Vincotech

V23990-P820-F10-PM

preliminary datasheet

flowPACK 1 3rd gen	Output Inverter Application	1200V/75A

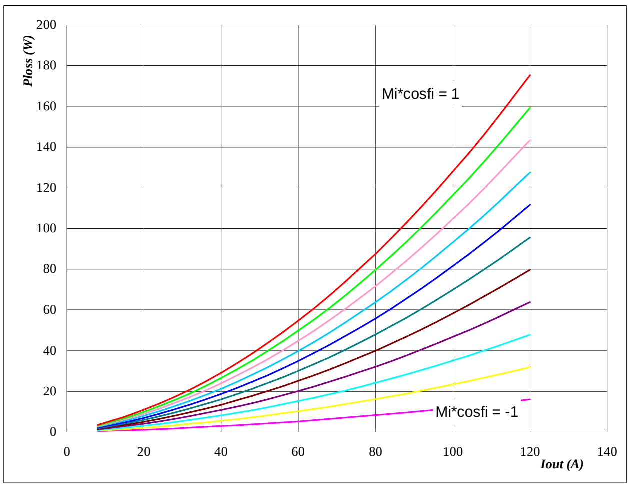
General conditions

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

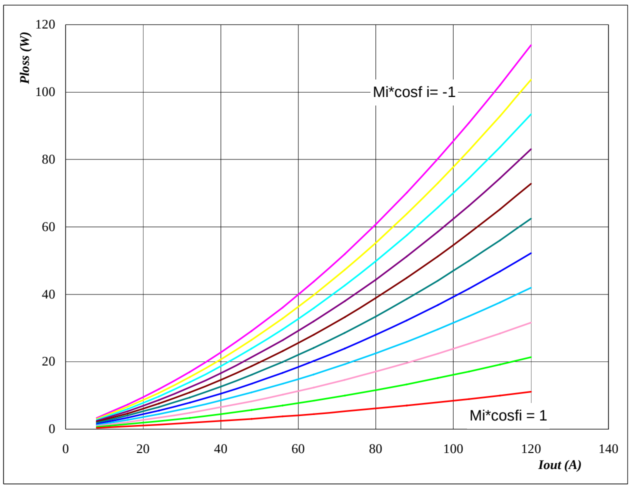
T_j = 150 °C

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

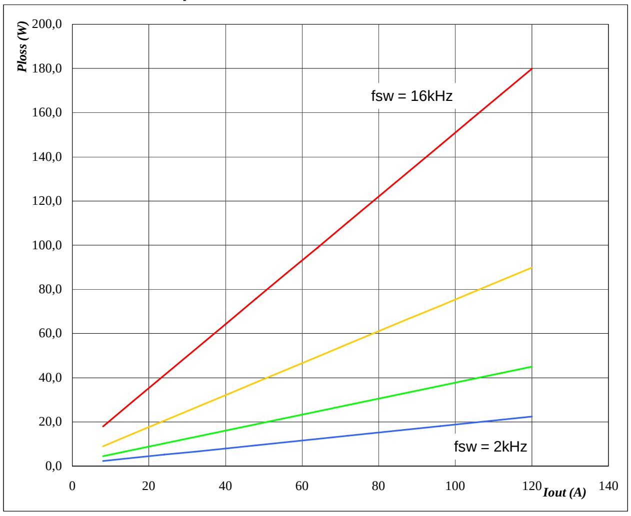
T_j = 150 °C

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 °C

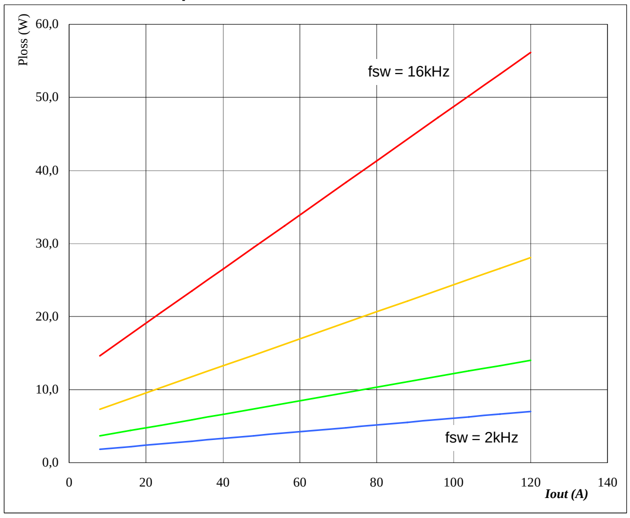
DC link = 600 V

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 °C

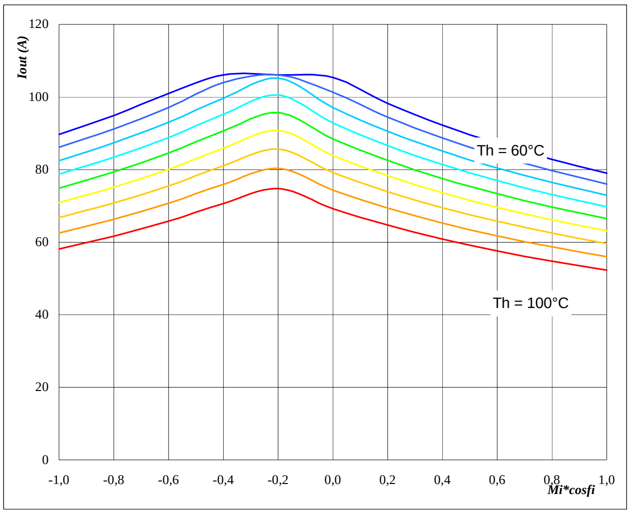
DC link = 600 V

fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 5 Phase

Typical available 50Hz output current as a function Mi*cosfi

$I_{out} = f(Mi*cosfi)$

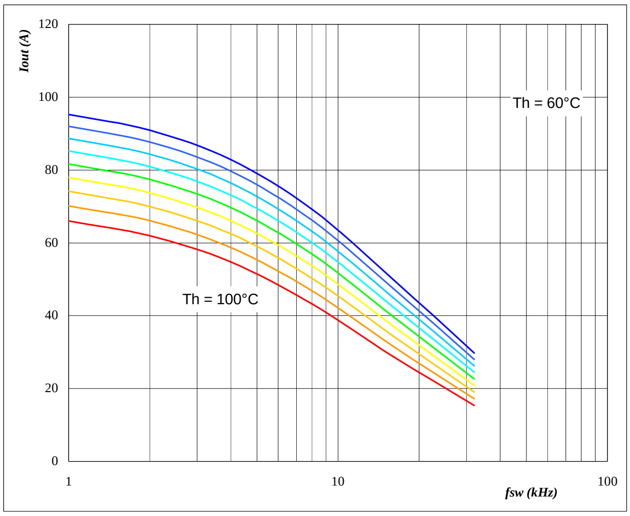


At
T_j = 150 °C
DC link = 600 V
fsw = 4 kHz
Th from 60 °C to 100 °C in steps of 5 °C

Figure 6 Phase

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

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

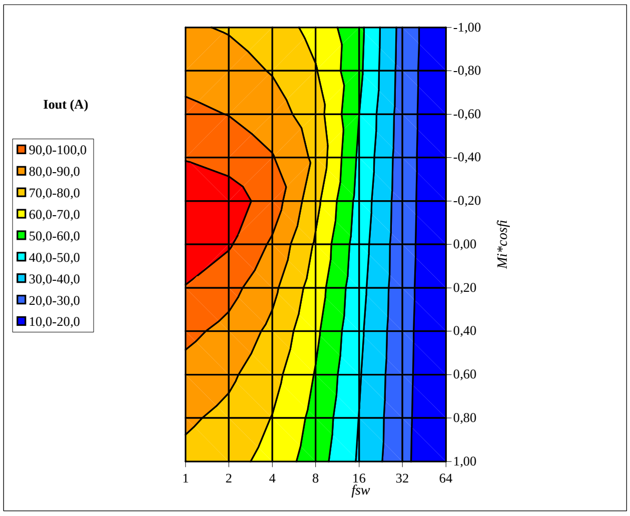


At
T_j = 150 °C
DC link = 600 V
Mi*cosfi = 0,8
Th from 60 °C to 100 °C in steps of 5 °C

Figure 7 Phase

Typical available 50Hz output current as a function of Mi*cosfi and switching frequency

$I_{out} = f(f_{sw}, Mi*cosfi)$

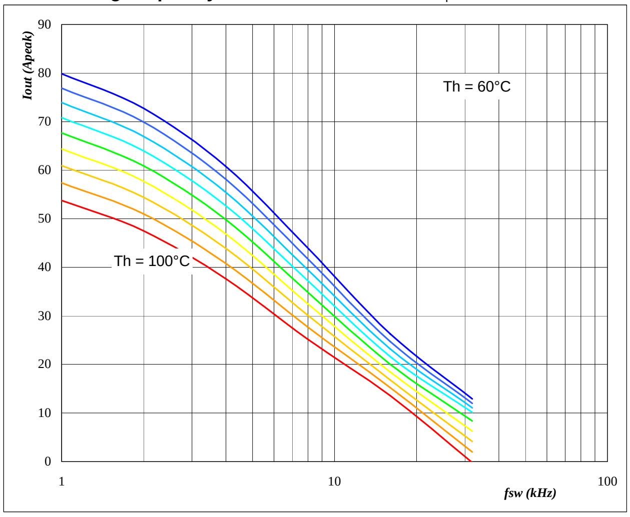


At
T_j = 150 °C
DC link = 600 V
T_h = 80 °C

Figure 8 Phase

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

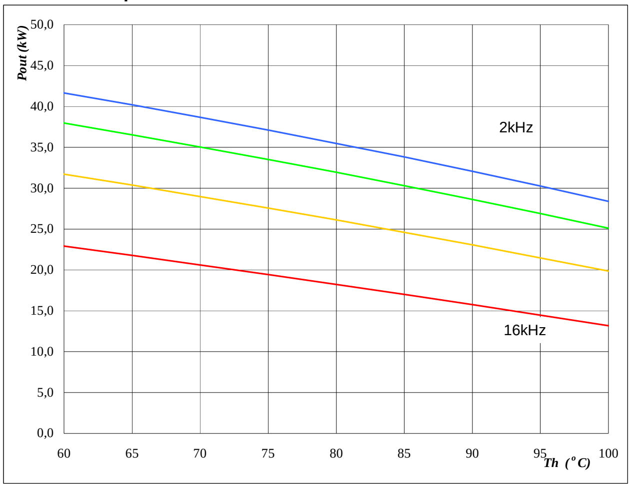
$I_{outpeak} = f(f_{sw})$



At
T_j = 150 °C
DC link = 600 V
Th from 60 °C to 100 °C in steps of 5 °C
Mi = 0

Figure 9 Inverter

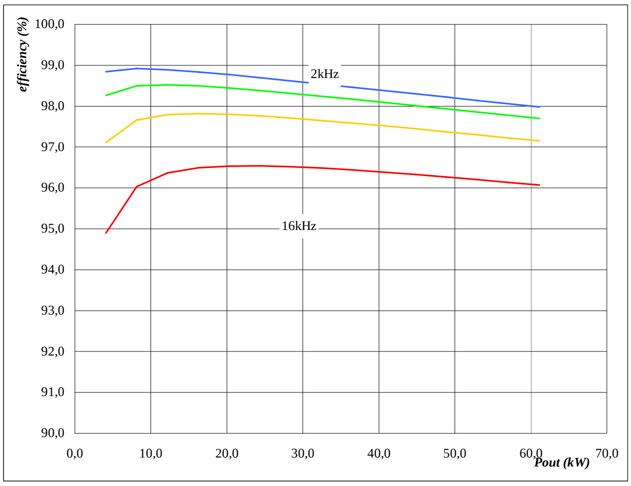
Typical available peak output power as a function of heatsink temperature $P_{out}=f(T_h)$



At
T_j = 150 °C
DC link = 600 V
Mi = 1
cosfi = 0,80
fsw from 2 kHz to 16 kHz in steps of factor 2

Figure 10 Inverter

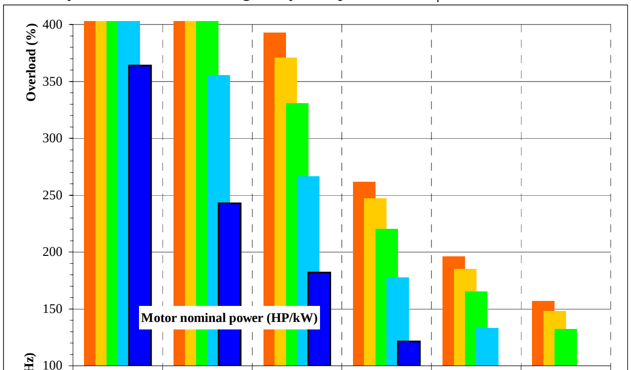
Typical efficiency as a function of output power efficiency=f(P_{out})



At
T_j = 150 °C
DC link = 600 V
Mi = 1
cosfi = 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} / $P_{nom}=f(P_{nom},f_{sw})$



Switching frequency (kHz)	005 / 004	008 / 006	010 / 007	015 / 011	020 / 015	025 / 018
1	785	523	393	262	196	157
2	741	494	371	247	185	148
4	662	441	331	221	165	132
8	533	355	267	178	133	0
16	364	243	182	121	0	0

At
T_j = 150 °C
DC link = 600 V
Mi = 1
cosfi = 0,8
fsw from 1 kHz to 16kHz in steps of factor 2
Th = 90 °C
Motor eff = 0,85

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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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