

## FUJI Small-IPM X-series

### Consumption current of control supply circuit vs. carrier frequency

This document shows the consumption current of control supply circuit vs. carrier frequency. Please design the power supply with sufficient margin in consideration of the consumption current.

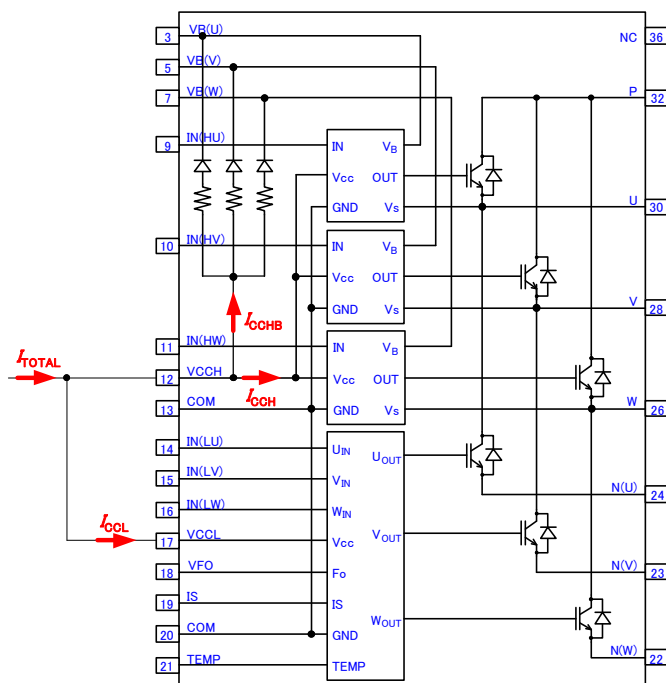
**Current measurement:**

Consumption current of low-side control supply  $I_{CCL}$

Consumption current of high-side control supply  $I_{CCH}$

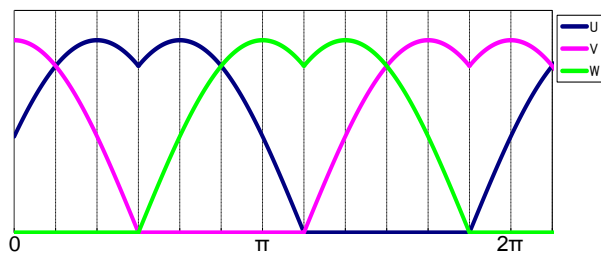
Total consumption current of U,V,W phase of bootstrap circuit  $I_{CCHB}$

Total consumption current of control supply  $I_{TOTAL} = I_{CCL} + I_{CCH} + I_{CCHB}$

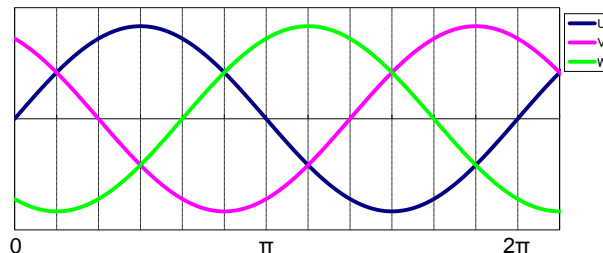


**Measurement condition:**

- 2 phase modulation, 3 phase modulation
- $V_{DC}=400V$ ,  $V_{CCL}=V_{CCH}=V_B(*)=15V$ ,  $T_c=25^\circ C$ , no-load



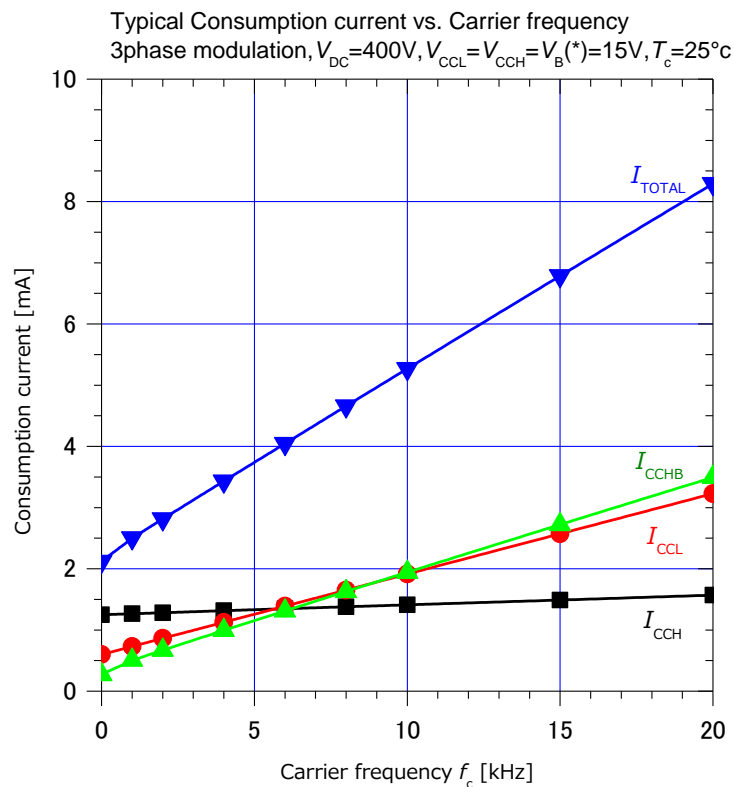
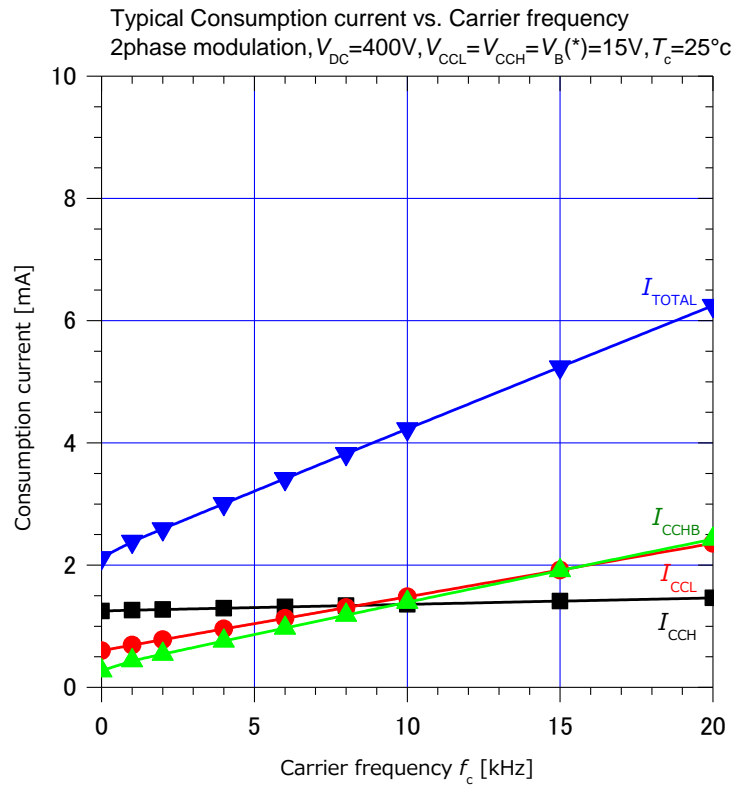
Modulation wave (2 phase)



Modulation wave (3 phase)

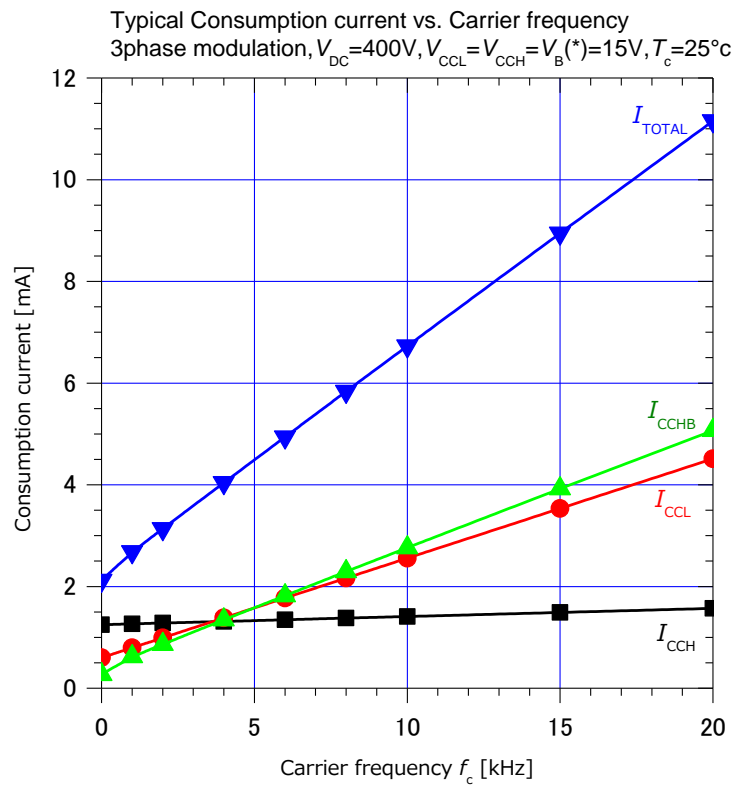
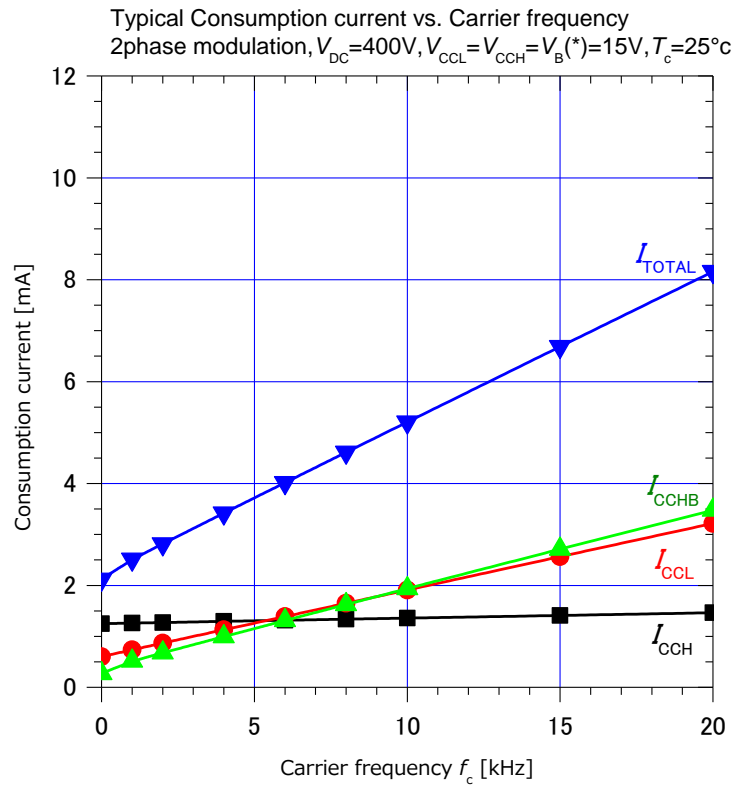
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6MBP15XSF060-50, 6MBP15XSF060-50-F1



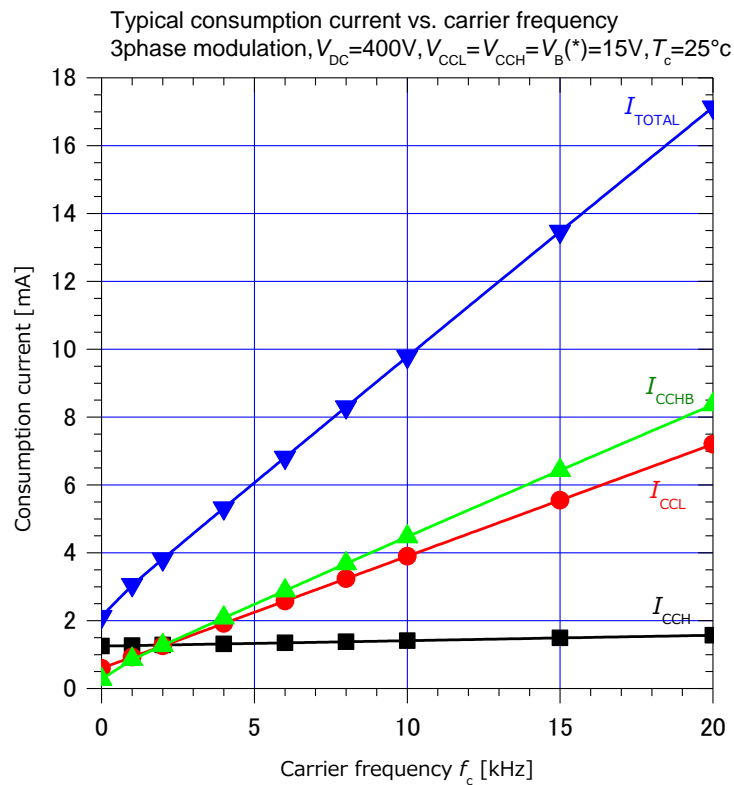
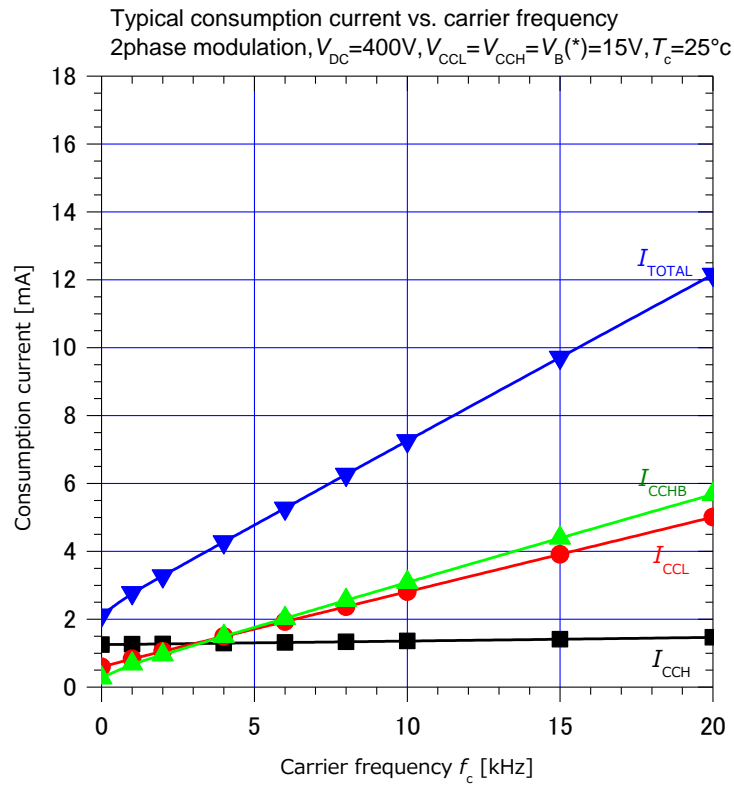
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6MBP20XSF060-50, 6MBP20XSF060-50-F1

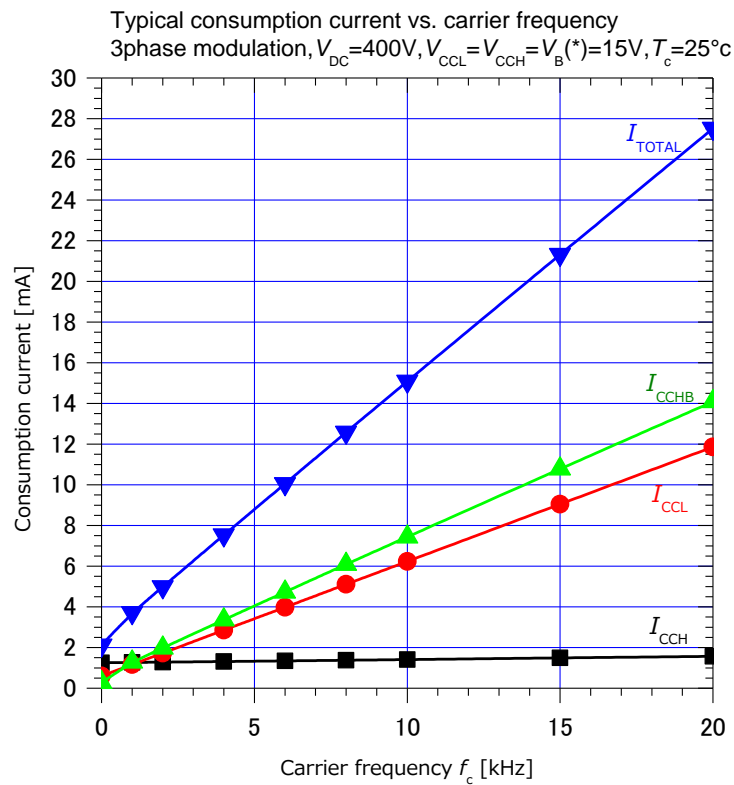
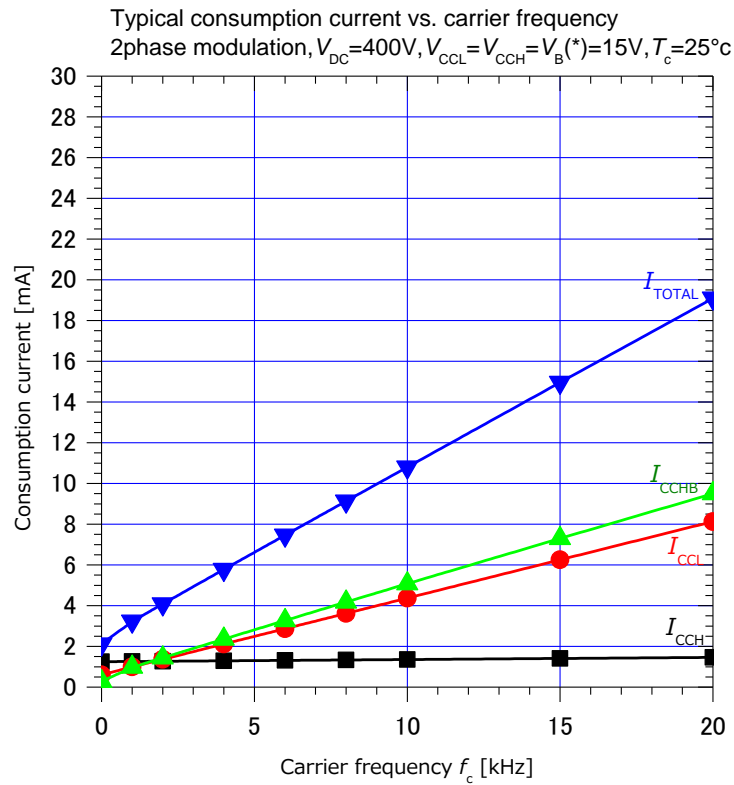


Type name: 6MBP30XSD060-50, 6MBP30XSD060-50-F1

6MBP30XSF060-50, 6MBP30XSF060-50-F1



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



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