

Help guide: Summary

Summary for the 'Flyback Converter (2 switch)' topology

Parameter C3M0160120K1, Ideal Diode, Trace 1

Variables ▼	
MOSFET	C3M0160120K1 Request Sample
Diode	Ideal Diode
Input voltage V_{in}	1700 Vdc
Output voltage V_{out}	48 Vdc
Rated power P_{out}	155 W
Number of parallel devices	1
Turn-on gate resistance $R_{g-on,ext}$	10 Ω
Turn-off gate resistance $R_{g-off,ext}$	10 Ω
Number of parallel diodes	1
Magnetizing inductance L	0.26 mH
Load capacitance C	560 uF
Switching frequency F_{sw}	65 kHz
MOSFET (grease) resistance $R_{th,ch}$	0.85 K/W
Fixed temperature T_h	75 °C
Cth_h used in simulation	0
Cth_h used in simulation	0
Rth_ha used in simulation	0
Rth_ha used in simulation	0
System Overview ▼	
Input Voltage	1.700 kV
Output Voltage	48.1 V
Transformer Turns Ratio	30.00
Actual Output Power	156.2 W
Duty Ratio	0.04
Switching Frequency	65.0 kHz
Temperatures ▼	
MOSFET Max Tj	75.9 °C
Diode Max Tj	75.0 °C
Pri. Heatsink Max Temp.	75.0 °C
Sec. Heatsink Max Temp.	75.0 °C
Ambient Temp.	75.0 °C
Losses Overview ▼	
MOSFET Switching	4.43 W
Per Sw. Position	2.22 W
MOSFET Conduction	0.10 W
Per Sw. Position	0.05 W
Diode Conduction	0 W
Combined Losses	4.53 W
Efficiency	97.08 %

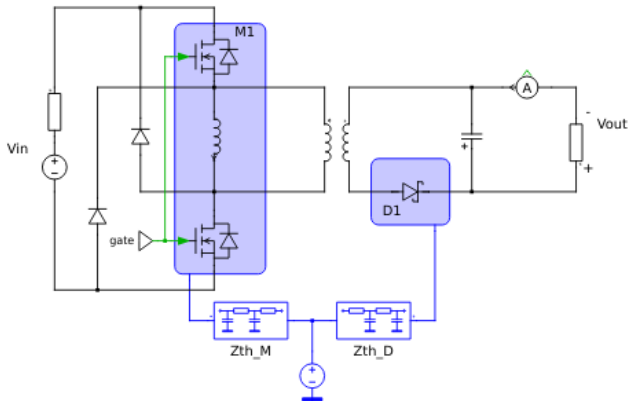
Parameter

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MOSFET Losses Breakdown ▾

Turn-on Losses	0 W
Turn-off Losses	4.43 W
Forward Conduction	0.10 W
Reverse Conduction	0 W
Body Diode Conduction	0 W

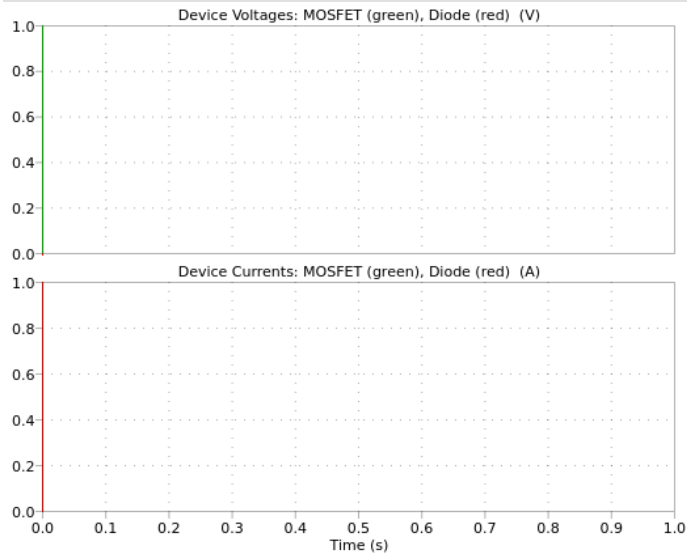
Schematic of Flyback Converter (2 switch)



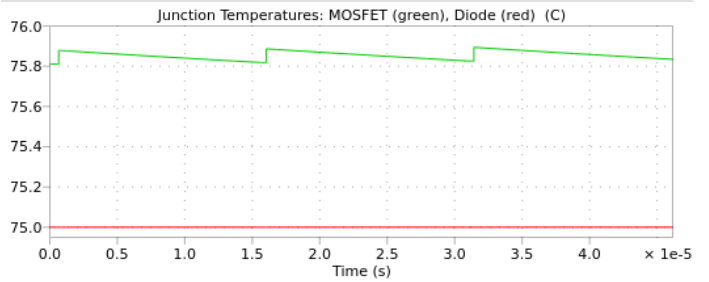
Source-Load



Devices



Junction Temp



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