

— 4MBI900VB-120R1-50 —

Spike Voltage vs. R_G

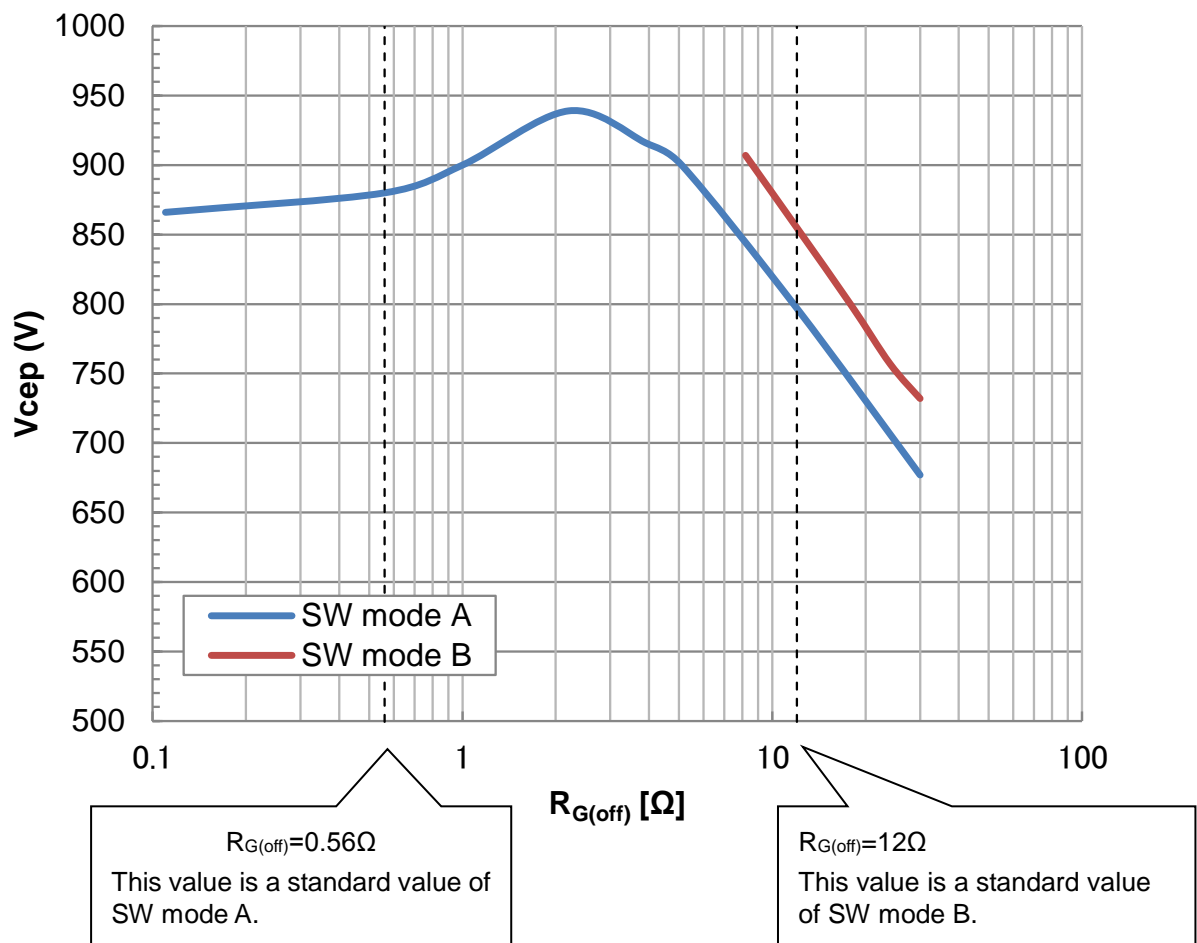
Measured module: 4MBI900VB-120R1-50 (RB-IGBT=900V)

Measured condition: $T_j=RT$, $V_{CC}=500V$, $I_C=900A$, $V_{GE}=15V/-15V$, $R_G=var.$

The data below shows turn off spike voltage in dependency of the gate resistance (R_G).

[SW mode A] T1,T4 IGBT switching

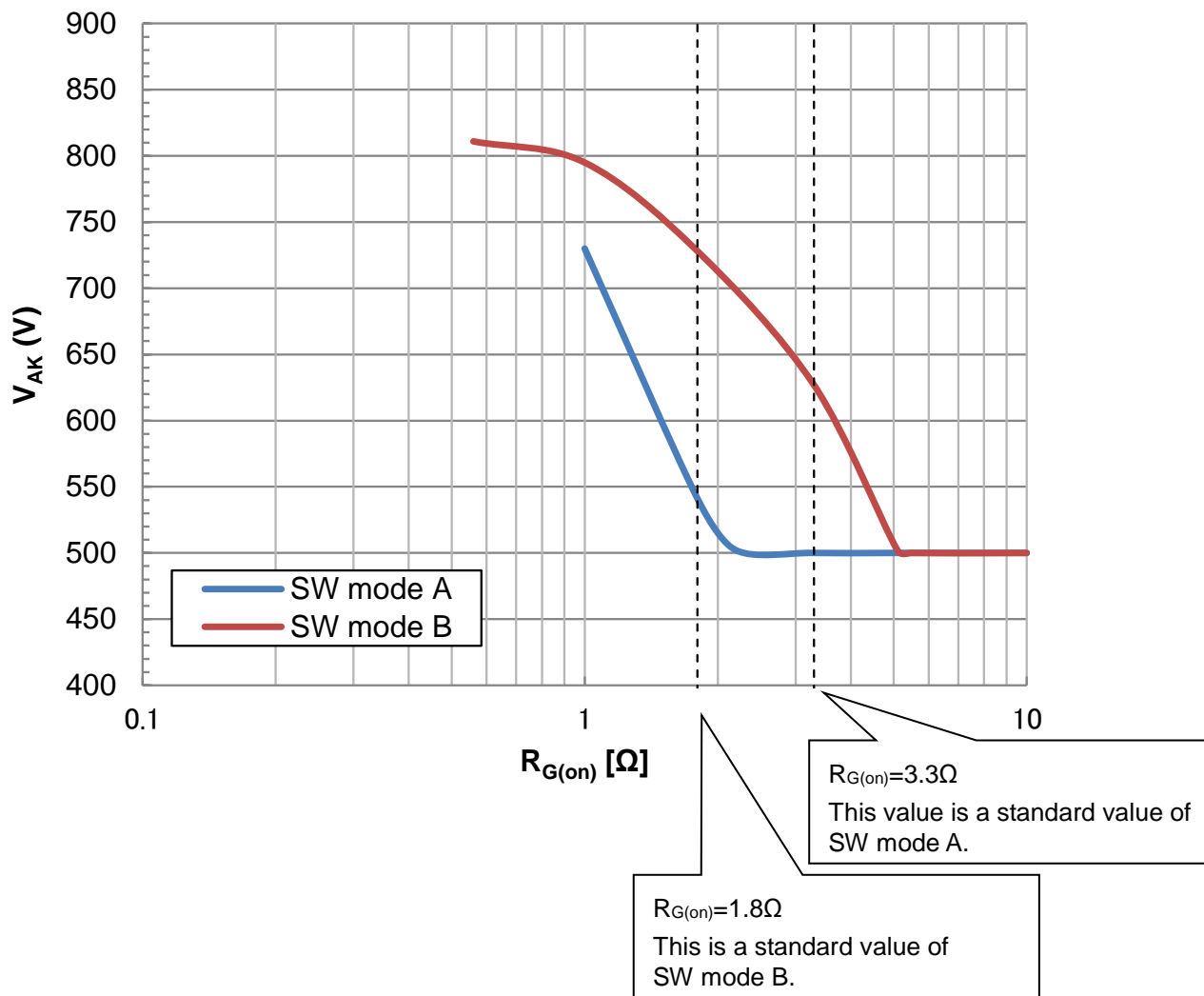
[SW mode B] T2,T3 RB-IGBT switching



Measured module: 4MBI900VB-120R1-50 (RB-IGBT=900V)
Measured condition: $T_j=RT$, $V_{CC}=500V$, $I_C=900A$, $V_{GE}=15V/-15V$, $R_G=var.$

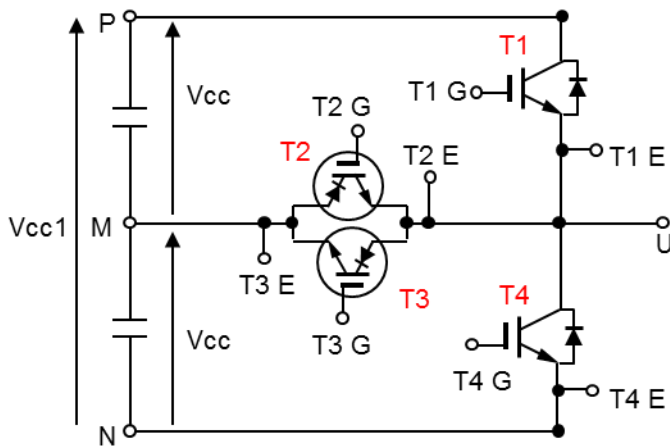
The data below shows reverse recovery spike voltage in dependency of the gate resistance(R_G).

[SW mode A] T2,T3 RB-IGBT recovery
[SW mode B] T1,T4 FWD recovery



Appendix

Circuit diagram



Switching modes

SW mode	Load L	T1	T2	T3	T4
A	M-U	SW	ON	OFF	OFF
	M-U	OFF	OFF	ON	SW
B	U-N	OFF	SW	ON	OFF
	P-U	OFF	ON	SW	OFF

SW: Connect to drive circuit and input gate signal

ON: Bias voltage of gate +15V

OFF: Reverse bias voltage of gate -15V

$V_{cc1} = 2 \times V_{cc}$

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