flow PIM 2 3rd	**Output Inverter Application**	650 V / 50 A

General conditions

H Bridge SPWM

V_{GEon}	=	**15 V**
V_{GEoff}	=	**-15 V**
R_{gon}	=	**8 Ω**
R_{goff}	=	**8 Ω**

Figure 1	IGBT

Typical average static loss as a function of output current

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

At
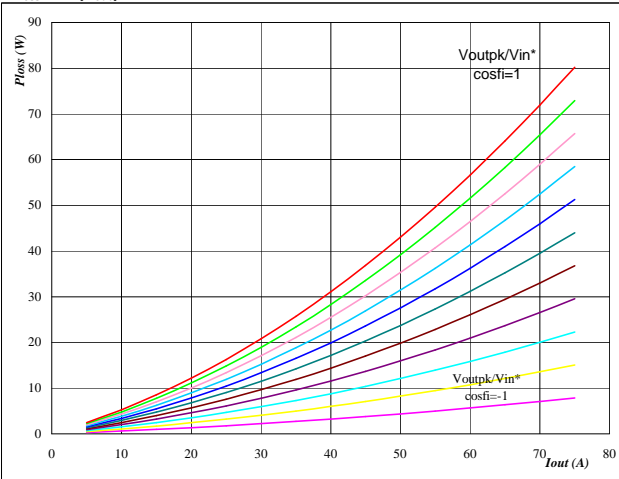
T_j = 125 °C

Mi*cosfi from -1 to 1 in steps of 0,2

Figure 2	FWD

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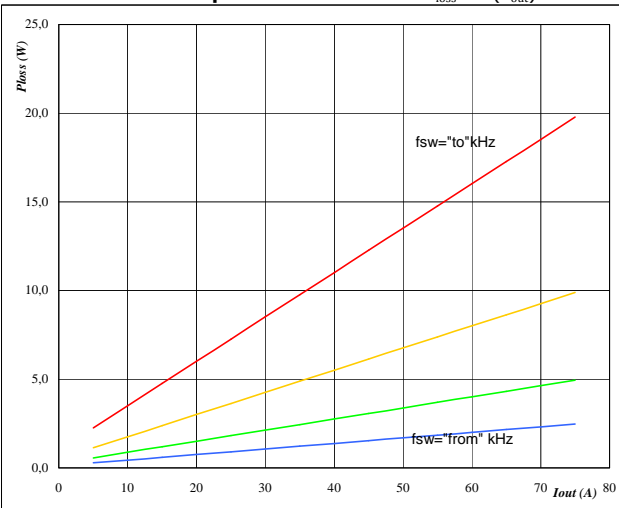
$P_{loss} = f(I_{out})$

At
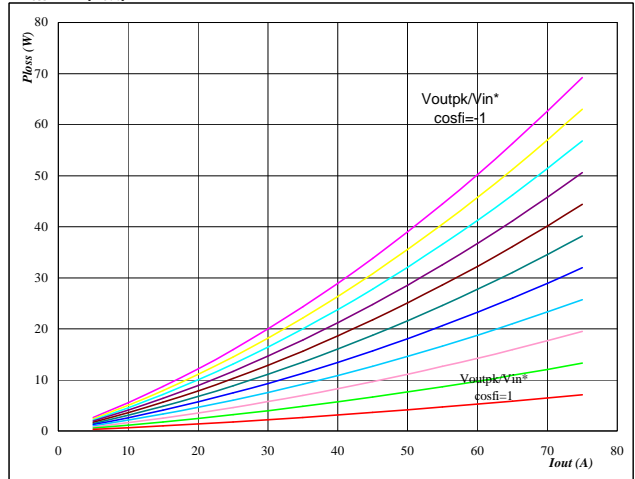
T_j = 125 °C

Mi*cosfi from -1 to 1 in steps of 0,2

Figure 3	IGBT

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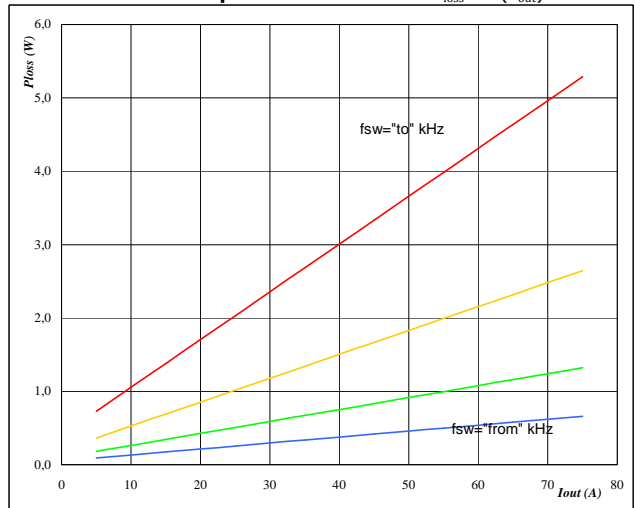

At

T_j = 125 °C

DC-link = 320 V

fsw from 4 kHz to 32 kHz in steps of factor 2

Figure 4	FWD

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

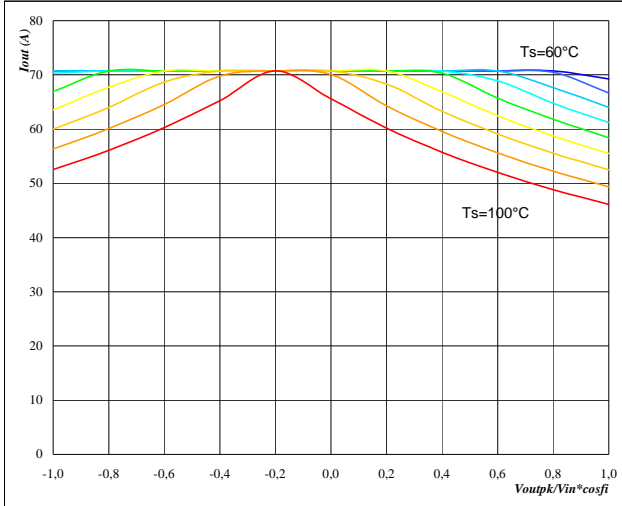**At**

T_j = 125 °C

DC-link = 320 V

fsw from 4 kHz to 32 kHz in steps of factor 2

Figure 5 | **Phase**
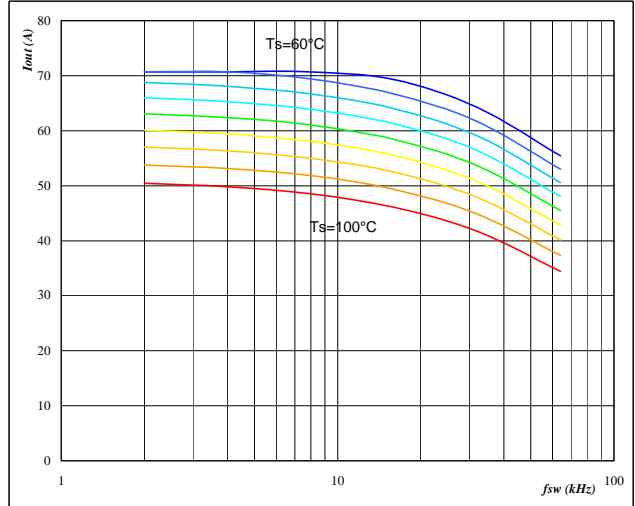
Typical available 50Hz output current as a function Mi*cosfi $I_{out} = f(Mi*cosfi)$

At

T_j =	125	°C
DC-link =	320	V
f_{sw} =	16	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 =	125	°C
DC-link =	320	V
Mi*cosfi =	1	

Th from 60 °C to 100 °C in steps of 5 °C

Figure 7 | **Phase**

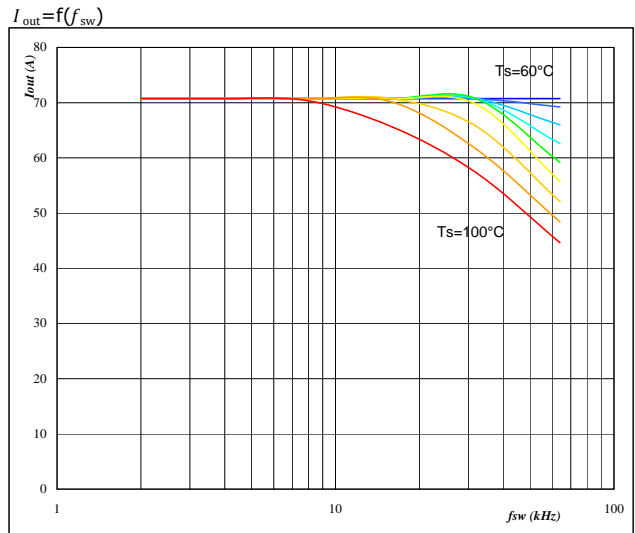**Typical available 50Hz output current as a function of $V_{outpk}/V_{in}*cosfi$ and switching frequency**
$I_{out}=f(f_{sw},Mi*cosfi)$

Iout (A)
- 70,0-75,0
- 65,0-70,0
- 60,0-65,0
- 55,0-60,0
- 50,0-55,0
- 45,0-50,0

At
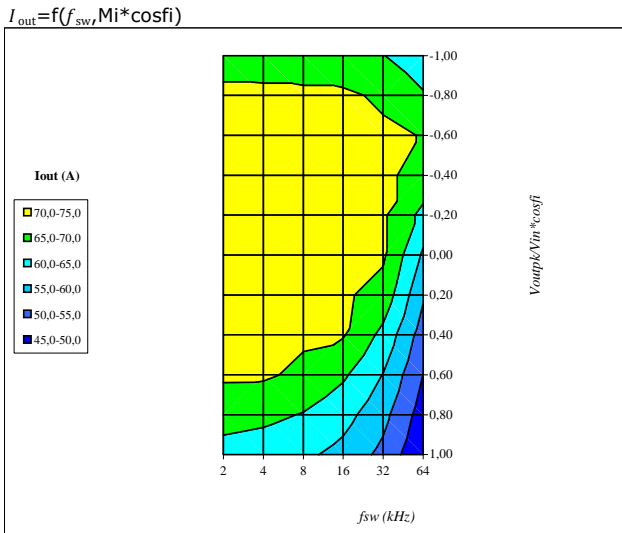
T_j =	125	°C
DC-link =	320	V
T_s =	80	°C

Figure 8 | **Phase**

Typical available 0Hz output current as a function of switching frequency
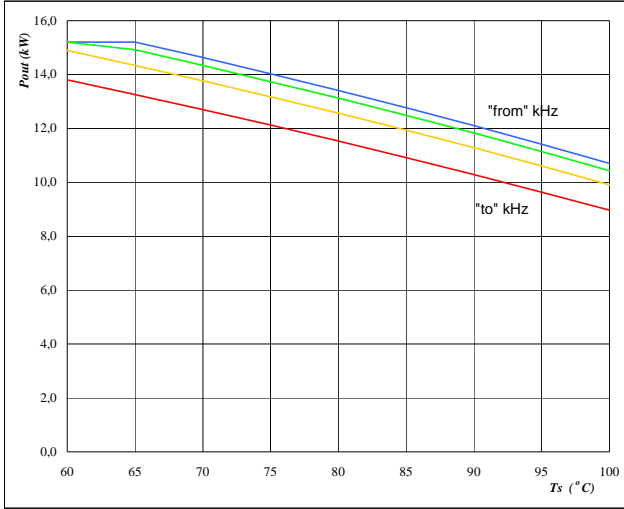$I_{out}=f(f_{sw})$

At

T_j =	125	°C
DC-link =	320	V
Mi*cosfi =	0	

Ts from 60 °C to 100 °C in steps of 5 °C

Figure 9 — **Inverter**

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

At

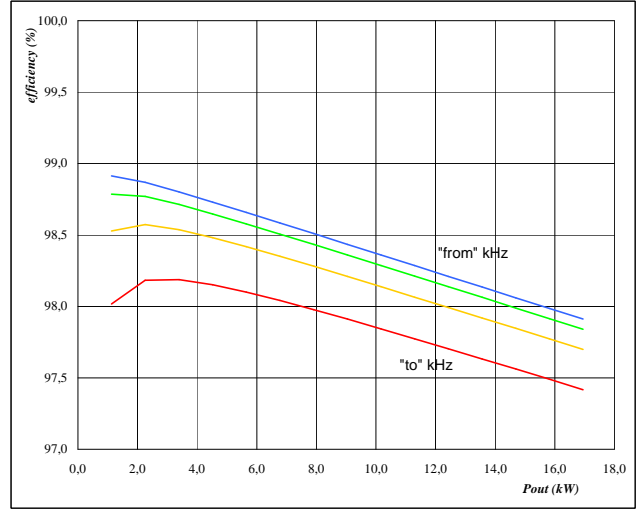|		
T_j =	125	°C
DC-link =	320	V
Mi =	1	
cosfi =	1	

fsw from 4 kHz to 32 kHz in steps of factor 2

Figure 10 — **Inverter**

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

At

T_j =	125	°C
DC-link =	320	V
Mi =	1	
cosfi =	1	

fsw from 4 kHz to 32 kHz in steps of factor 2