



IPOSIM Steady-State Calculation Report

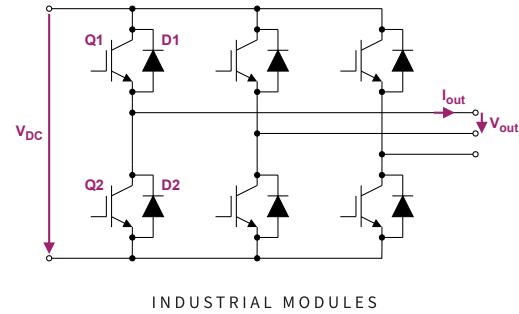
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Circuit & Control

Modulation algorithm	SVPWM
DC link voltage V_{DC}	1070 V
Output current I_{out}	370 Arms
Output frequency	15.6 Hz
Switching frequency	4000 Hz
Modulation index	0.85
Power factor $\cos(\phi)$	-0.8
Output voltage V_{out}	557 V
Reactive power type	Inductive load (lagging) V



Three Phase - 2 Level

SWITCH
FF1200R17IP5

IGBT parameters

V_{CEsat}	2.14 V
$E_{on} + E_{off}$	797.90 mWs
T_{vjmax}	175.00 °C
R_{thJC}	0.02 K/W
R_{thCH}	0.02 K/W

Diode parameters

V_F	1.74 V
E_{rec}	244.00 mWs
T_{vjmax}	175.00 °C
R_{thJC}	0.04 K/W
R_{thCH}	0.02 K/W

System parameters

Slew-rate gate control	Deactivated
Switch Q1: R_{Gon}	1.20 Ω
Switch Q1: R_{Goff}	1.20 Ω

Cooling conditions

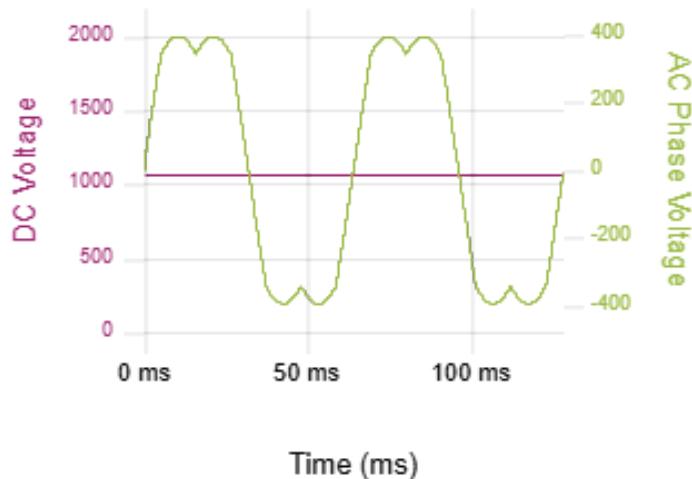
Heatsink model	User defined heatsink	
Ambient temperature T_a	40.00 °C	
Heatsink parameters	$R_{th,h}$ [K/W]	$\tau_{th,h}$ [s]
	0.036	1
	0	1
	0	1
	0	1
	0	1



	MAXIMUM JUNCTION TEMPERATURE	CONDUCTION LOSSES	SWITCHING LOSSES	TOTAL LOSSES
SWITCH Q1	120.20 °C	49.00 W	680.20 W	729.20 W
DIODE D1	111.00 °C	152.60 W	197.90 W	350.50 W

System Electrical

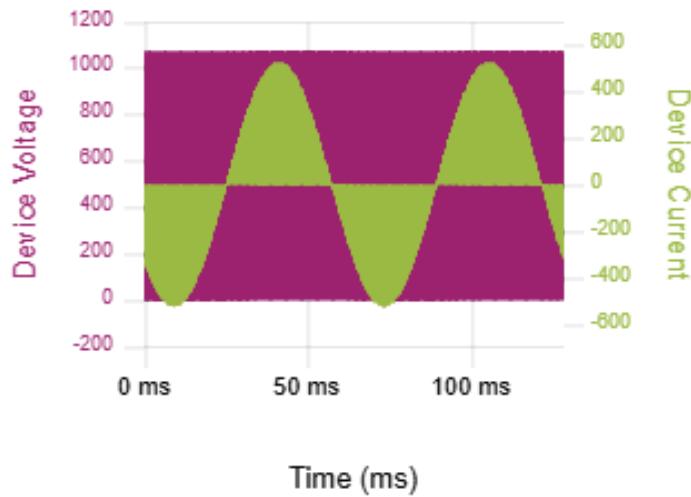
System Voltage





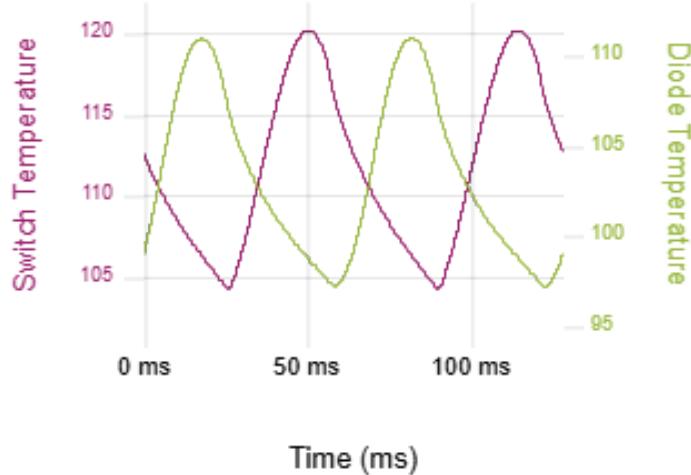
Device Electrical

Device Q1 Voltage and Current



Device Thermal

Device Q1 Temperature Ripple





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