| flowBOOST0 | DC Boost Application | 600V/41mΩ |
|---|---|---|

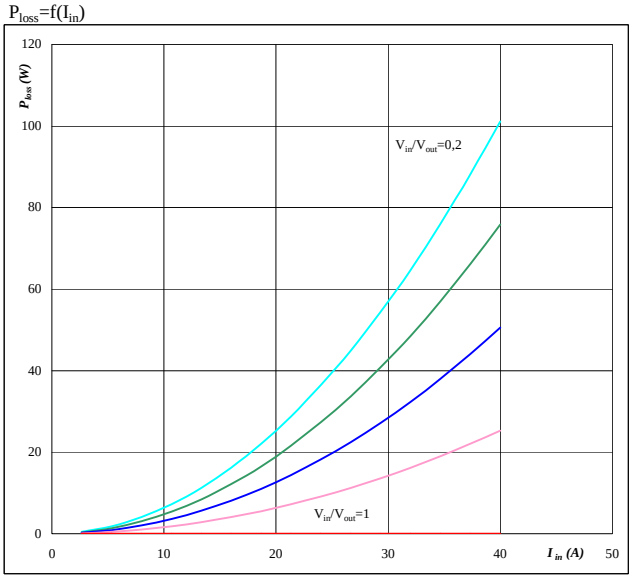
**General conditions**

| BOOST | | |
|---|---|---|
| $V_{GEon}$ | = | 10 V |
| $V_{GEoff}$ | = | 0 V |
| $R_{gon}$ | = | 8 Ω |
| $R_{goff}$ | = | 8 Ω |

**Figure 1.** INPUT BOOST MOSFET

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

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




Conditions: $T_j$= 125 °C

Ratio of input DC voltage to output DC voltage

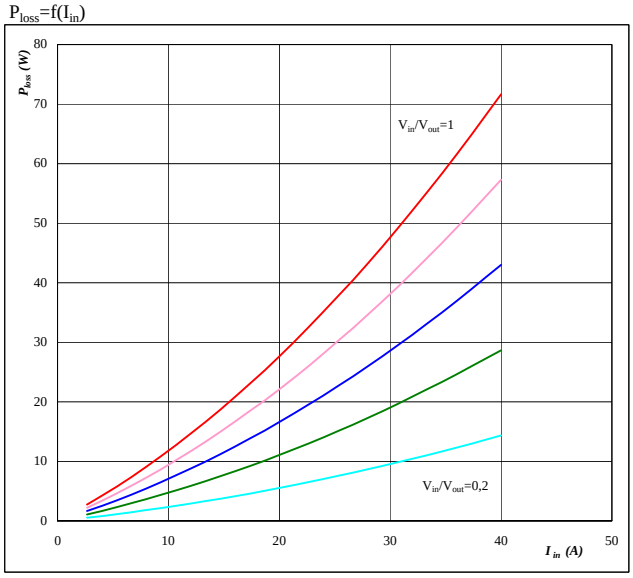
parameter: $V_{in}/V_{out}$ from 0,2 to 1,0

in 0,2 steps

**Figure 2.** INPUT BOOST FWD

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

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




Conditions: $T_j$= 125 °C

Ratio of input DC voltage to output DC voltage

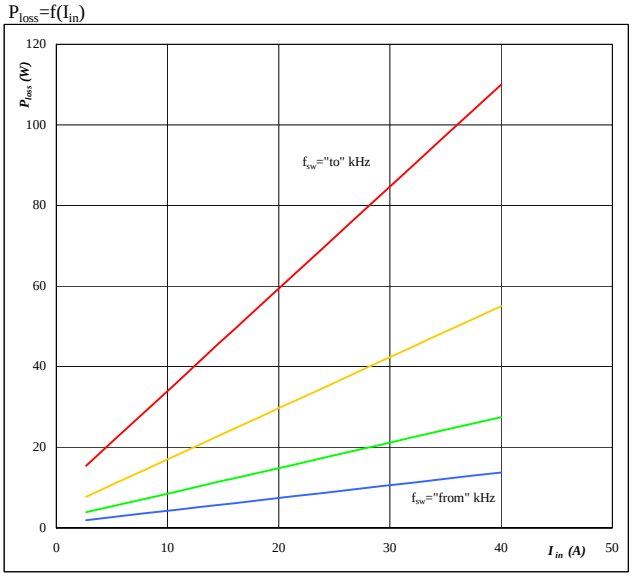
parameter: $V_{in}/V_{out}$ from 0,2 to 1,0

in 0,2 steps

**Figure 3.** INPUT BOOST MOSFET

**Typical average switching loss as a function of input current**

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




Conditions: Tj= 125 °C

$V_{out}$ = 350 V

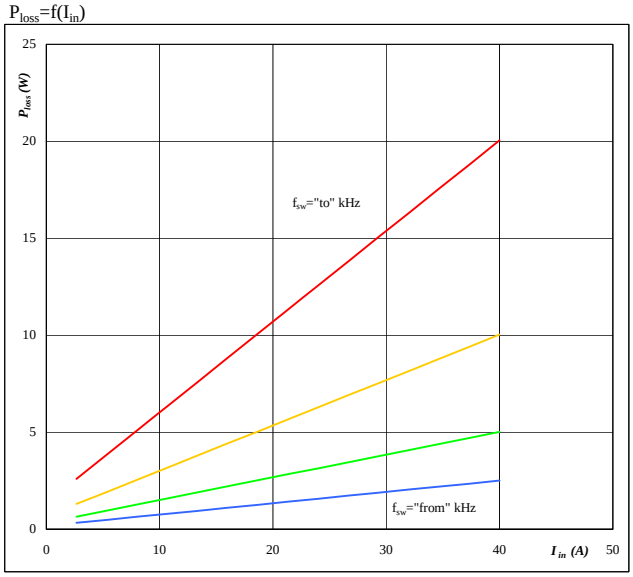
Sw. freq. fsw from 16 kHz to 128 kHz

in steps of factor 2

**Figure 4.** INPUT BOOST FWD

**Typical average switching loss as a function of input current**

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




Conditions: Tj= 125 °C

$V_{out}$ = 350 V

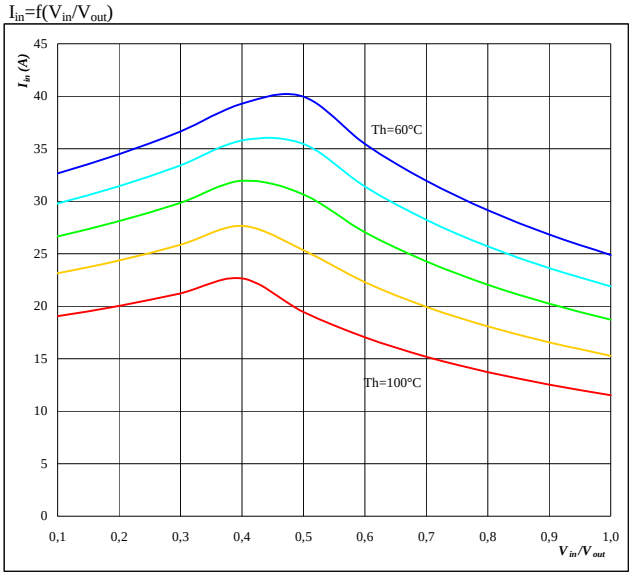
Sw. freq. fsw from 16 kHz to 128 kHz

in steps of factor 2

**Figure 5.** per PHASE

**Typical available input current as a function of $V_{in}/V_{out}$**

$I_{in}=f(V_{in}/V_{out})$

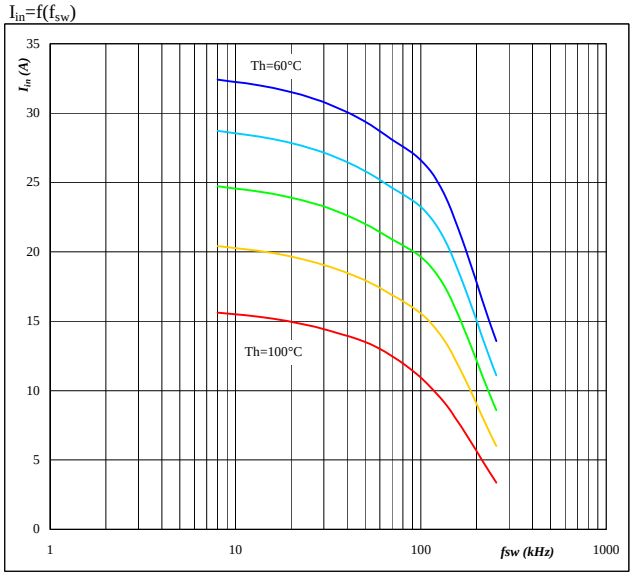



Conditions: $T_j$= $T_{jmax}$-25°C
DC link= 350 V $f_{sw}$= 20 kHz
parameter: Heatsink temp.
Th from 60 °C to 100 °C
in 10 °C steps

**Figure 6.** per PHASE

**Typical available input current as a function of switching frequency**

$I_{in}=f(f_{sw})$

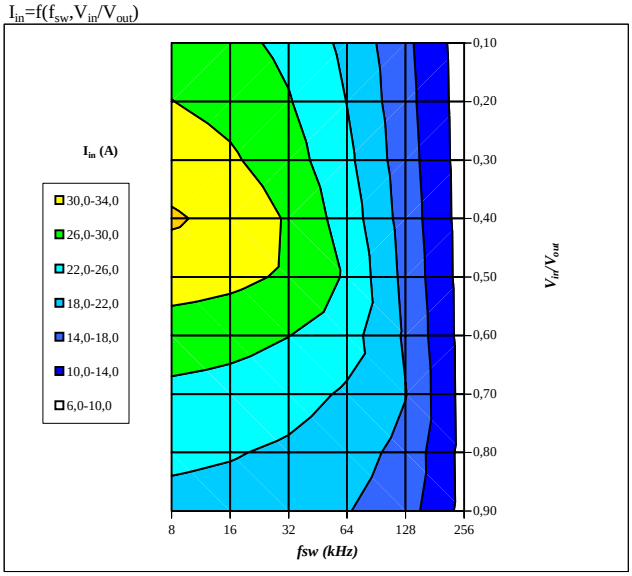



Conditions: $T_j$= $T_{jmax}$-25°C
DC link= 350 V Vin 250 V
parameter: Heatsink temp.
Th from 60 °C to 100 °C
in 10 °C steps

**Figure 7.** per PHASE

**Typical available input current as a function of $f_{sw}$ and $V_{in}/V_{out}$**

$I_{in}=f(f_{sw},V_{in}/V_{out})$

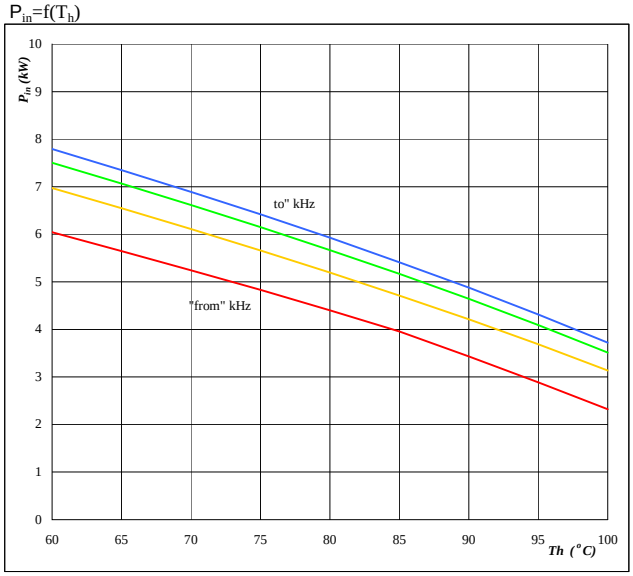



Conditions: Tj= $T_{jmax}$-25°C
DC link= 350 V
Th= 80 °C

**Figure 8.** per PHASE

**Typical available electric input power as a function of heatsink temperature**

$P_{in}=f(T_h)$

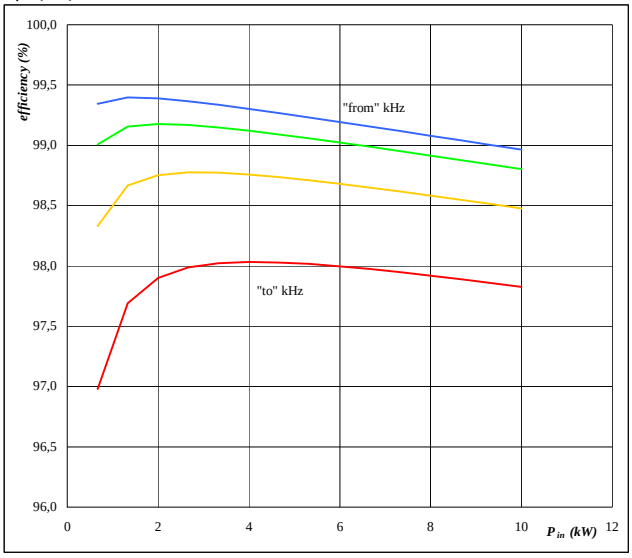



Conditions: Tj= $T_{jmax}$-25°C
Vin 250 V DC link= 350 V
Sw. freq. fsw from 16 kHz to 128 kHz

**Figure 9.** **per PHASE**

**Typical efficiency as a function of input power**

η=f(Pin)




| | | | | | |
|---|---|---|---|---|---|
| Conditions: | Tj= | $T_{jmax}$-25°C | | | |
| | Vin | 250 V | | DC link= | 350 V |
| parameter: | | | | | |
| Sw. freq. | fsw from | 16 | kHz to | 128 | kHz |