

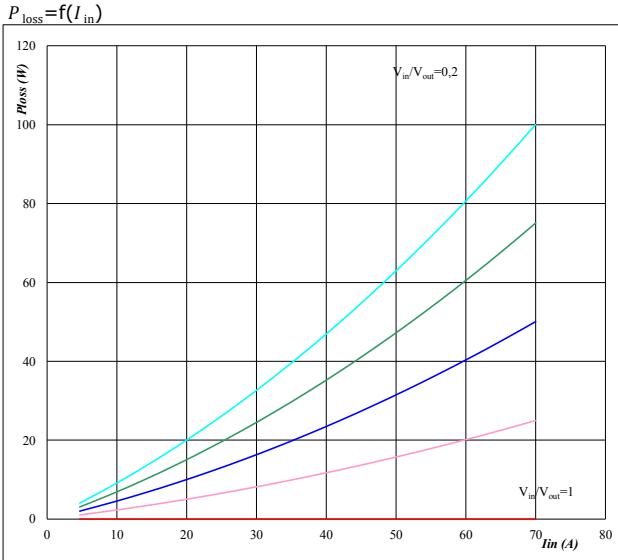


General conditions

BOOST	
V_{GEon}	= 15 V
V_{GEOff}	= -15 V
R_{gon}	= 4 Ω
R_{goff}	= 4 Ω

Figure 1. IGBT

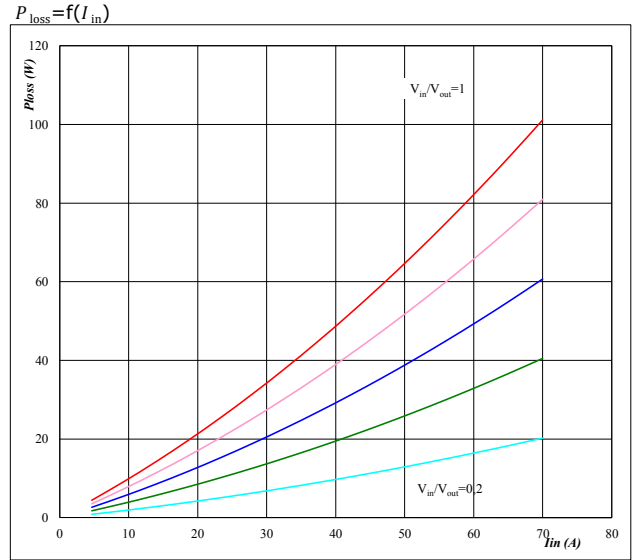
Typical average static loss as a function of input current I_{iRMS}



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. FRED

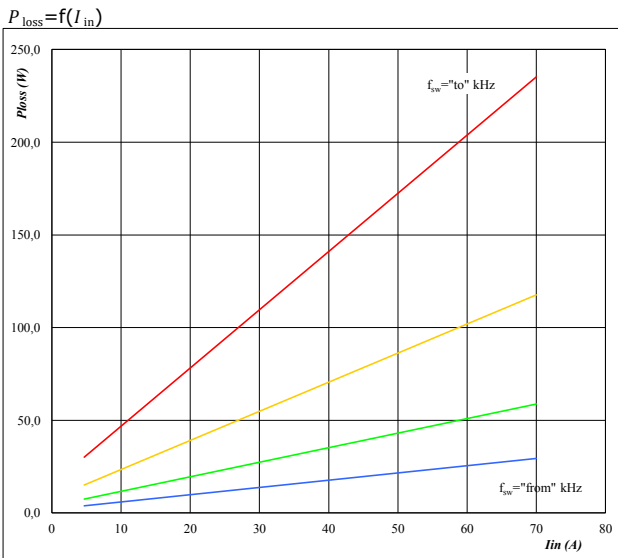
Typical average static loss as a function of input current I_{iRMS}



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

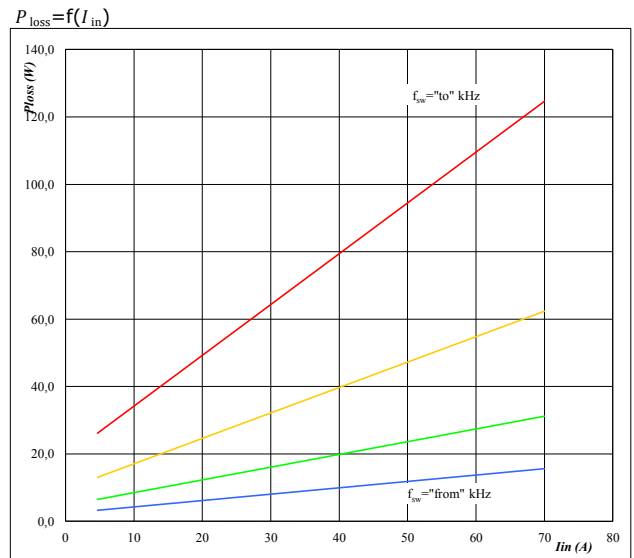
Typical average switching loss as a function of input current



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. FRED

Typical average switching loss as a function of input current



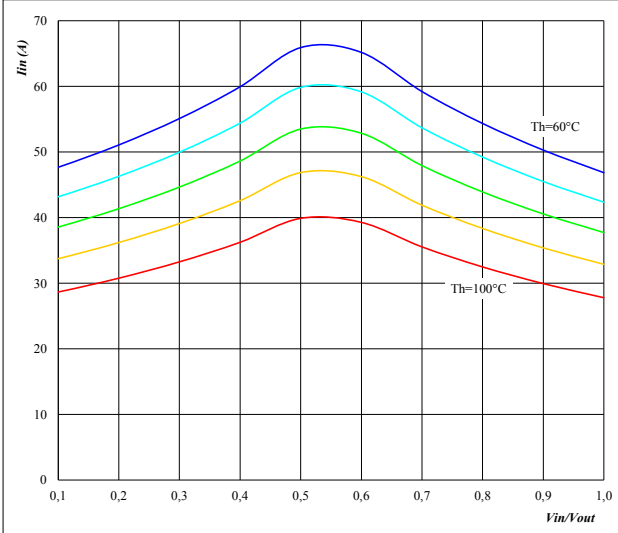
Conditions $T_j = 150$ °C
 $V_{out} = 350$ V
Sw. freq. f_{sw} from 16 kHz to 128 kHz in steps of factor 2



flow Boost 0 symmetric DC Boost Application 650 V / 75 A

Figure 5. per Leg

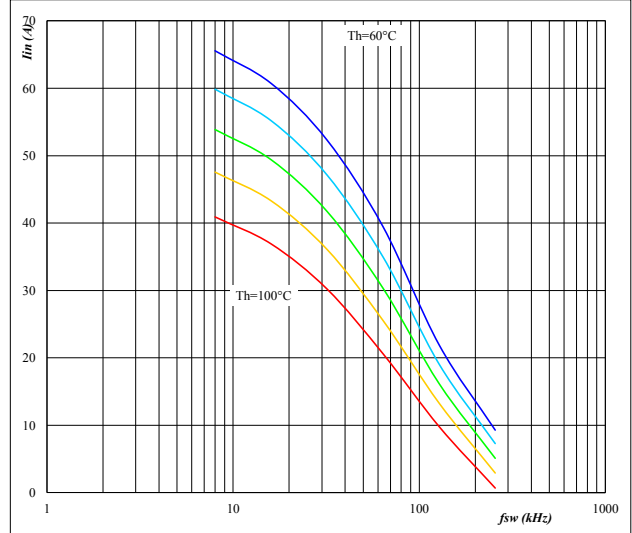
Typical available input current as a function of V_{in}/V_{out}
 $I_{in}=f(V_{in}/V_{out})$



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

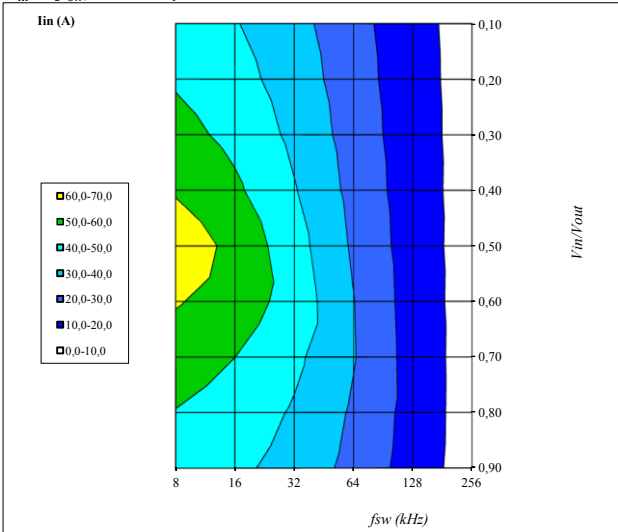
Typical available input current as a function of switching frequency
 $I_{in}=f(f_{sw})$



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

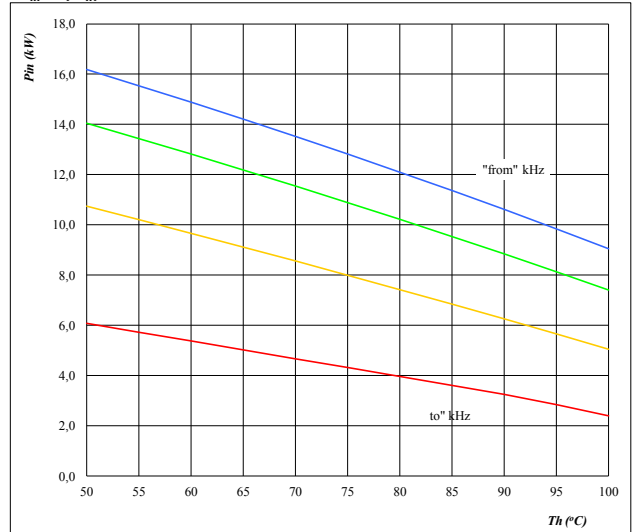
Typical available input current as a function of f_{sw} and V_{in}/V_{out}
 $I_{in}=f(f_{sw}, V_{in}/V_{out})$



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



Vincotech

flow Boost 0 symmetric

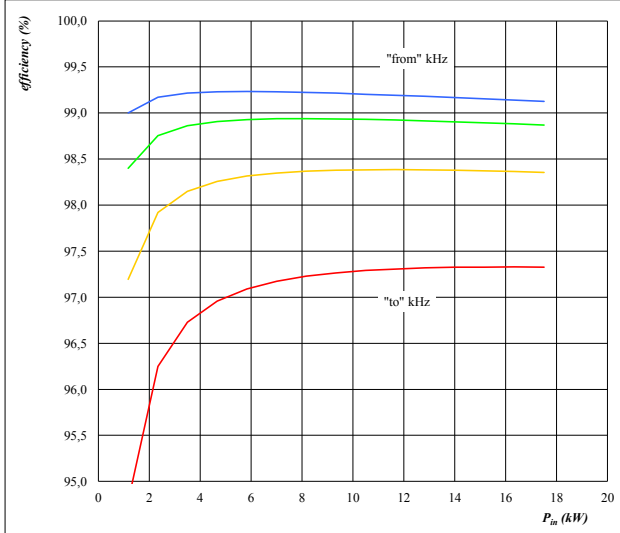
DC Boost Application

650 V / 75 A

Figure 9. per Leg

Typical efficiency as a function of input power

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



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