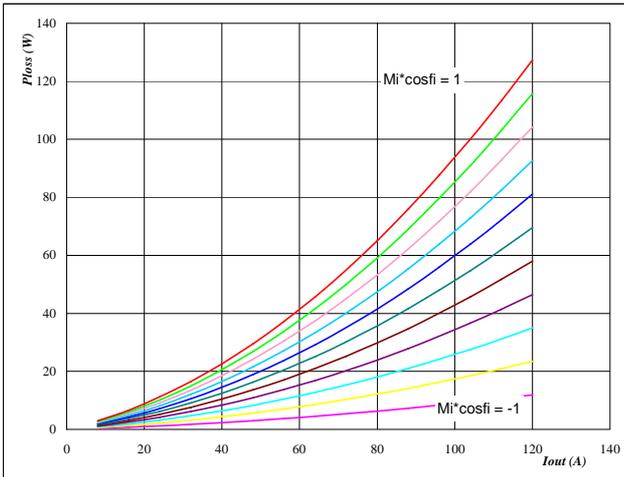


General conditions

3phase SPWM	
V_{GEon}	= 15 V
V_{GEoff}	= -15 V
R_{gon}	= 4 Ω
R_{goff}	= 4 Ω

Figure 1 IGBT

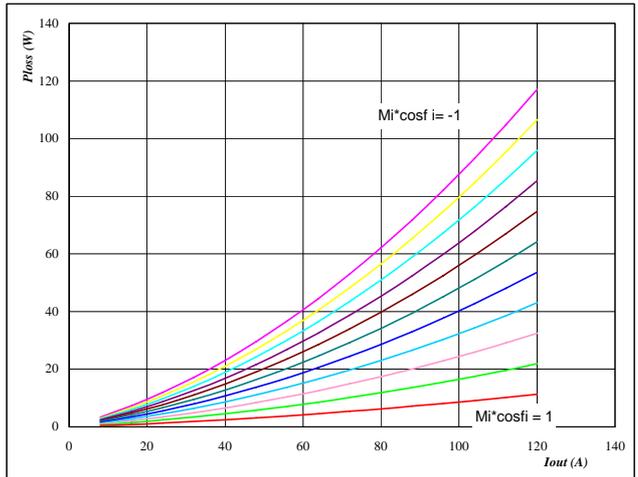
Typical average static loss as a function of output current
 $P_{loss} = f(I_{out})$



At
 $T_j = 150 \text{ }^\circ\text{C}$
Mi*cosfi from -1 to 1 in steps of 0,2

Figure 2 FRED

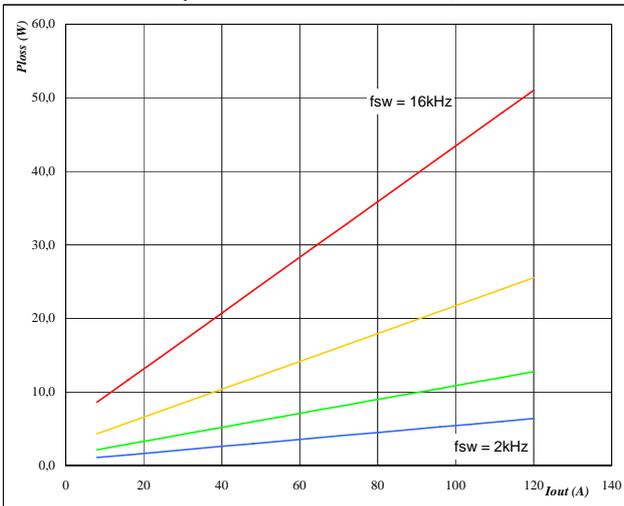
Typical average static loss as a function of output current
 $P_{loss} = f(I_{out})$



At
 $T_j = 150 \text{ }^\circ\text{C}$
Mi*cosfi from -1 to 1 in steps of 0,2

Figure 3 IGBT

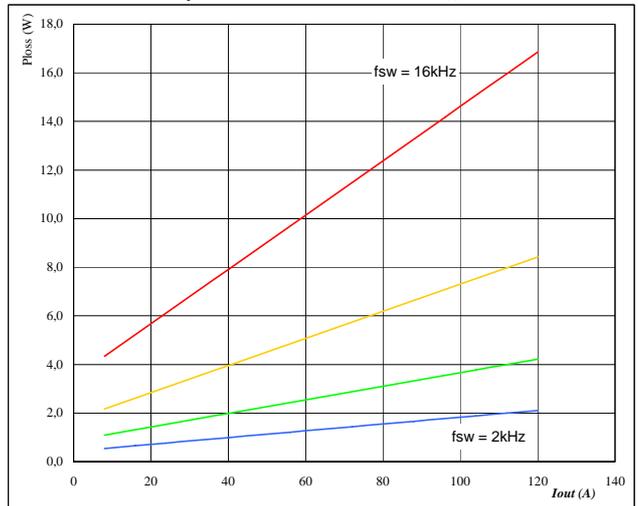
Typical average switching loss as a function of output current
 $P_{loss} = f(I_{out})$



At
 $T_j = 150 \text{ }^\circ\text{C}$
DC link = 320 V
fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 4 FRED

Typical average switching loss as a function of output current
 $P_{loss} = f(I_{out})$

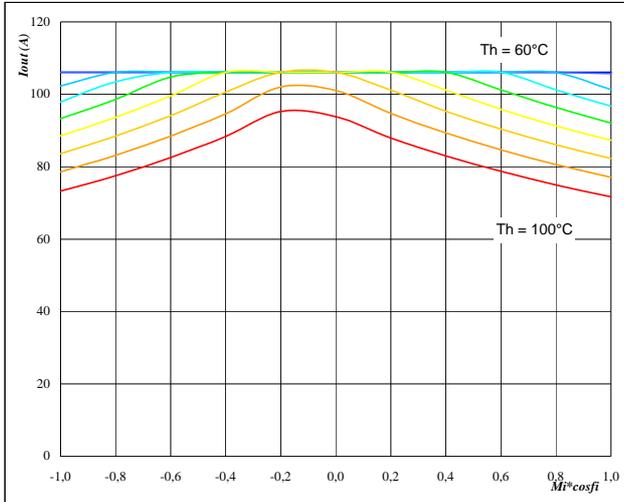


At
 $T_j = 150 \text{ }^\circ\text{C}$
DC link = 320 V
fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 5 Phase

Typical available 50Hz output current as a function $Mi \cdot \cos\phi_i$

$$I_{out} = f(Mi \cdot \cos\phi_i)$$

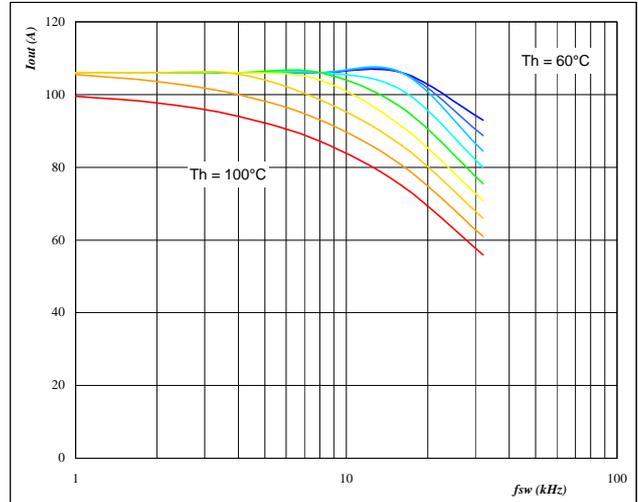


At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $f_{sw} = 16 \text{ kHz}$
 Th from 60 °C to 100 °C in steps of 5 °C

Figure 6 Phase

Typical available 50Hz output current as a function of switching frequency

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

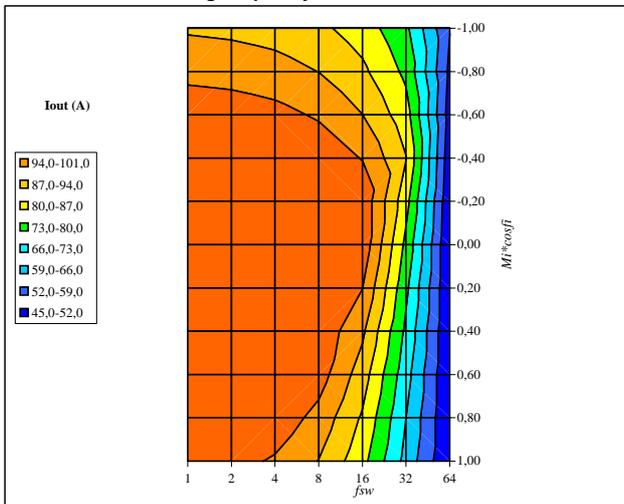


At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $Mi \cdot \cos\phi_i = 0,8$
 Th from 60 °C to 100 °C in steps of 5 °C

Figure 7 Phase

Typical available 50Hz output current as a function of $Mi \cdot \cos\phi_i$ and switching frequency

$$I_{out} = f(f_{sw}, Mi \cdot \cos\phi_i)$$

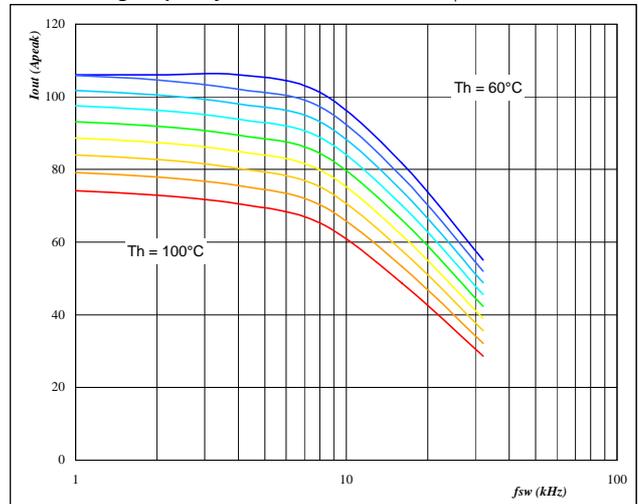


At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $T_n = 90 \text{ } ^\circ\text{C}$

Figure 8 Phase

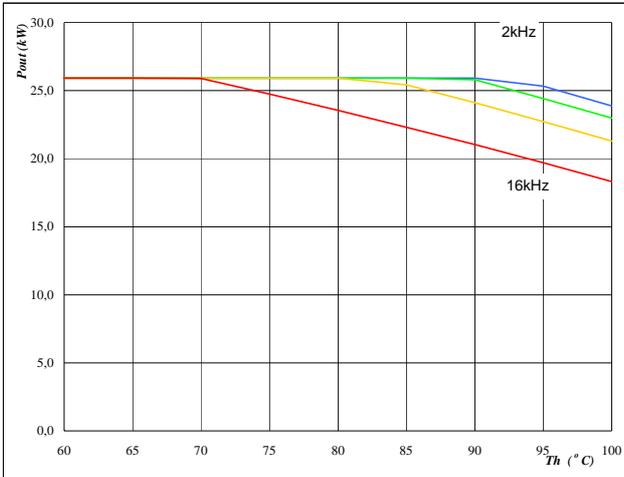
Typical available 0Hz output current as a function of switching frequency

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



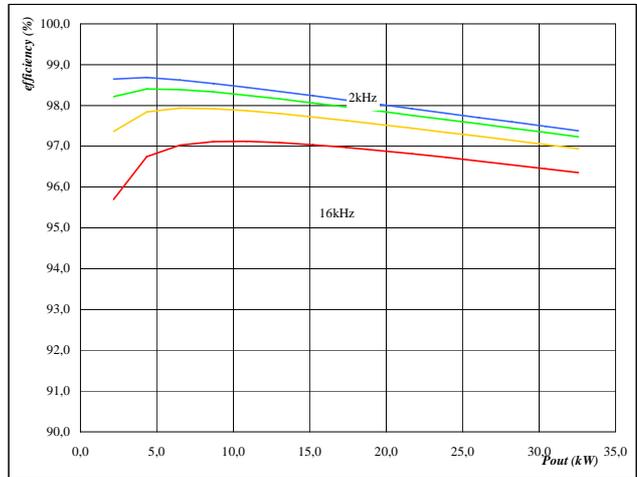
At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 Th from 60 °C to 100 °C in steps of 5 °C
 $Mi = 0$

Figure 9 Inverter

Typical available peak output power as a function of heatsink temperature
 $P_{out}=f(T_h)$


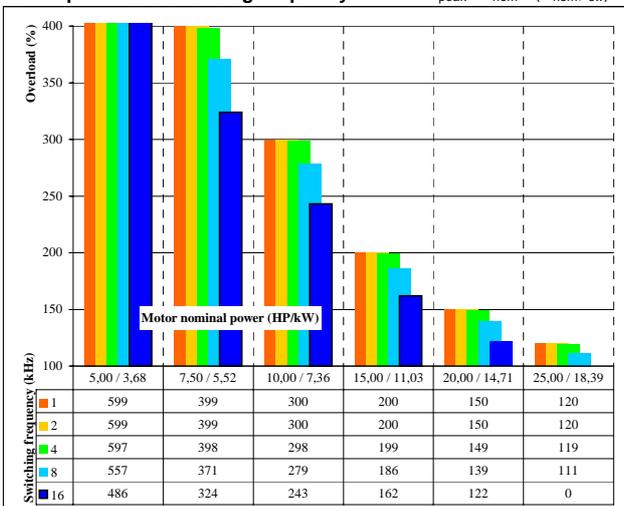
At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $M_i = 1$
 $\cos\phi_i = 0,80$
 fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 10 Inverter

Typical efficiency as a function of output power
 $\text{efficiency}=f(P_{out})$


At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $M_i = 1$
 $\cos\phi_i = 0,80$
 fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 11 Inverter

Typical available overload factor as a function of motor power and switching frequency
 $P_{peak} / P_{nom}=f(P_{nom}, f_{sw})$


At
 $T_j = 150 \text{ } ^\circ\text{C}$
 DC link = 320 V
 $M_i = 1$
 $\cos\phi_i = 0,8$
 fsw from 1 kHz to 16kHz in steps of factor 2
 $T_h = 90 \text{ } ^\circ\text{C}$
 Motor eff = 0,85

PRODUCT STATUS DEFINITIONS

Datasheet Status	Product Status	Definition
Target	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. The data contained is exclusively intended for technically trained staff.
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