

**FUJI Small-IPM X-series**

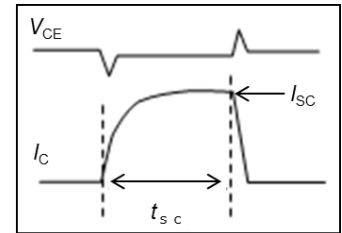
**SCSOA**

Conditions:  $V_{CE}=400V$ ,  $T_j=125^\circ C$ , non-repetitive pulse

This document shows the short circuit capability dependency on control circuit voltage  $V_{CC}$ .

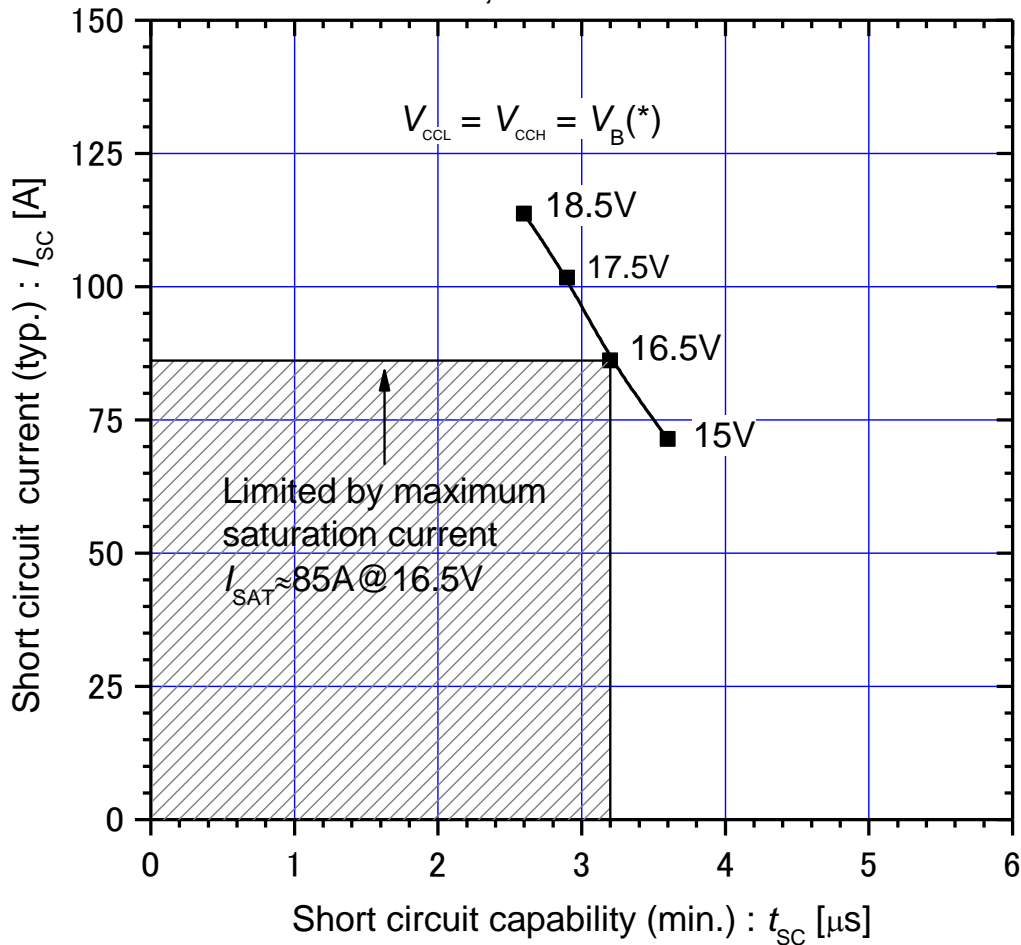
In the case of  $V_{CCL}=V_{CCH}=V_B(^*)=16.5V$ , 6MBP15XSD060-50 can safely shut down short circuit current that is about 5 times of its current rating under the conditions only if the IGBT conducting period is less than  $3.2\mu s$ . Since the SCSOA area varies depending on the input voltage  $V_{DC}$ , control voltage  $V_{CC}$ , junction temperature  $T_j$ , etc., please be careful to design with a suitable margin.

Type name: 6MBP15XSD060-50, 6MBP15XSD060-50-F1  
 6MBP15XSF060-50, 6MBP15XSF060-50-F1



Actual result of Short circuit capability vs. Short circuit current

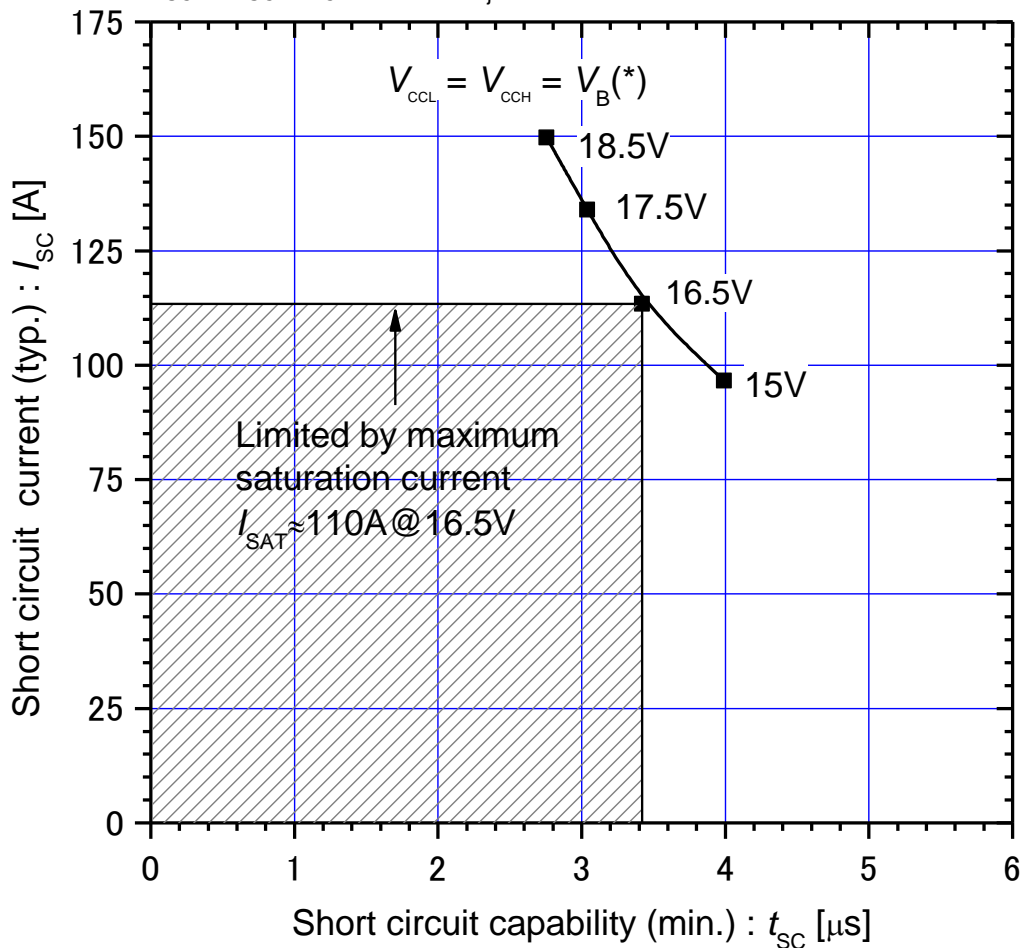
$I_{SC} = f(t_{SC}); V_{CE} = 400V, T_j = 125^\circ C$



Type name: 6MBP20XSD060-50, 6MBP20XSD060-50-F1  
 6MBP20XSF060-50, 6MBP20XSF060-50-F1

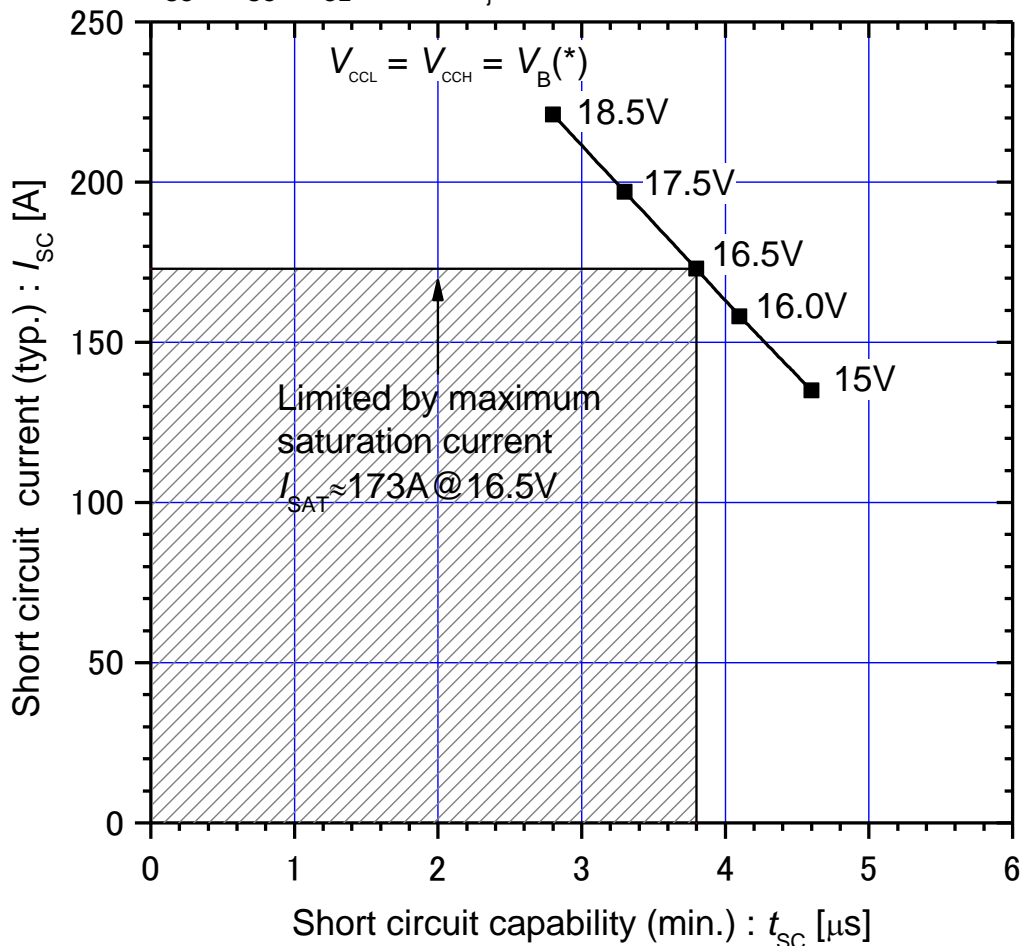
Actual result of Short circuit capability vs. Short circuit current

$$I_{SC} = f(t_{SC}); V_{CE} = 400V, T_j = 125^\circ C$$



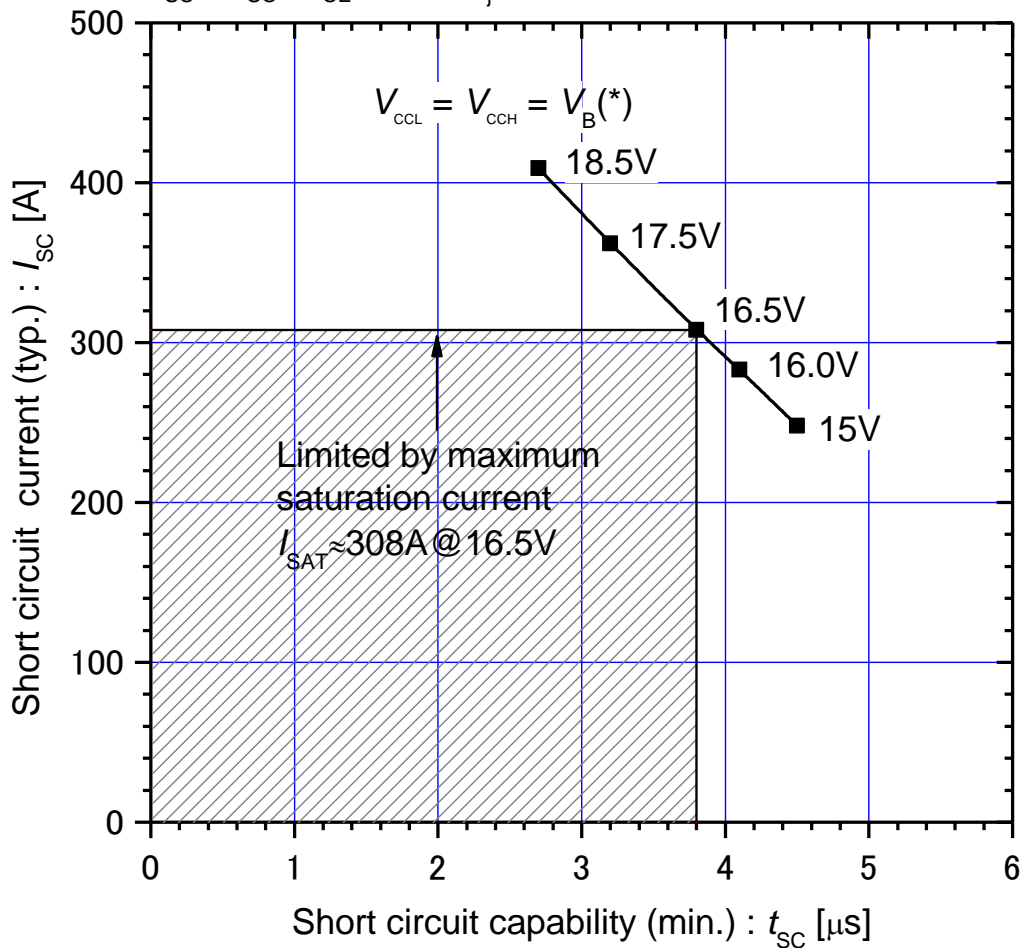
Type name: 6MBP30XSD060-50, 6MBP30XSD060-50-F1  
 6MBP30XSF060-50, 6MBP30XSF060-50-F1

Actual result of Short circuit capability vs. Short circuit current  
 $I_{SC} = f(t_{SC}); V_{CE} = 400V, T_j = 125^\circ C$



Type name: 6MBP35XSD060-50, 6MBP35XSD060-50-F1  
 6MBP35XSF060-50, 6MBP35XSF060-50-F1

Actual result of Short circuit capability vs. Short circuit current  
 $I_{SC} = f(t_{SC}); V_{CE} = 400V, T_j = 125^\circ C$



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