



flow BOOST 0 DC Boost Application 1200 V / 40 A

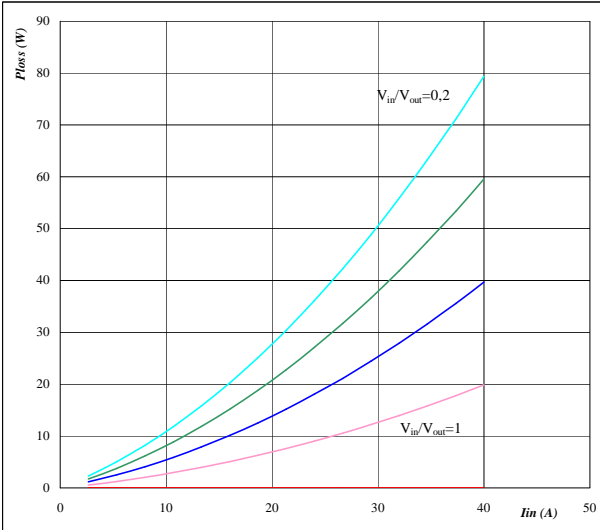
General conditions

BOOST	
V_{GEon}	= 15 V
V_{GEoff}	= 0 V
R_{gon}	= 16 Ω
R_{goff}	= 16 Ω

figure 1.. IGBT

Typical average static loss as a function of input current I_{RMS}

$P_{loss} = f(I_{in})$

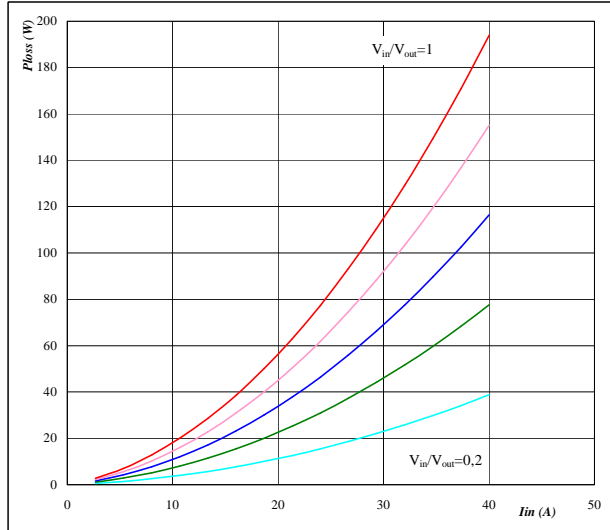


Conditions $T_j = 150$ °C
 Ratio of input DC voltage to output DC voltage parameter V_{in}/V_{out} from 0,2 to 1,0 in 0,2 steps

figure 2.. FWD

Typical average static loss as a function of input current I_{RMS}

$P_{loss} = f(I_{in})$

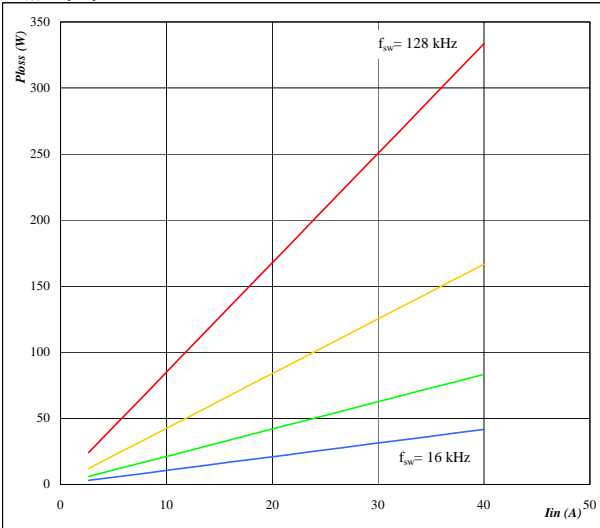


Conditions $T_j = 150$ °C
 Ratio of input DC voltage to output DC voltage parameter V_{in}/V_{out} from 0,2 to 1,0 in 0,2 steps

figure 3.. IGBT

Typical average switching loss as a function of input current

$P_{loss} = f(I_{in})$

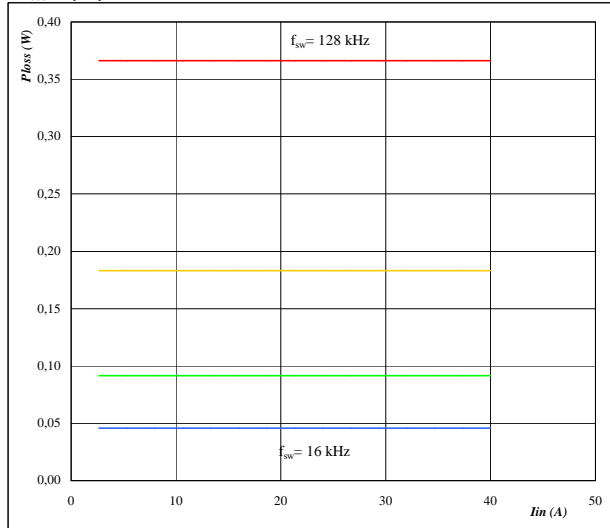


Conditions $T_j = 150$ °C
 $V_{out} = 350$ V
 Sw. freq. f_{sw} from 16 kHz to 128 kHz in steps of factor 2

figure 4.. FWD

Typical average switching loss as a function of input current

$P_{loss} = f(I_{in})$



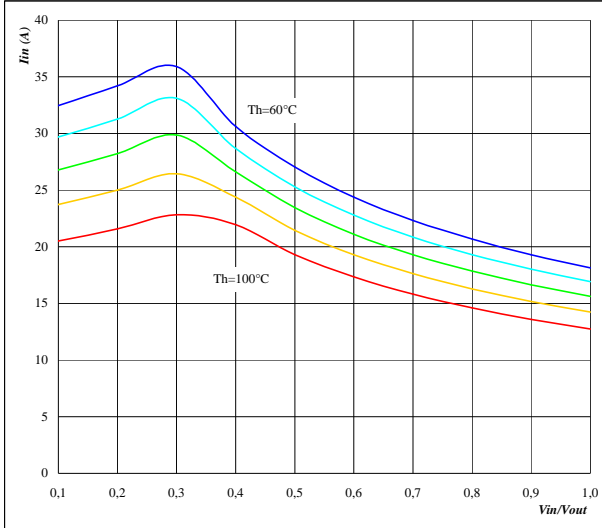
Conditions $T_j = 150$ °C
 $V_{out} = 350$ V
 Sw. freq. f_{sw} from 16 kHz to 128 kHz in steps of factor 2



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figure 5.. per LEG

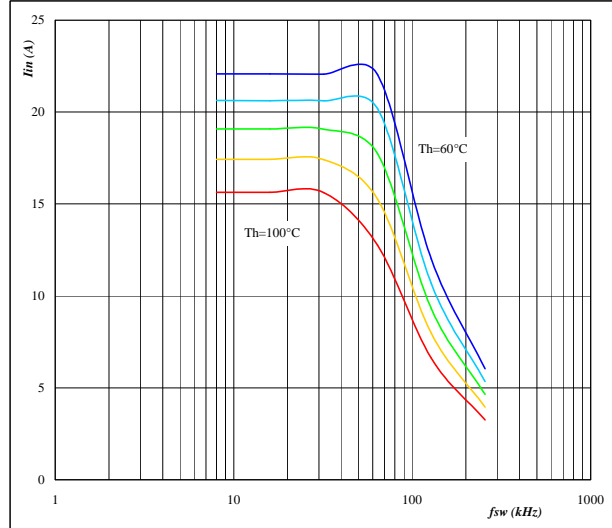
Typical available input current as a function of V_{in}/V_{out}
 $I_{in}=f(V_{in}/V_{out})$



Conditions $T_j = T_{jmax} - 25^\circ\text{C}$
 DC-link= 350 V $f_{sw} = 20$ kHz
 parameter Heatsink temp.
 T_h from 60 °C to 100 °C
 in 10 °C steps

figure 6.. per LEG

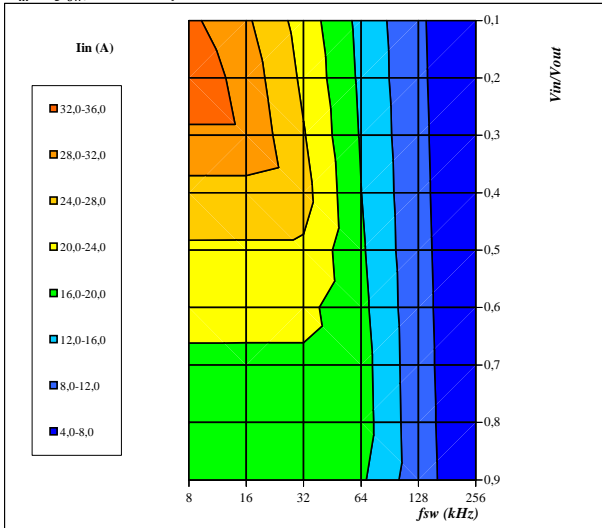
Typical available input current as a function of switching frequency
 $I_{in}=f(f_{sw})$



Conditions $T_j = T_{jmax} - 25^\circ\text{C}$
 DC-link= 350 V $V_{in} = 250$ V
 parameter Heatsink temp.
 T_h from 60 °C to 100 °C
 in 10 °C steps

figure 7.. per LEG

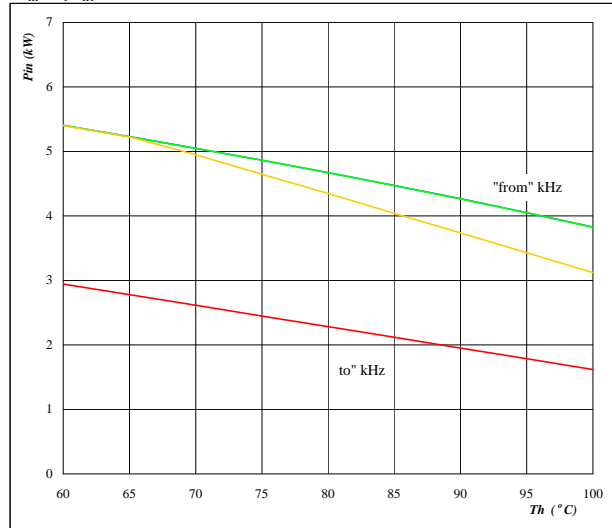
Typical available input current as a function of f_{sw} and V_{in}/V_{out}
 $I_{in}=f(f_{sw}, V_{in}/V_{out})$



Conditions $T_j = T_{jmax} - 25^\circ\text{C}$
 DC-link= 350 V
 $T_h = 80$ °C

figure 8.. per LEG

Typical available electric input power as a function of heatsink temperature
 $P_{in}=f(T_h)$



Conditions $T_j = T_{jmax} - 25^\circ\text{C}$
 $V_{in} = 250$ V DC-link= 350 V
 Sw. freq. f_{sw} from 16 kHz to 128 kHz

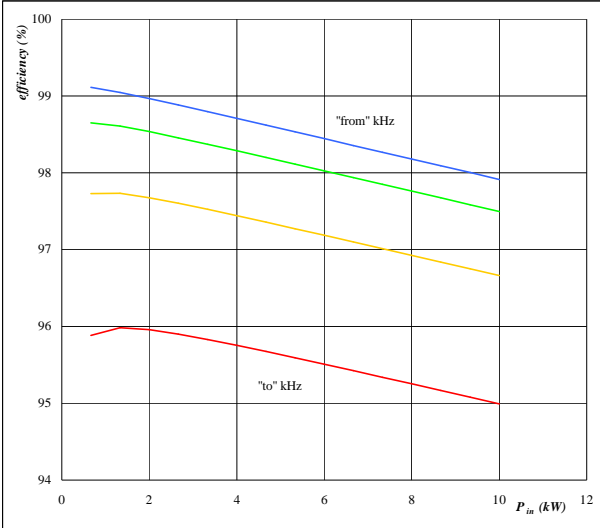


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figure 9.. per LEG

Typical efficiency as a function of input power

$\eta=f(P_{in})$



Conditions $T_j = T_{jmax} - 25^\circ C$
 V_{in} 250 V DC-link= 350 V
 parameter:
 Sw. freq. f_{sw} from 16 kHz to 128 kHz