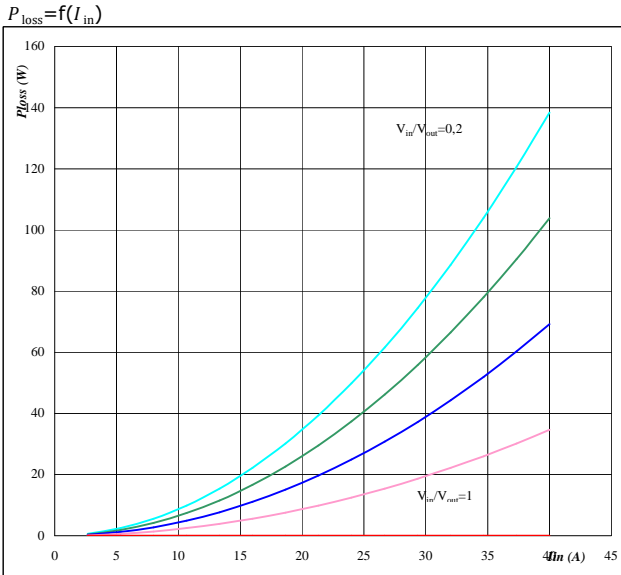




General conditions

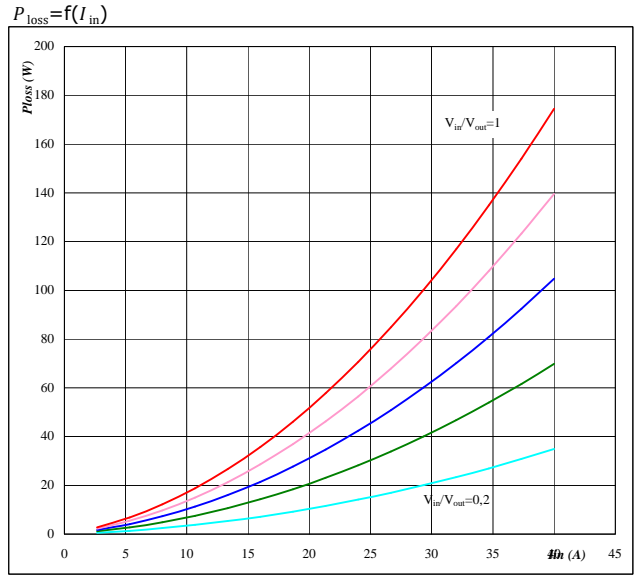
BOOST	
$V_{GEon}$	= 18 V
$V_{GEoff}$	= 0 V
$R_{gon}$	= 4 Ω
$R_{goff}$	= 4 Ω

**Figure 1. MOSFET**  
Typical average static loss as a function of input current  $I_{iRMS}$



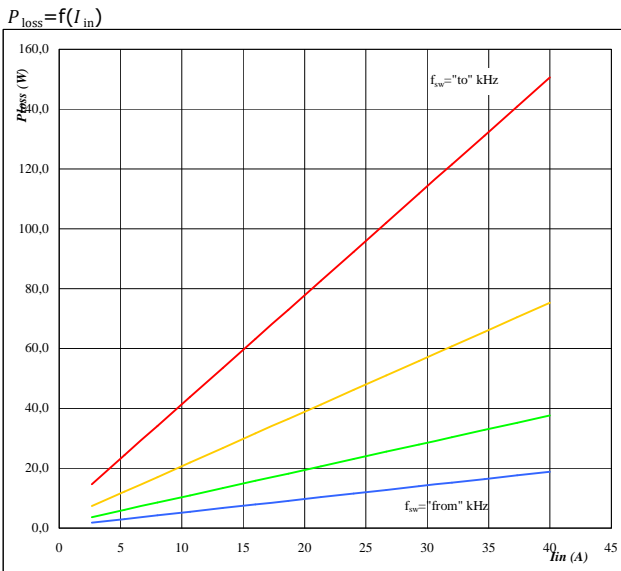
Conditions  $T_j = 150$  °C  
Ratio of input DC voltage to output DC voltage parameter  $V_{in}/V_{out}$  from 0,2 to 1,0 in 0,2 steps

**Figure 2. FWD**  
Typical average static loss as a function of input current  $I_{iRMS}$



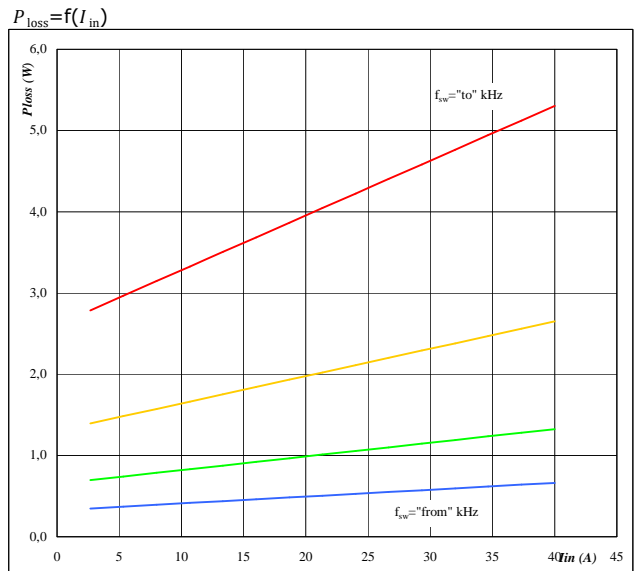
Conditions  $T_j = 150$  °C  
Ratio of input DC voltage to output DC voltage parameter  $V_{in}/V_{out}$  from 0,2 to 1,0 in 0,2 steps

**Figure 3. MOSFET**  
Typical average switching loss as a function of input current



Conditions  $T_j = 150$  °C  
 $V_{out} = 700$  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

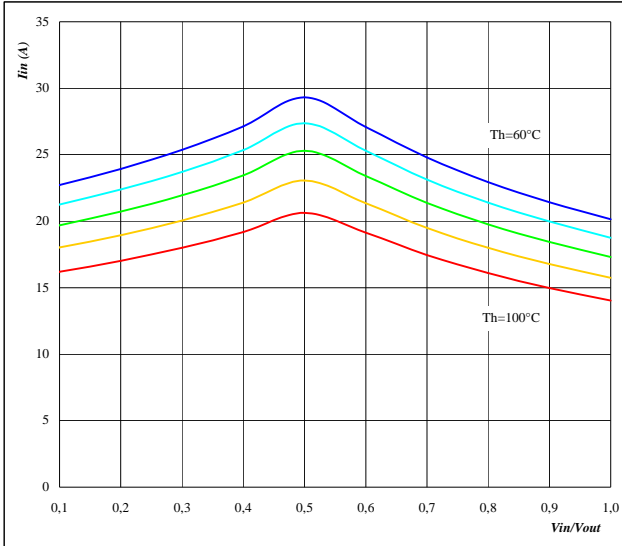


Conditions  $T_j = 150$  °C  
 $V_{out} = 700$  V  
Sw. freq.  $f_{sw}$  from 16 kHz to 128 kHz in steps of factor 2



**Figure 5.** per Leg

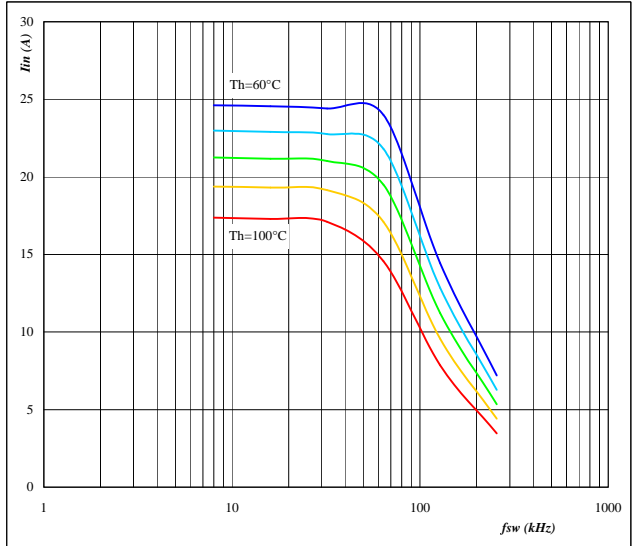
**Typical available input current as a function of  $V_{in}/V_{out}$**   
 $I_{in} = f(V_{in}/V_{out})$



Conditions  $T_j = T_{jmax} - 25^\circ\text{C}$   
 DC-link= 700 V  $f_{sw} = 20$  kHz  
 parameter Heatsink temp.  
 $T_h$  from 60 °C to 100 °C  
 in 10 °C steps

**Figure 6.** per Leg

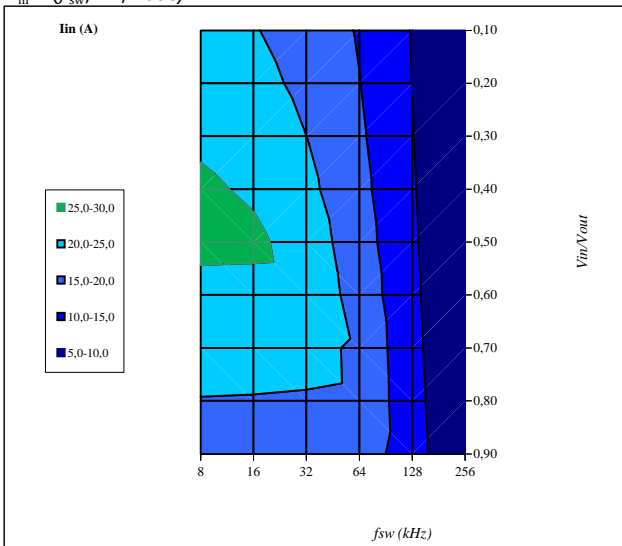
**Typical available input current as a function of switching frequency**  
 $I_{in} = f(f_{sw})$



Conditions  $T_j = T_{jmax} - 25^\circ\text{C}$   
 DC-link= 700 V  $V_{in} = 500$  V  
 parameter Heatsink temp.  
 $T_h$  from 60 °C to 100 °C  
 in 10 °C steps

**Figure 7.** per Leg

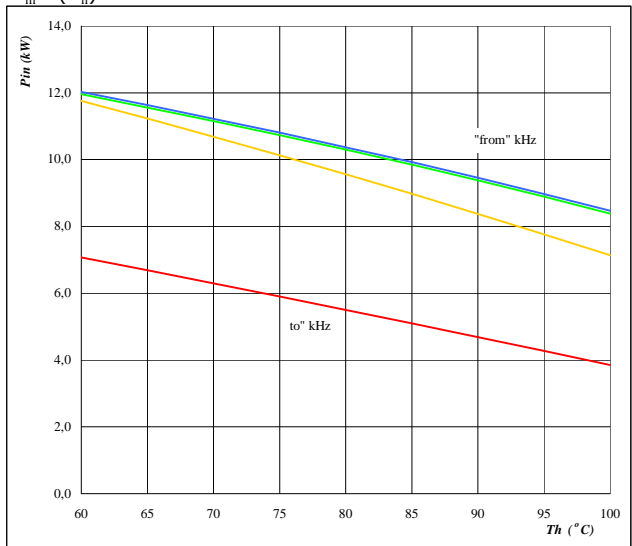
**Typical available input current as a function of  $f_{sw}$  and  $V_{in}/V_{out}$**   
 $I_{in} = f(f_{sw}, V_{in}/V_{out})$



Conditions  $T_j = T_{jmax} - 25^\circ\text{C}$   
 DC-link= 700 V  
 $T_h = 80$  °C

**Figure 8.** per Leg

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



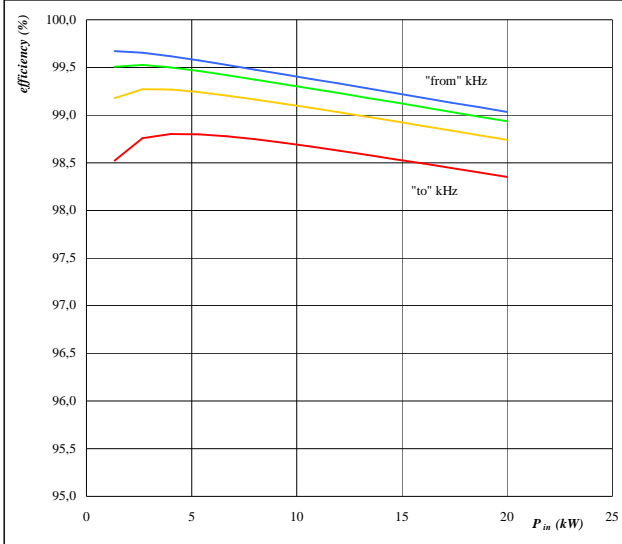
Conditions  $T_j = T_{jmax} - 25^\circ\text{C}$   
 $V_{in} = 500$  V DC-link= 700 V  
 Sw. freq.  $f_{sw}$  from 16 kHz to 128 kHz



Figure 9. per Leg

Typical efficiency as a function of input power

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



Conditions  $T_j = T_{jmax} - 25^\circ\text{C}$   
 $V_{in}$  500 V DC-link= 700 V  
parameter:  
Sw. freq.  $f_{sw}$  from 16 kHz to 128 kHz