V23990-P849-A58/A59/C58/C59-PM

preliminary datasheet

flowPIM0 3rd Gen	Output Inverter Application	1200V/8A

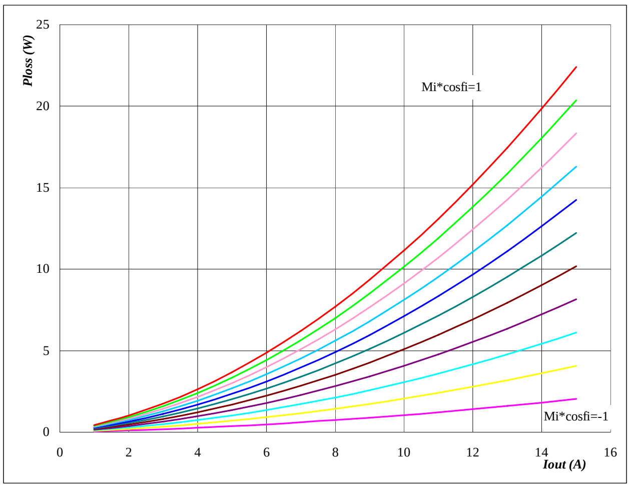
General conditions

3phase SPWM		
V_{GEon}	=	15 V
V_{GEoff}	=	-15 V
R_{gon}	=	32 Ω
R_{goff}	=	32 Ω

Figure 1 IGBT

Typical average static loss as a function of output current

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



At

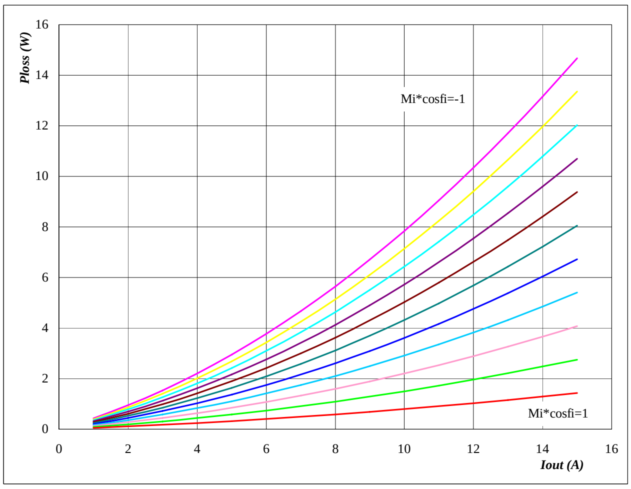
Tj=125°C

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

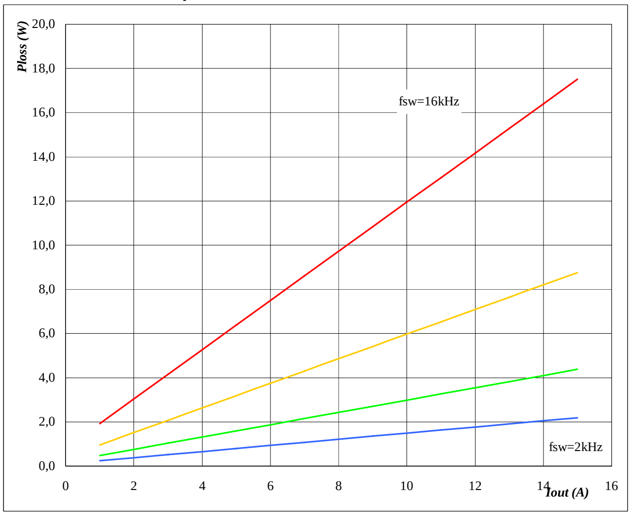
Tj=125°C

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

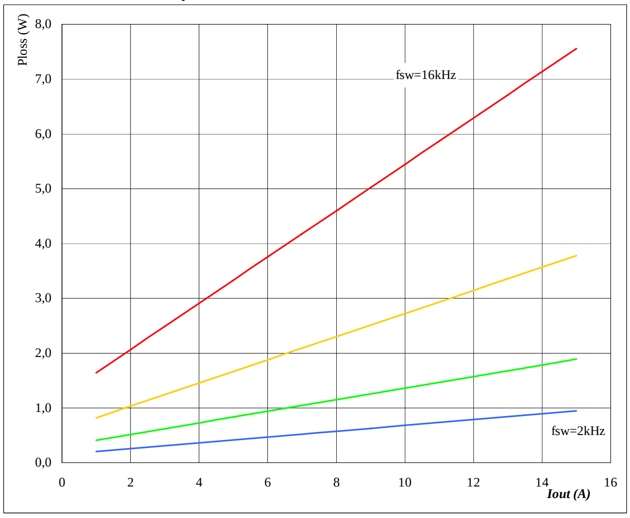
T_j =	125	°C
DC link =	600	V

fsw from 2 kHz to 16 kHz in 2 steps

Figure 4 FRED

Typical average switching loss as a function of output current

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



At

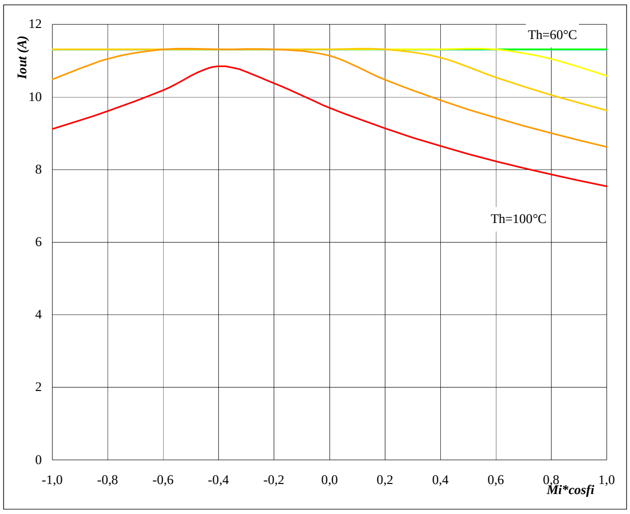
T_j =	125	°C
DC link =	600	V

fsw from 2 kHz to 16 kHz in 2 steps

Output Inverter Application

Figure 5 Phase

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



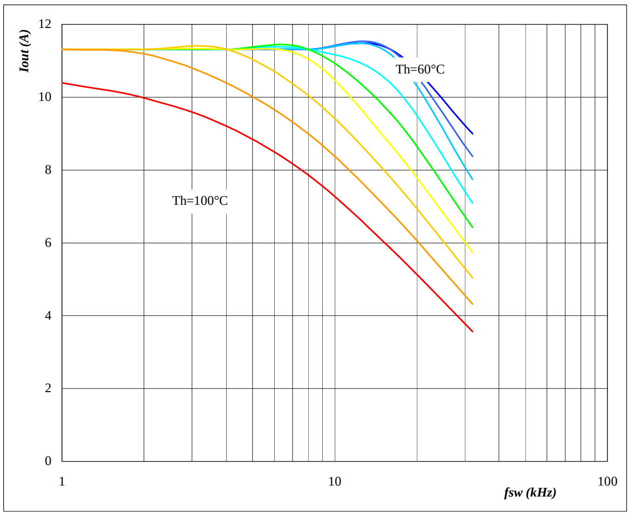
At

T_j =	125	°C
DC link =	600	V
fsw =	8	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 $I_{out} = f(f_{sw})$



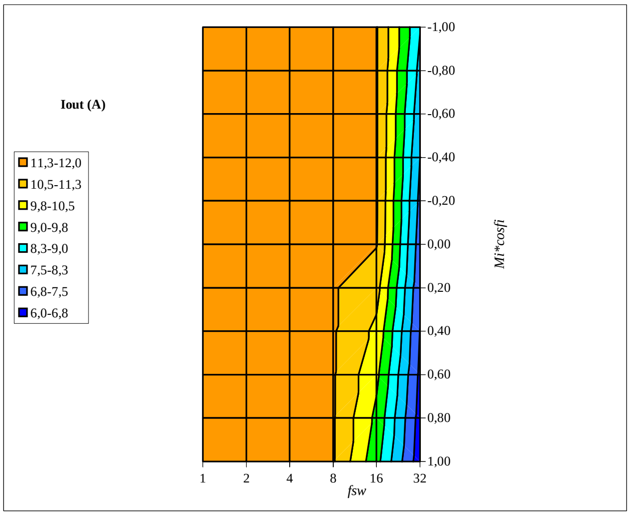
At

T_j =	125	°C
DC link =	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 $I_{out} = f(f_{sw}, Mi*cosfi)$

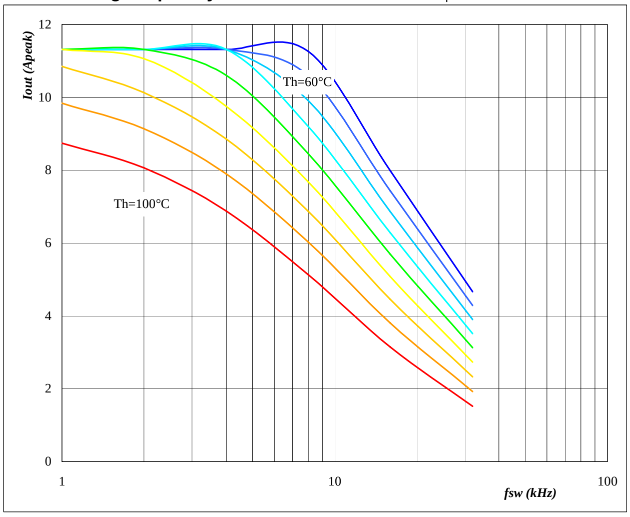


At

T_j =	125	°C
DC link =	600,00	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

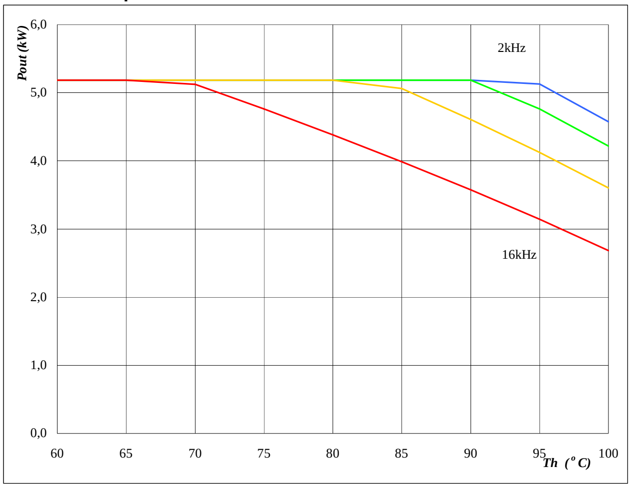
T_j =	125	°C
DC link =	600,00	V

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

Output Inverter Application

Figure 9 Inverter

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



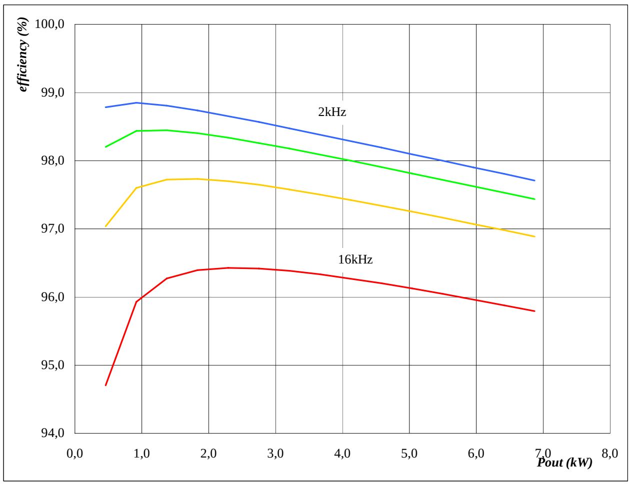
At

T_j =	125	°C
DC link =	600	V
Mi =	1	
cosfi =	0,80	

fsw from 2 kHz to 16 kHz in 2 steps

Figure 10 Inverter

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



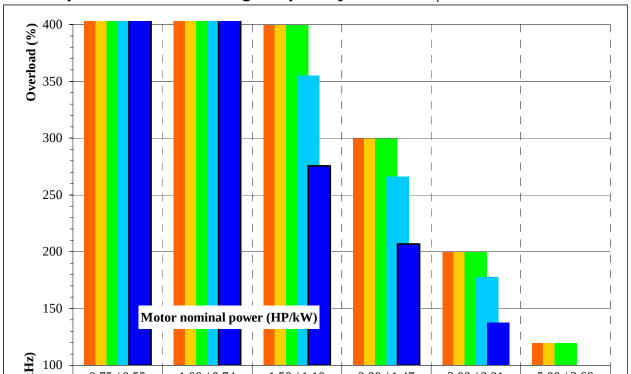
At

T_j =	125	°C
DC link =	600	V
Mi =	1	
cosfi =	0,80	

fsw from 2 kHz to 16 kHz in 2 steps

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)	0,75 / 0,55	1,00 / 0,74	1,50 / 1,10	2,00 / 1,47	3,00 / 2,21	5,00 / 3,68
1	799	599	399	300	200	120
2	799	599	399	300	200	120
4	799	599	399	300	200	120
8	710	532	355	266	177	0
16	551	413	276	207	138	0

At

T_j =	125	°C
DC link =	600	V
Mi =	1	
cosfi =	0,8	

fsw from 1 kHz to 16 kHz in 2 steps

Th =	90	°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.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data may be published at a later date. Vincotech reserves the right to make changes at any time without notice in order to improve design. The data contained is exclusively intended for technically trained staff.
Final	Full Production	This datasheet contains final specifications. Vincotech reserves the right to make changes at any time without notice in order to improve design. The data contained is exclusively intended for technically trained staff.