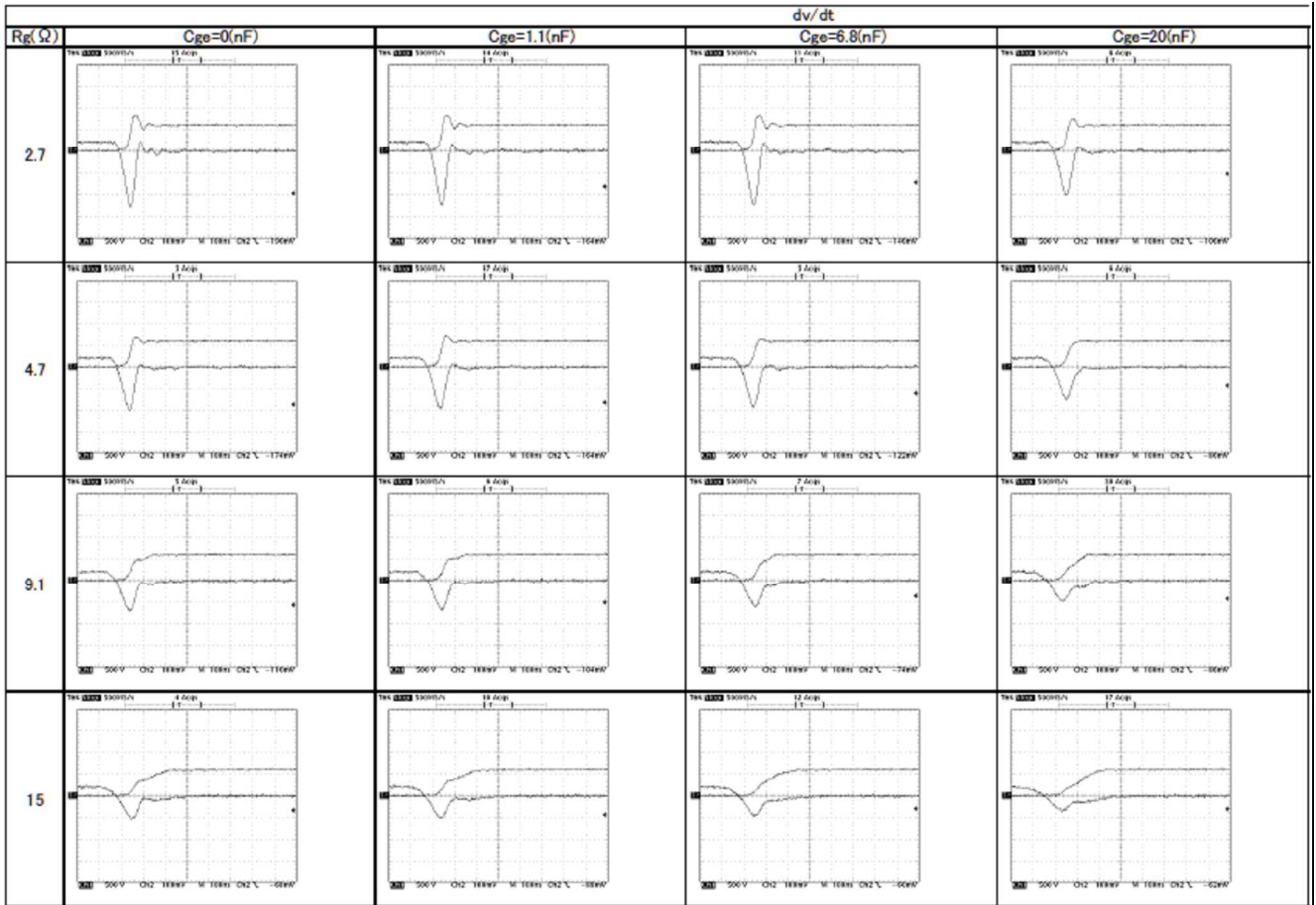


- ※ E_{on} standard : $R_g=R_g$ standard , $C_{ies}=0 \mu F$ (they are similar for E_{off} and E_{rr})
- ※ Connecting C_{ge} is unnecessary for U4-Series because it able to control the switching loss, dv/dt by the gate resistance.

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Switching waveform



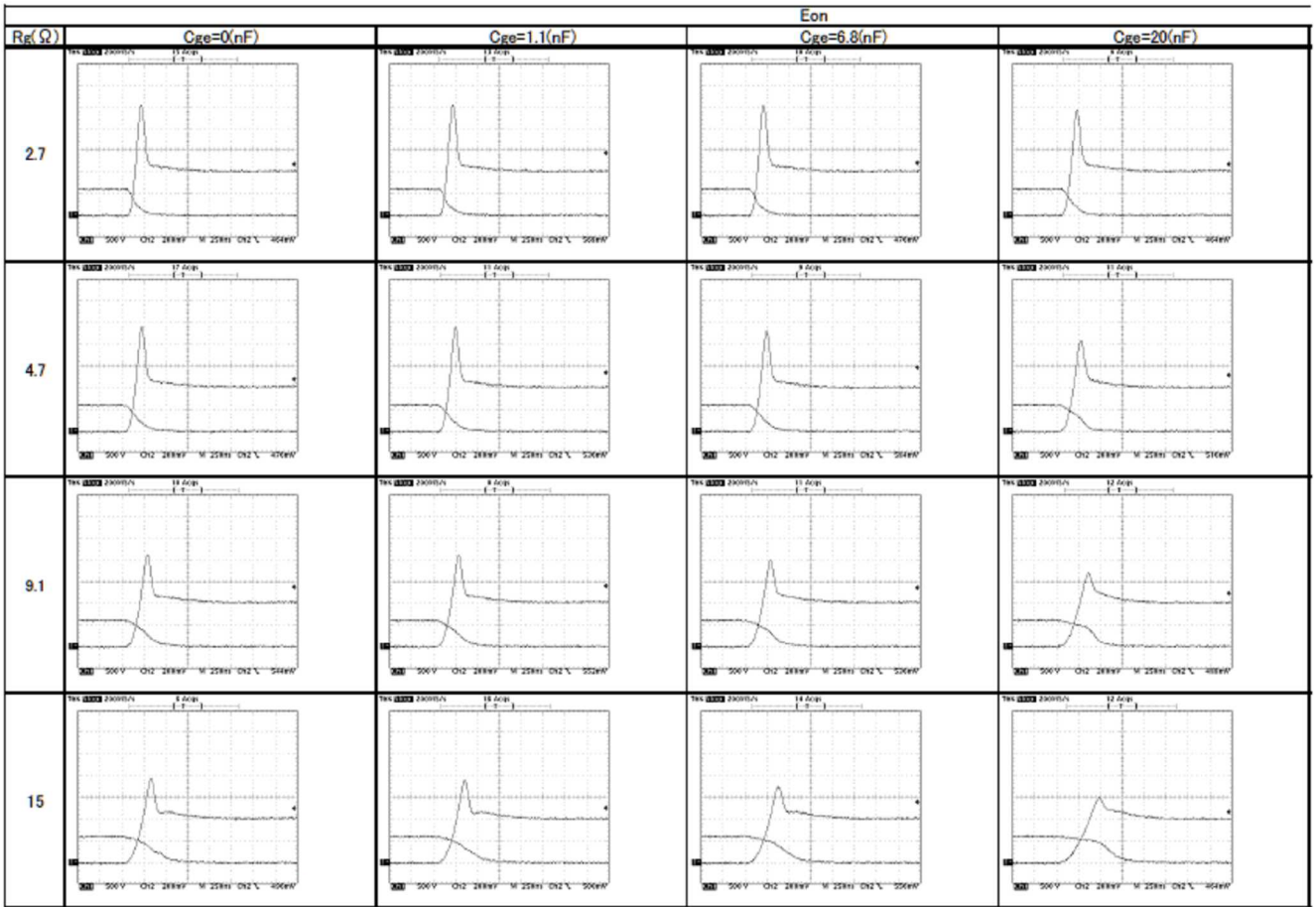
$E_d=600V, I_c=20A, 2MBI200U4H-120, V_{ge}=+15V/-8V, T_j=RT$

$I_c: 100A/div, V_{ce}: 500V/div, t: 100ns/div$

Figure 1. Reverse-recovery waveform

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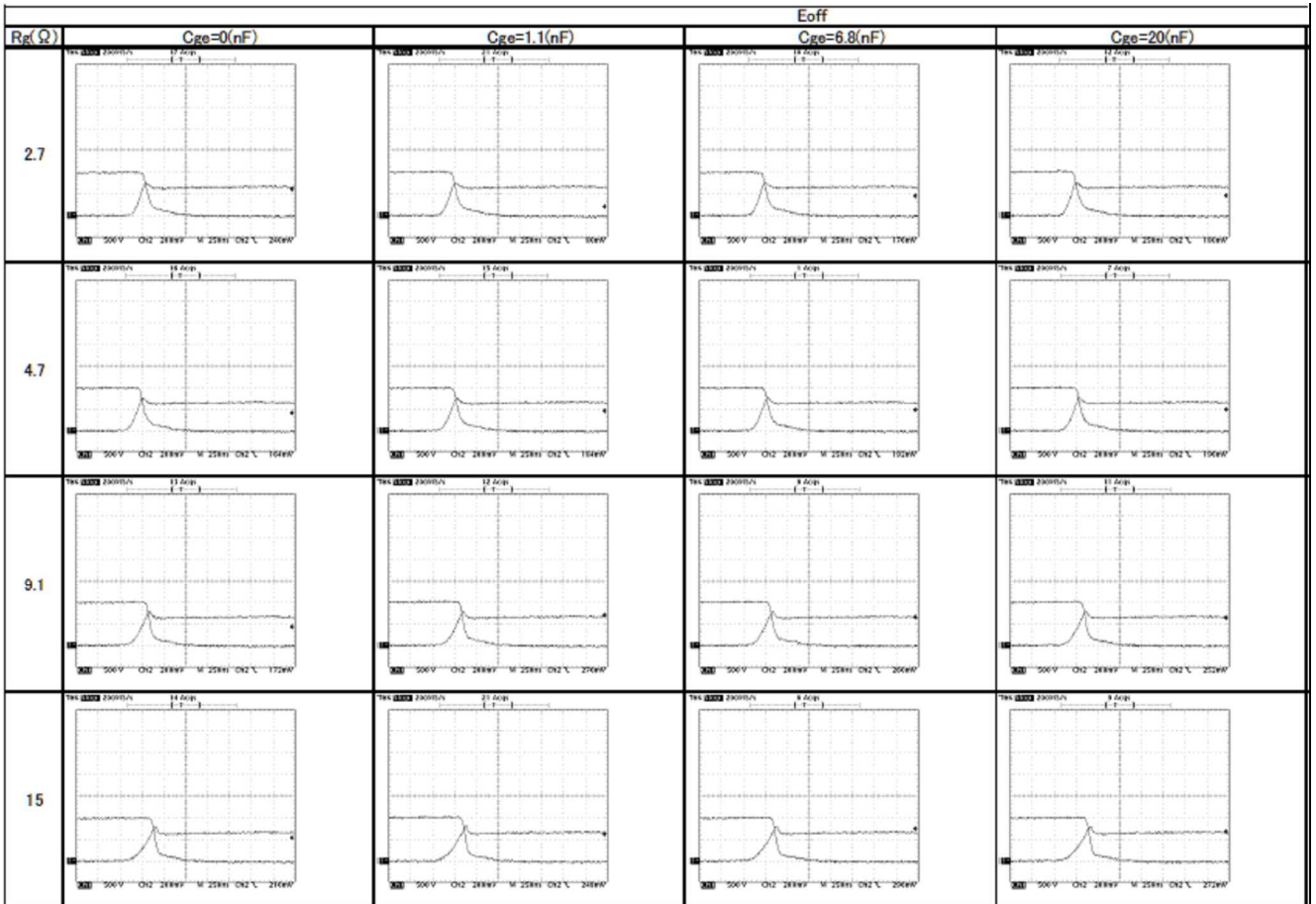
$E_d=600V, I_c=200A, 2MBI200U4H-120, V_{ge}=+15V/-8V, T_j=125^\circ C$

$I_c: 100A/div, V_{ce}: 500V/div, t: 250ns/div$

Figure 2. Turn-on waveform

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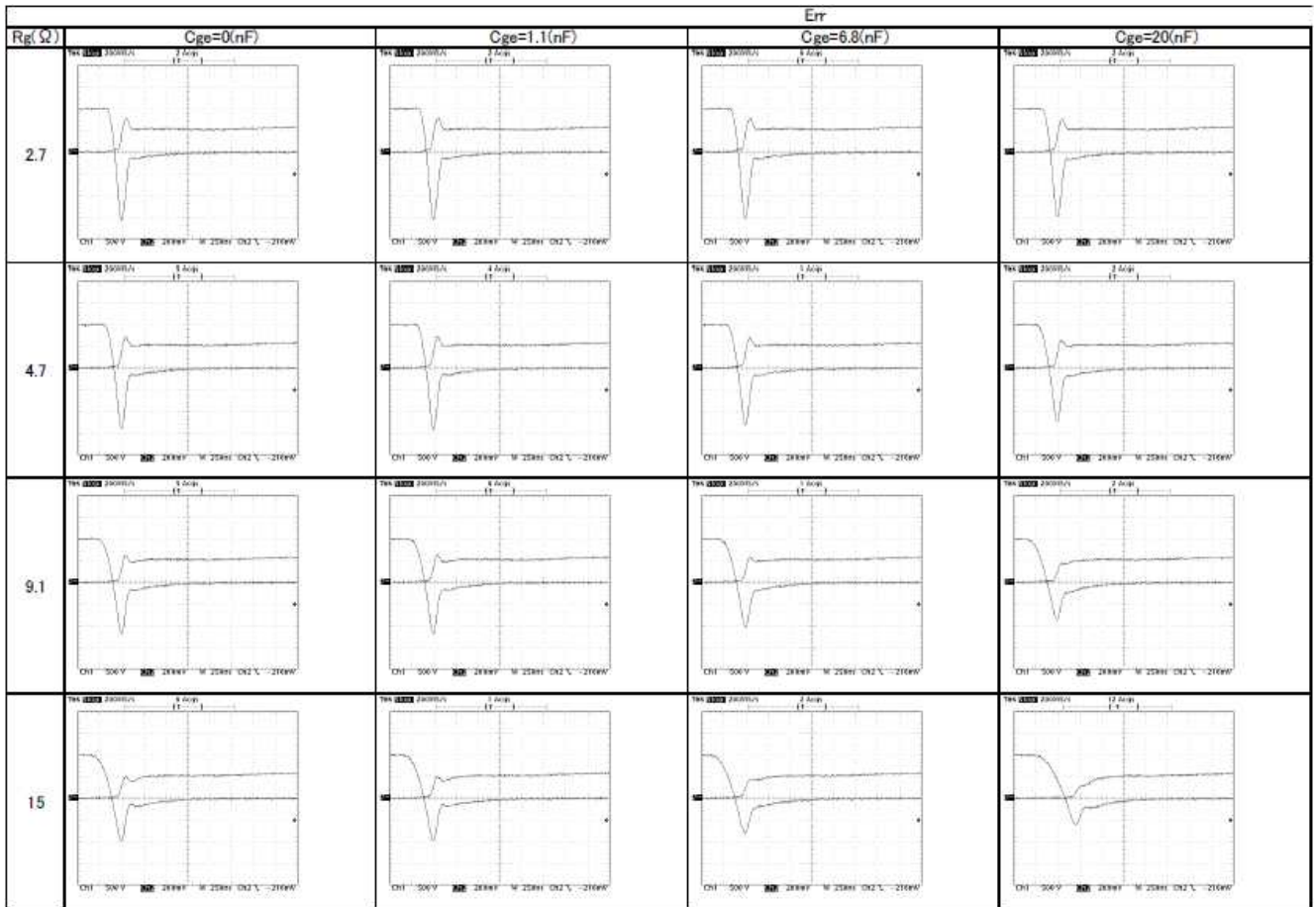
$E_d=600V, I_c=200A, 2MBI200U4H-120, V_{ge}=+15V/-8V, T_j=125^\circ C$

$I_c: 100A/div, V_{ce}: 500V/div, t: 250ns/div$

Figure 3. Turn-off waveform

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$E_d=600V, I_c=200A, 2MBI200U4H-120, V_{ge}=+15V/-8V, T_j=125^\circ C$

$I_c: 100A/div, V_{ce}: 500V/div, t: 250ns/div$

Figure 4. Reverse-recovery waveform

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