

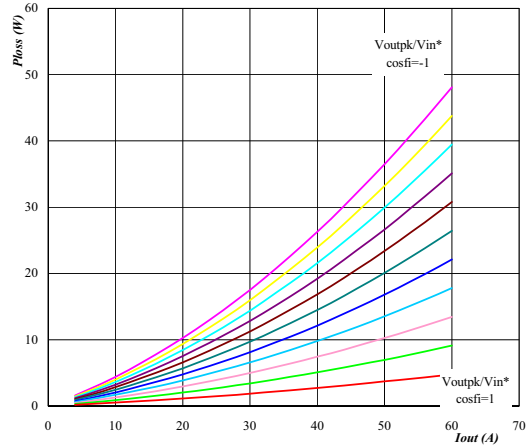
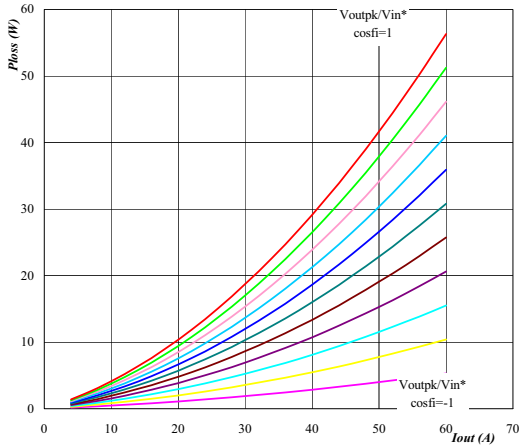
Output inverter application

General conditions: H bridge SPWM $V_{geon} = 15\text{ V}$
 $V_{geofl} = -15\text{ V}$

$R_{gon} = 8\text{ ohms}$ $R_{goff} = 8\text{ ohms}$

Figure 1. Typical average static loss as a function of output current
IGBT $P_{loss} = f(I_{out})$

Figure 2. Typical average static loss as a function of output current
FRED $P_{loss} = f(I_{out})$

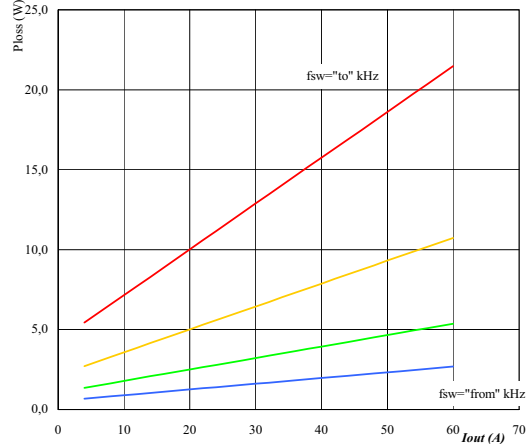
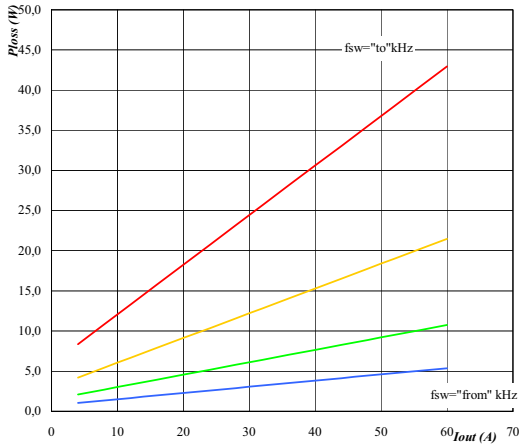


Conditions: $T_j = 150\text{ }^\circ\text{C}$
 Ratio of output peak to input DC voltage parameter $V_{outpk}/V_{in} * \cos\phi_i$ from -1 to 1
 in 0,2 steps

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 Ratio of output peak to input DC voltage parameter $V_{outpk}/V_{in} * \cos\phi_i$ from -1 to 1
 in 0,2 steps

Figure 3. Typical average switching loss as a function of output current
IGBT $P_{loss} = f(I_{out})$

Figure 4. Typical average switching loss as a function of output current
FRED $P_{loss} = f(I_{out})$



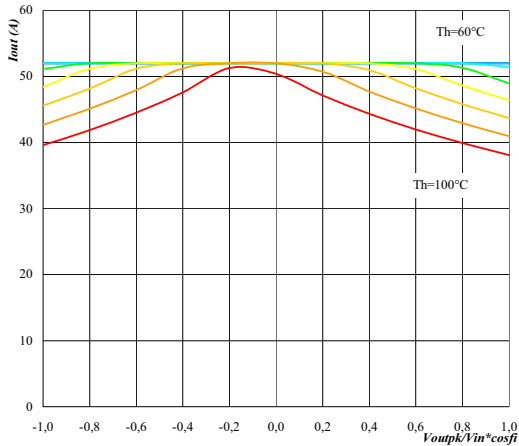
Conditions: $T_j = 150\text{ }^\circ\text{C}$
 DC link = 400 V
 Switching freq. parameter f_{sw} from 4 kHz to 32 kHz
 in * 2 steps

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 DC link = 400 V
 Switching freq. parameter f_{sw} from 4 kHz to 32 kHz
 in * 2 steps

Output inverter application

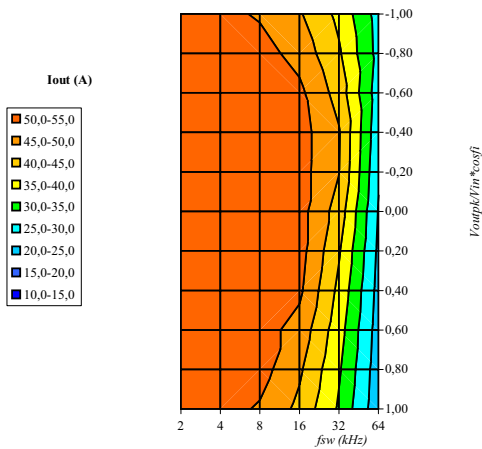
General conditions: H bridge SPWM V_{geon} 15 V
 V_{geoff} -15 V

Figure 5. Typical available 50Hz output current as a function of $V_{outpk}/V_{in} \cdot \cos\phi$
Phase $I_{out} = f(M_i \cdot \cos\phi)$



Conditions: $T_j = 150\text{ °C}$
 DC link = 400 V
 $f_{sw} = 16\text{ kHz}$
 Heatsink temp. T_h from 60 °C to 100 °C
 parameter in 5 °C steps

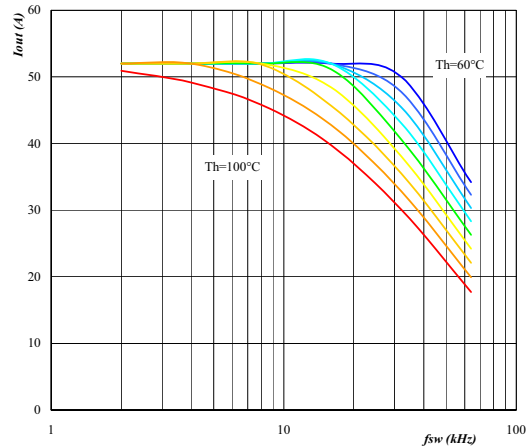
Figure 7. Typical available 50Hz output current as a function of $V_{outpk}/V_{in} \cdot \cos\phi$ and f_{sw}
Phase $I_{out} = f(f_{sw}, V_{outpk}/V_{in} \cdot \cos\phi)$



Conditions: $T_j = 150\text{ °C}$
 DC link = 400 V
 $T_h = 90\text{ °C}$

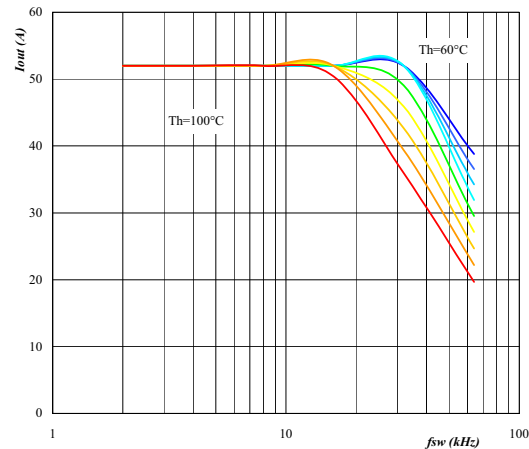
$R_{gon} = 8\text{ ohms}$ $R_{goff} = 8\text{ ohms}$

Figure 6. Typical available 50Hz output current as a function of switching frequency
Phase $I_{out} = f(f_{sw})$



Conditions: $T_j = 150\text{ °C}$
 $V_{out} = 230\text{ VAC}$
 $\cos\phi = 1$
 Heatsink temp. T_h from 60 °C to 100 °C
 parameter in 5 °C steps

Figure 8. Typical available 50Hz output current as a function of switching frequency
Phase $I_{out} = f(f_{sw})$



Conditions: $T_j = 150\text{ °C}$
 DC link = 400 V
 $V_{outpk}/V_{in} \cdot \cos\phi = 0$
 Heatsink temp. T_h from 60 °C to 100 °C
 parameter in 5 °C steps

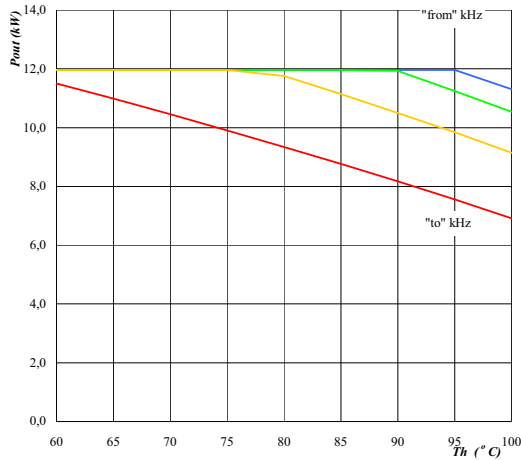
Output inverter application

General conditions: H bridge SPWM $V_{geon} = 15\text{ V}$
 $V_{geoff} = -15\text{ V}$

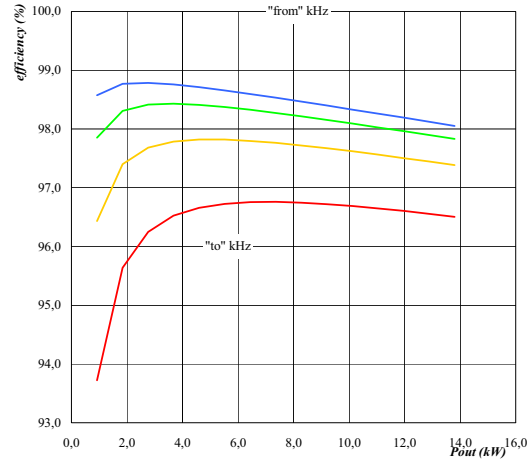
$R_{gon} = 8\text{ ohms}$ $R_{goff} = 8\text{ ohms}$

Figure 9. Typical available electric output power as a function of heatsink temperature
Inverter $P_{out} = f(T_h)$

Figure 10. Typical efficiency as a function of output power
Inverter $efficiency = f(P_{out})$



Conditions: $T_j = 150\text{ }^{\circ}\text{C}$
 DC link = 400 V
 $V_{out} = 230\text{ VAC}$
 $\cos\phi = 1,00$
 Switching freq. parameter: fsw from 4 kHz to 32 kHz in * 2 steps



Conditions: $T_j = 150\text{ }^{\circ}\text{C}$
 DC link = 400 V
 $V_{out} = 230\text{ VAC}$
 $\cos\phi = 1,00$
 Switching freq. parameter: fsw from 4 kHz to 32 kHz in * 2 steps

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