

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.

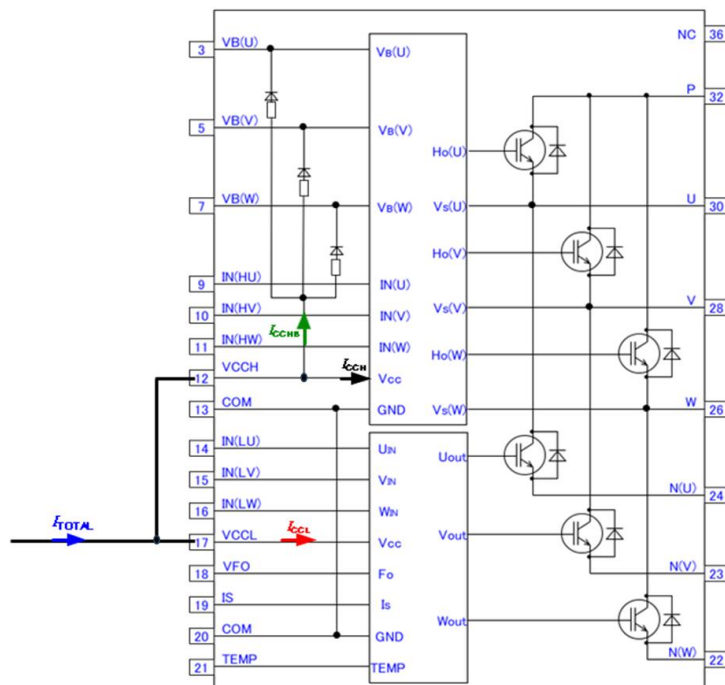
Current measurement:

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

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

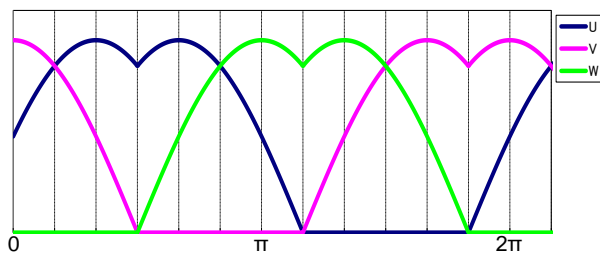
Total consumption current of U, V, W phase of bootstrap circuit I_{CCHB}

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

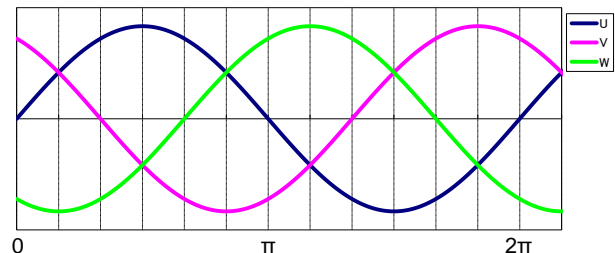


Measurement condition:

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

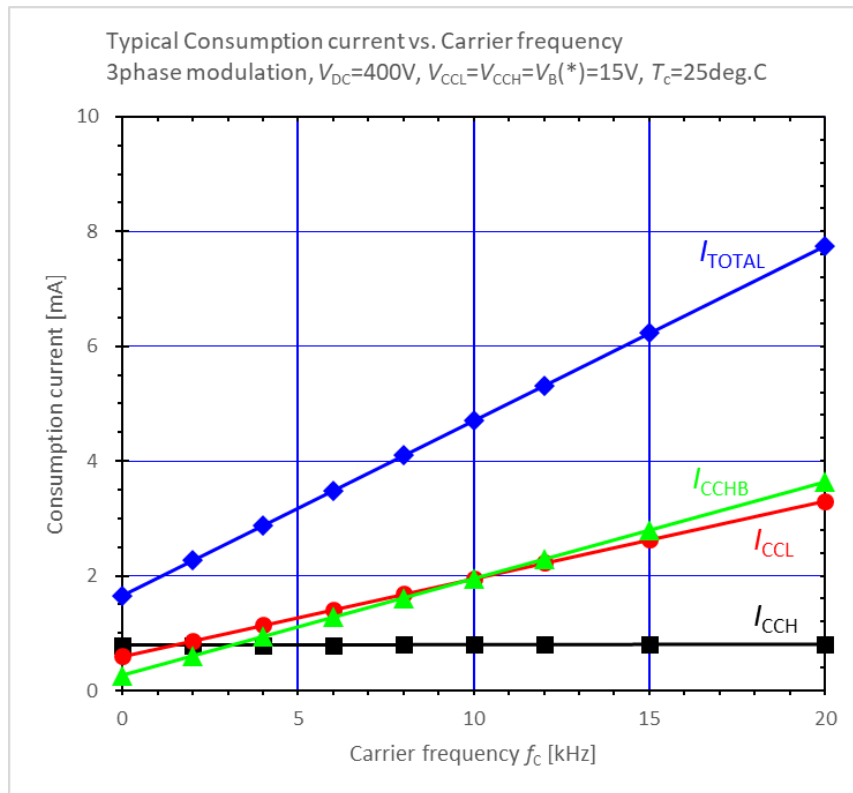
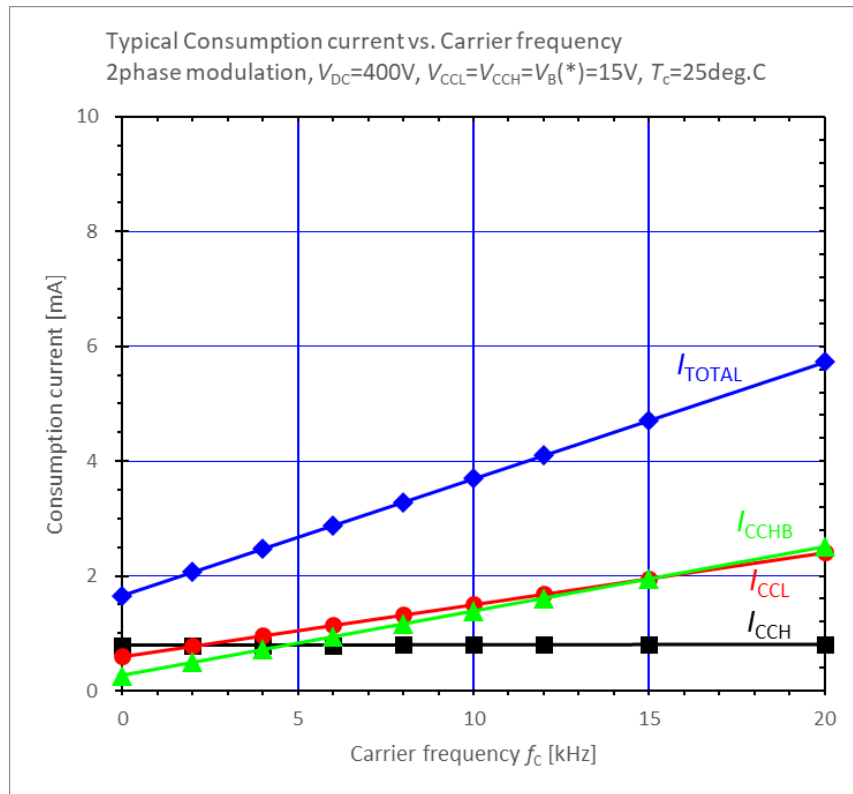


Modulation wave (2 phase)

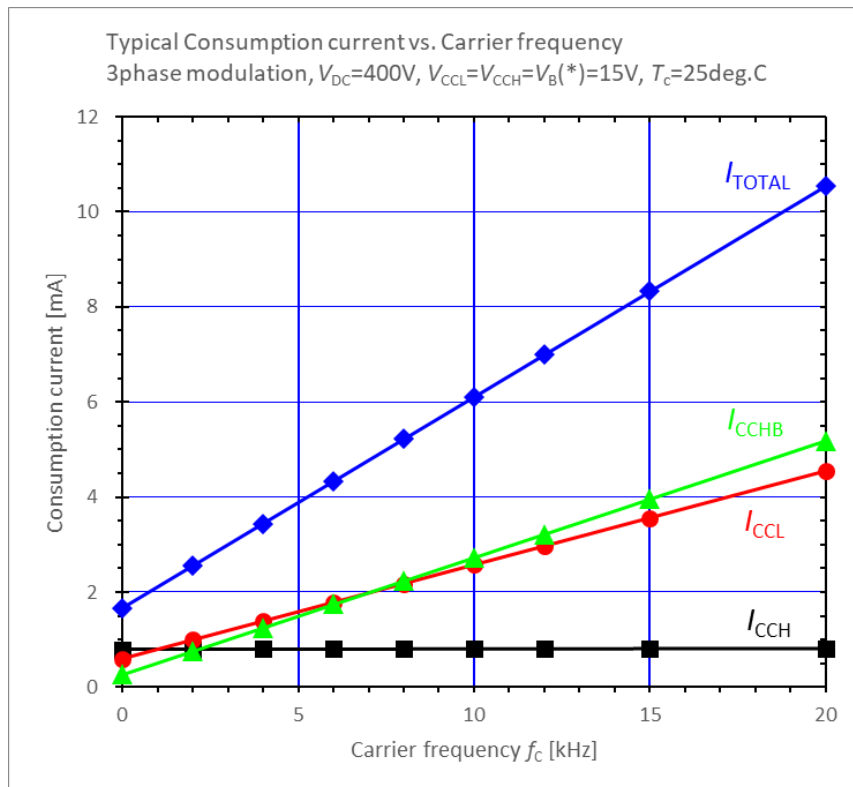
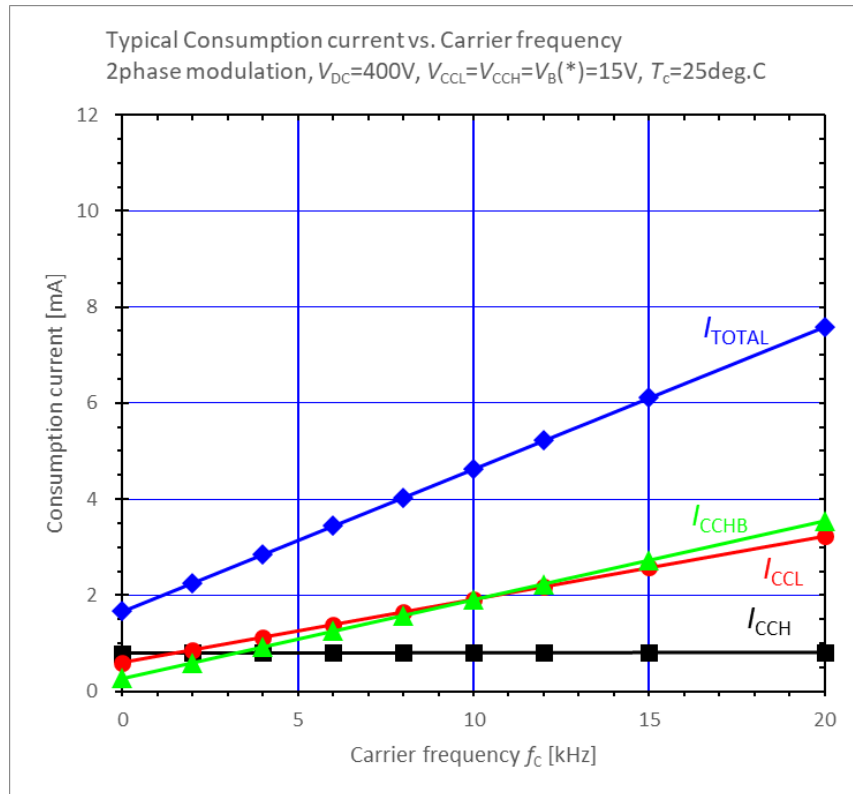


Modulation wave (3 phase)

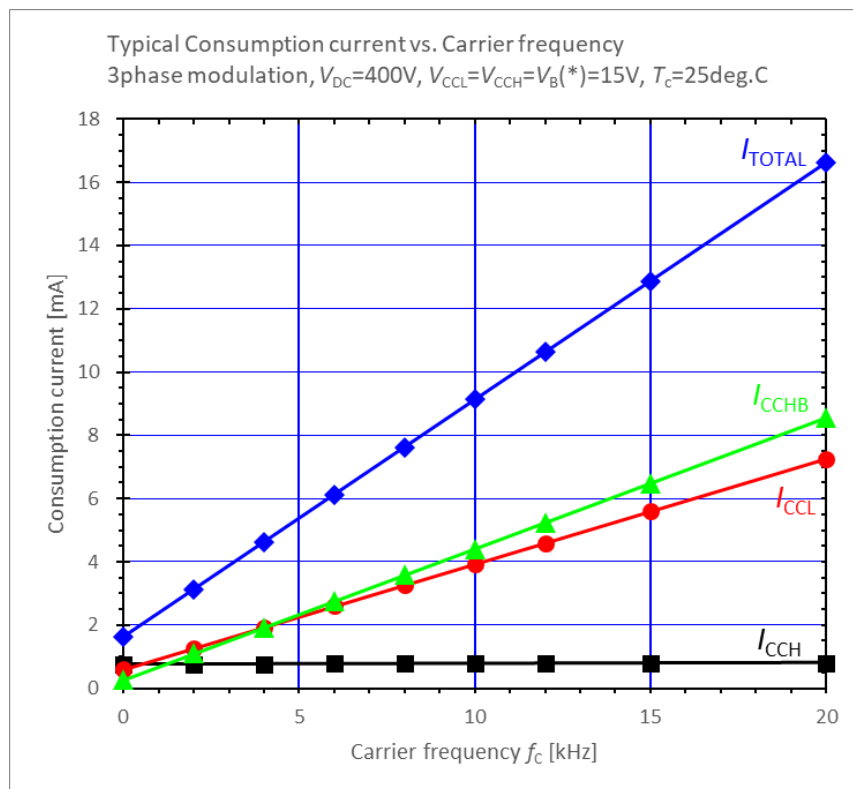
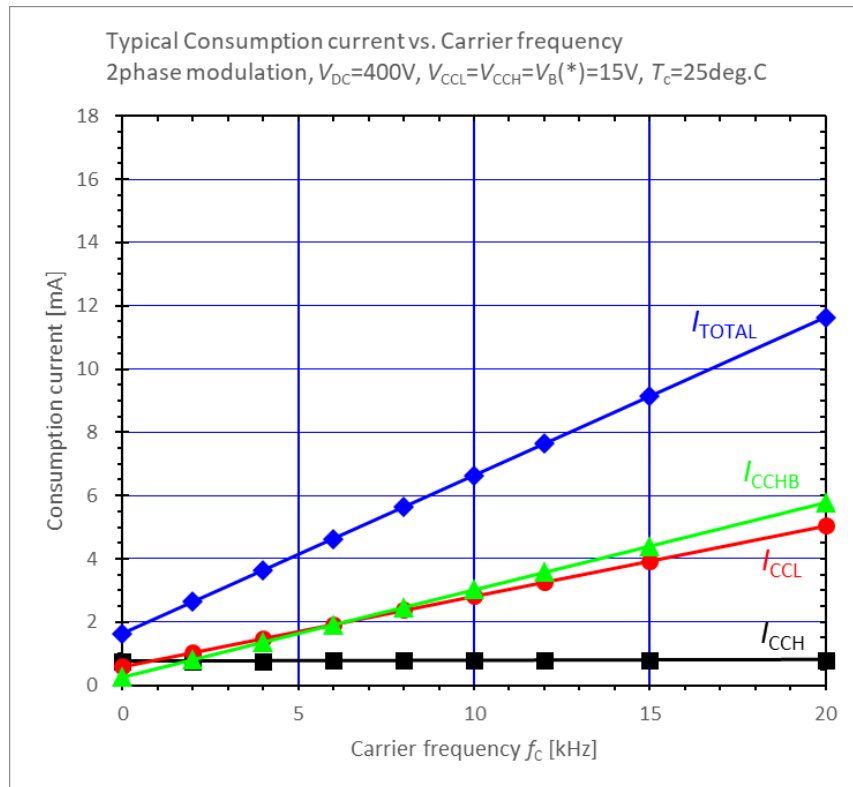
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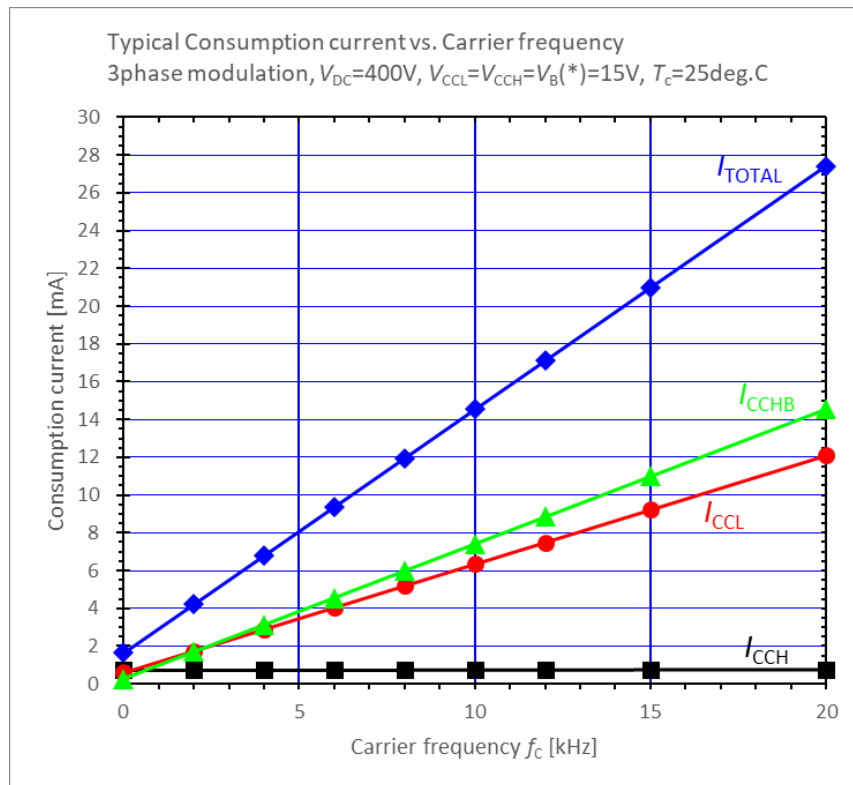
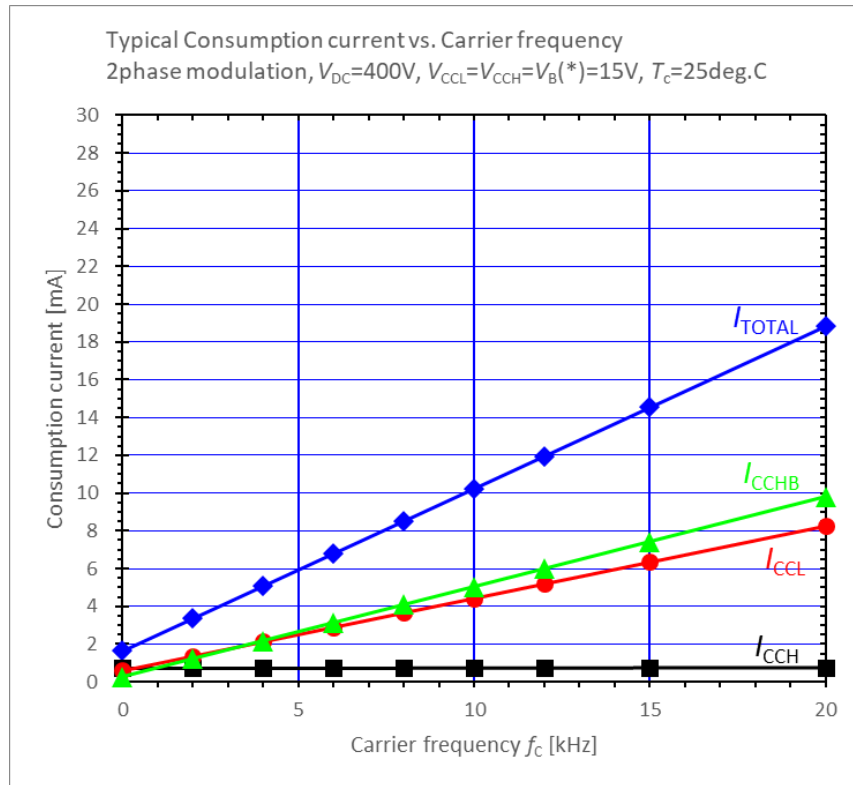
Type name: 6MBP20XSJ065-50, 6MBP20XSK065-50



Type name: 6MBP30XSJ065-50, 6MBP30XSK065-50



Type name: 6MBP35XSJ065-50, 6MBP35XSK065-50



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