



SMAC SERIE
TECHNICAL DATA SHEET
3-PHASE SYNCHRONOUS MOTOR

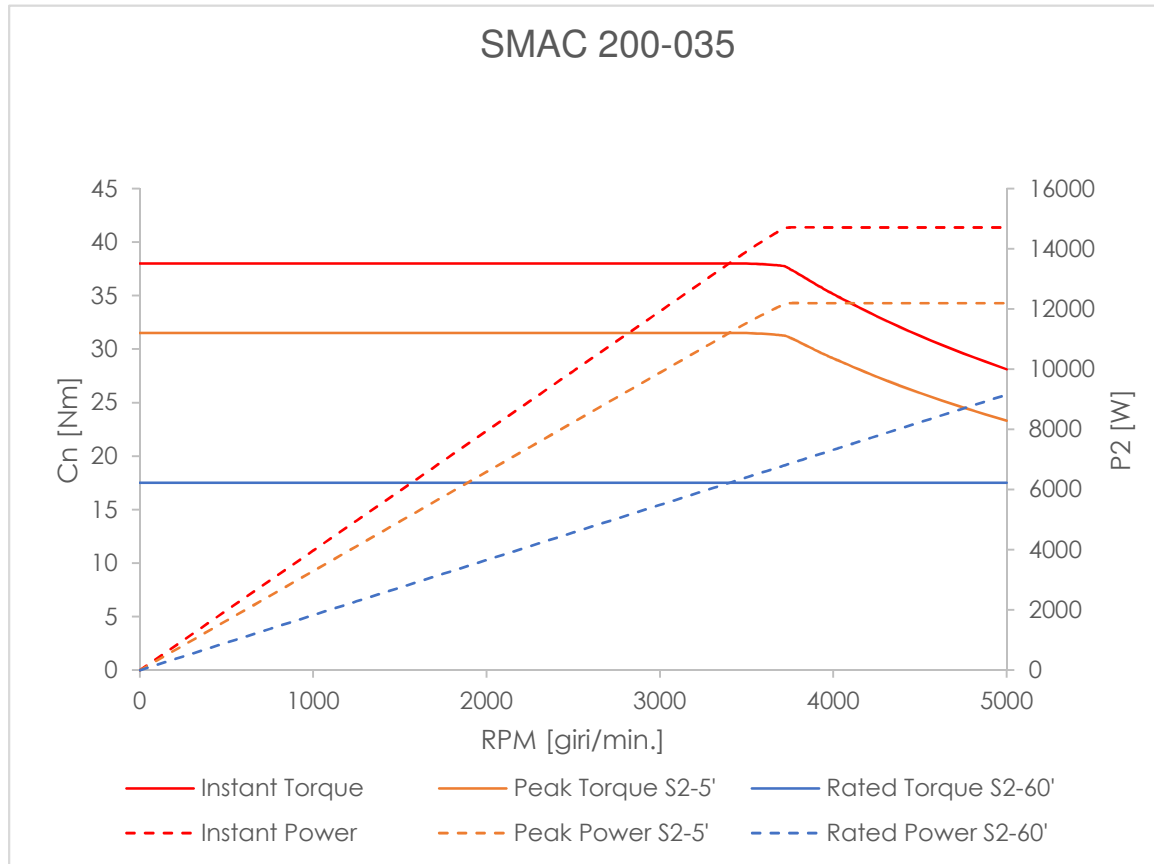
Code	51J20003528ET080400		
Rev.	03		
Date	03/03/2021		
Page	1	di	2

Motor Rated Power			5500W
--------------------------	--	--	--------------

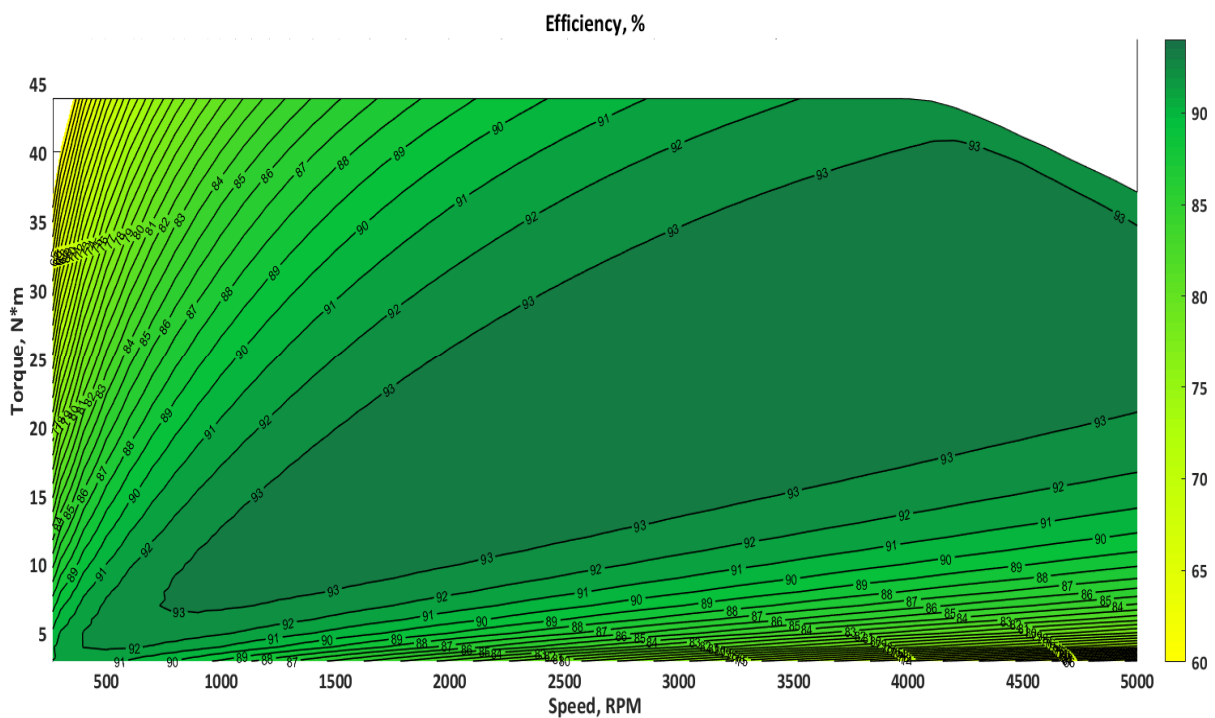
Inverter Power Supply			48Vdc
------------------------------	--	--	--------------

Description	Symbol	Unit		
Duty	-	-	S2-60min	
Nominal Speed	n_n	rpm	3000	
Frequency (N° poles)	$f (2p)$	Hz	200 (8)	
Constant Voltage	K_e	Vrms/Krpm	6.6	
Constant Torque	K_t	Nm/Arms	0.10	
Instant Torque	T_{inst}	Nm	38.0	
Instant Current	I_{inst}	Arms	460	
Peak Torque S2-5min.	T_{peak}	Nm	31.5	
Peak Current S2-5min.	I_{peak}	Arms	340	
Nominal Torque S2-60min.	T_n	Nm	17.5	
Nominal Current S2-60min.	I_n	Arms	170	
Rotor Inertia	J_r	kg x m ²	0.006	
Ambient Temperature	θ_a	°C	-15 ÷ +40	
Protection Degree	IP		IP 54	up to IP67
Insulation Class	-	-	F	
Thermal protection	-	-	KTY 84-130	
Cooling system			Air	

Speed-Torque & Speed Power Motor Curves



Efficiency Map



Motor Rated Power			8000W
--------------------------	--	--	--------------

Inverter Power Supply			48Vdc
------------------------------	--	--	--------------

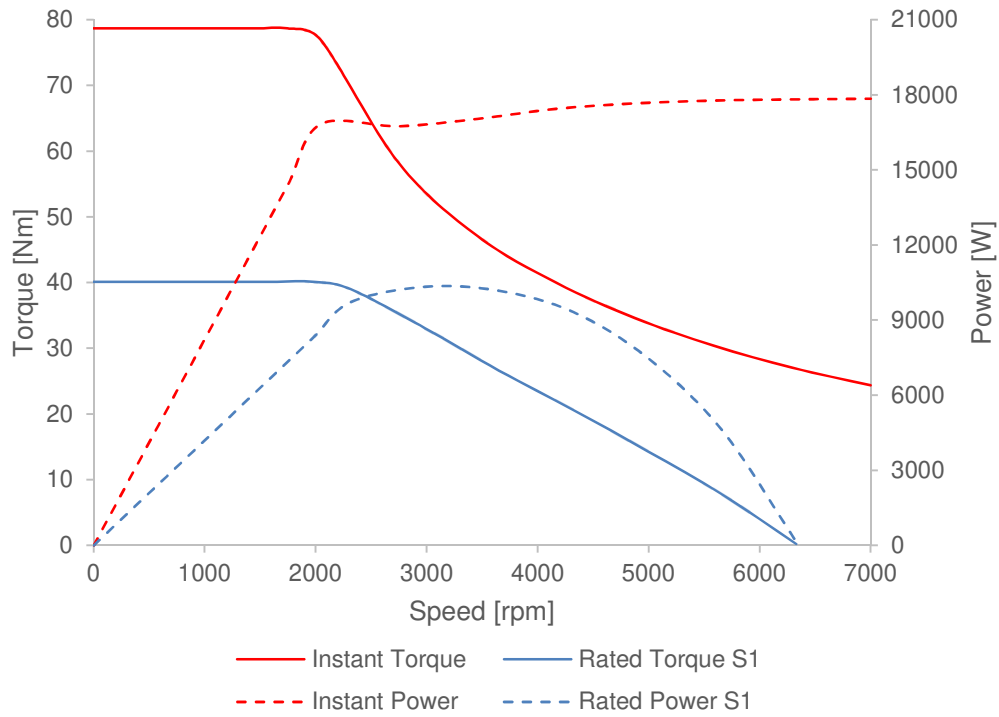
Description	Symbol	Unit	
Duty	-	-	S1
Nominal Speed	n_n	rpm	2000
Frequency (N° poles)	$f (2p)$	Hz	133.3 (8)
Costant Voltage	K_e	Vrms/Krpm	13.0
Costant Torque	K_t	Nm/Arms	0.21
Instant Torque	T_i	Nm	80.0
Instant Current	I_i	Arms	540.0

Rated Torque	S1.	T_r	Nm	40.0
Rated Current	S1.	I_r	Arms	180.0
Rotor Inertia		J_r	kg x m ²	0.012
Ambient Temperature		θ_a	°C	-15 ÷ +40
Protection Degree		IP		IP67
Insulation Class		-		F
Thermal protection		-		PTY 84-130
Cooling system				Liquid

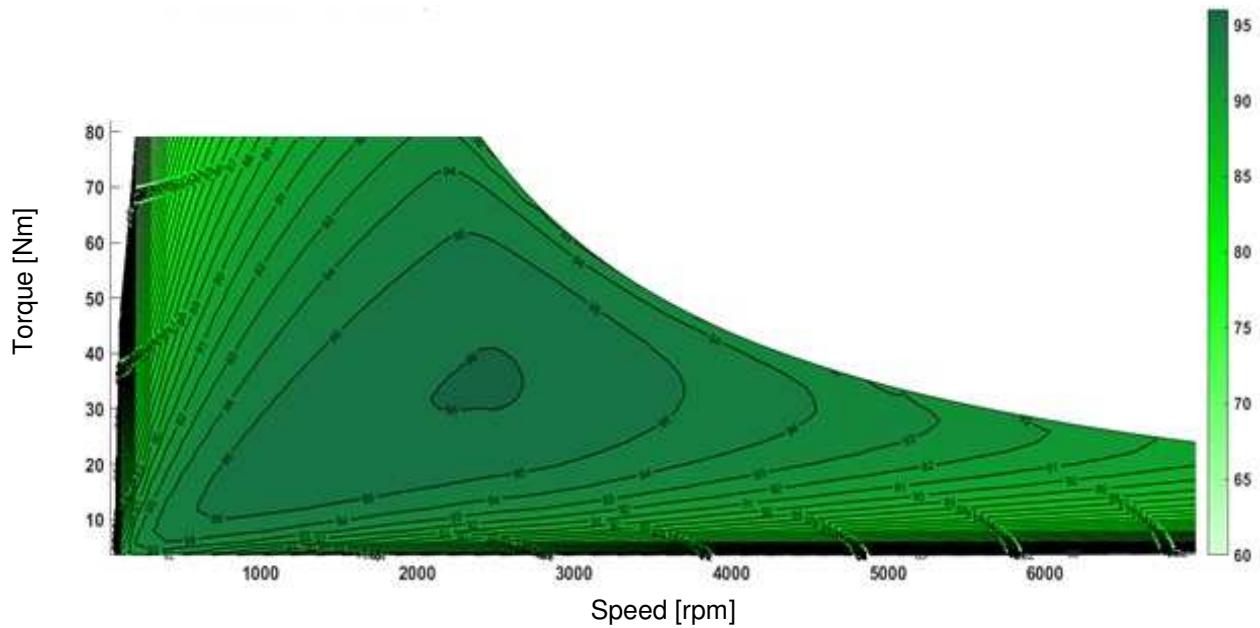
PRELIMINARY

Speed-Torque & Speed Power Motor Curves (*)

SMAC 200-070



Efficiency Map % (*)



* MTPA Field Weakening strategy control & Optimized Advance Angle



ELECTRIC POWERTRAIN SOLUTIONS

SMAC SERIE

TECHNICAL DATA SHEET

3-PHASE SYNCHRONOUS MOTOR

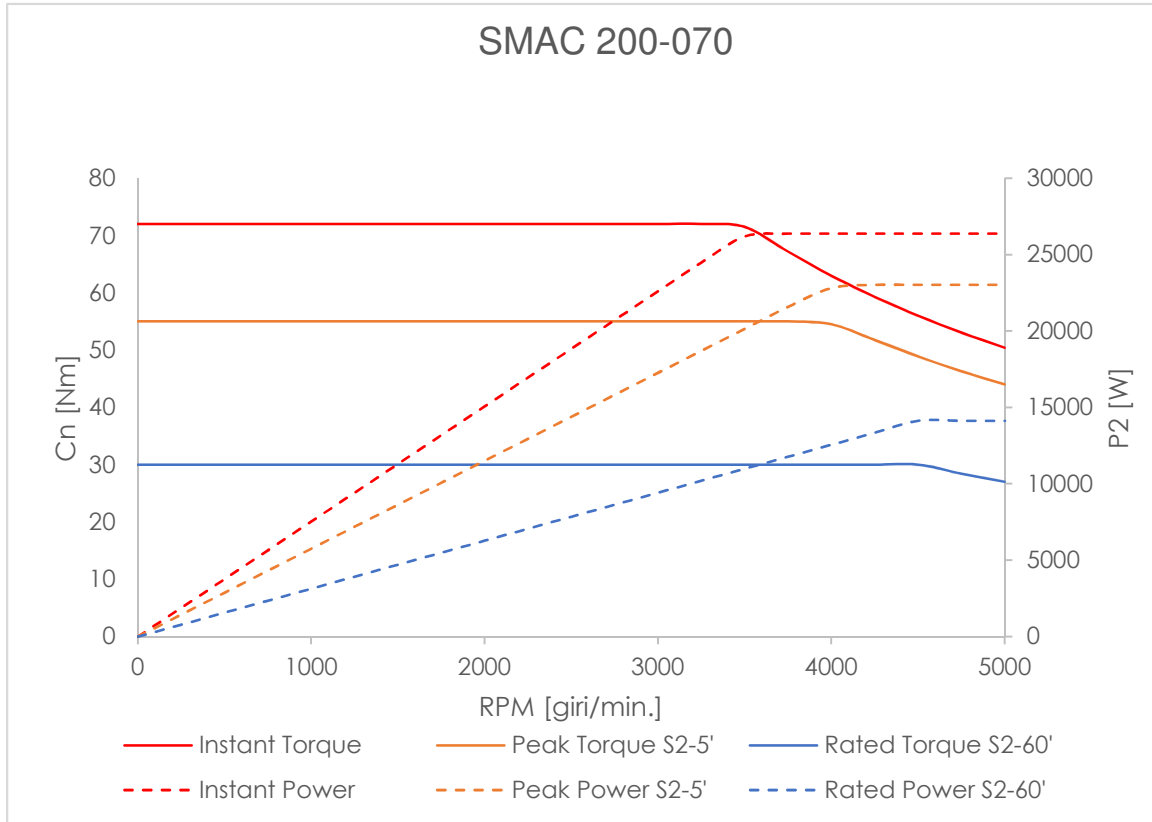
Code	51J20007028HT080400		
Rev.	01		
Date	03/03/2021		
Page	1	di	2

Motor Rated Power			12500W	
--------------------------	--	--	---------------	--

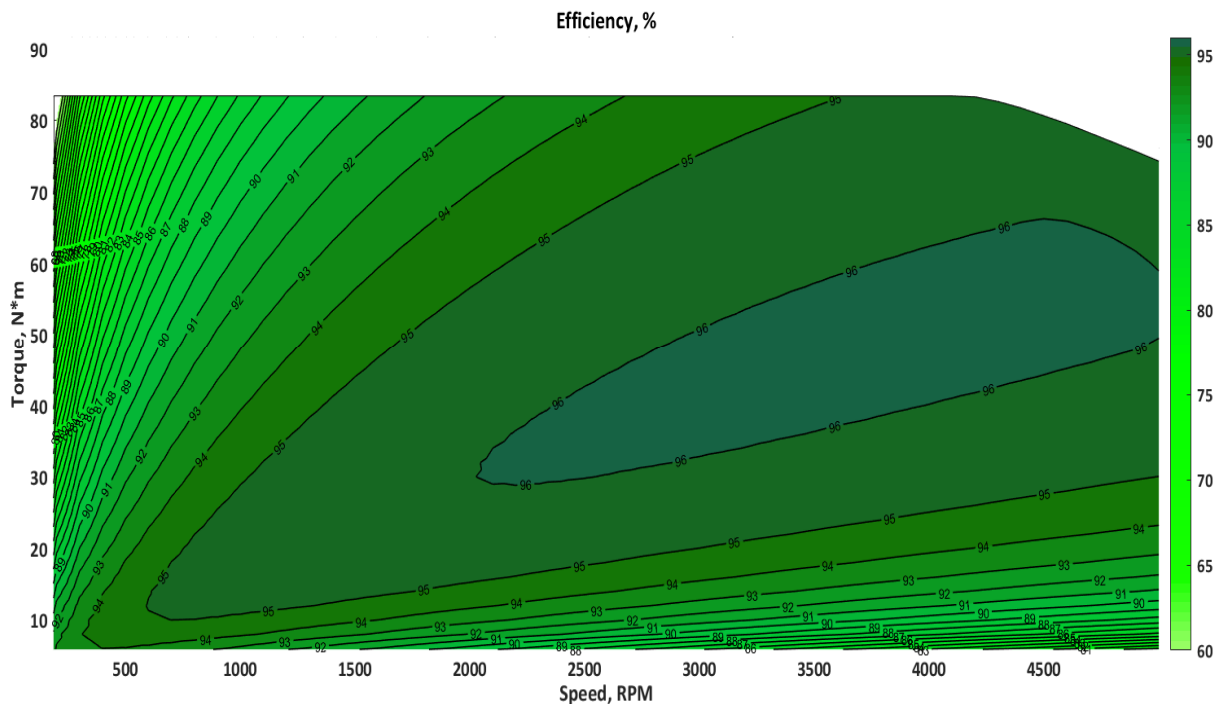
Inverter Power Supply			96Vdc	
------------------------------	--	--	--------------	--

Description	Symbol	Unit		
Duty	-	-	S2-60min	
Nominal Speed	n_n	rpm	4000	
Frequency (N° poles)	$f (2p)$	Hz	266.6 (8)	
Constant Voltage	K_e	Vrms/Krpm	13.0	
Constant Torque	K_t	Nm/Arms	0.21	
Instant Torque	T_{inst}	Nm	72.0	
Instant Current	I_{inst}	Arms	448	
Peak Torque S2-5min.	T_{peak}	Nm	55.0	
Peak Current S2-5min.	I_{peak}	Arms	298	
Nominal Torque S2-60min.	T_n	Nm	30.0	
Nominal Current S2-60min.	I_n	Arms	148	
Rotor Inertia	J_r	kg x m ²	0.012	
Ambient Temperature	θ_a	°C	-15 ÷ +40	
Protection Degree	IP		IP 54	up to IP67
Insulation Class	-	-	F	
Thermal protection	-	-	KTY 84-130	
Cooling system			Air	

Speed-Torque & Speed Power Motor Curves



Efficiency Map



Motor Rated Power			10000W	
--------------------------	--	--	---------------	--

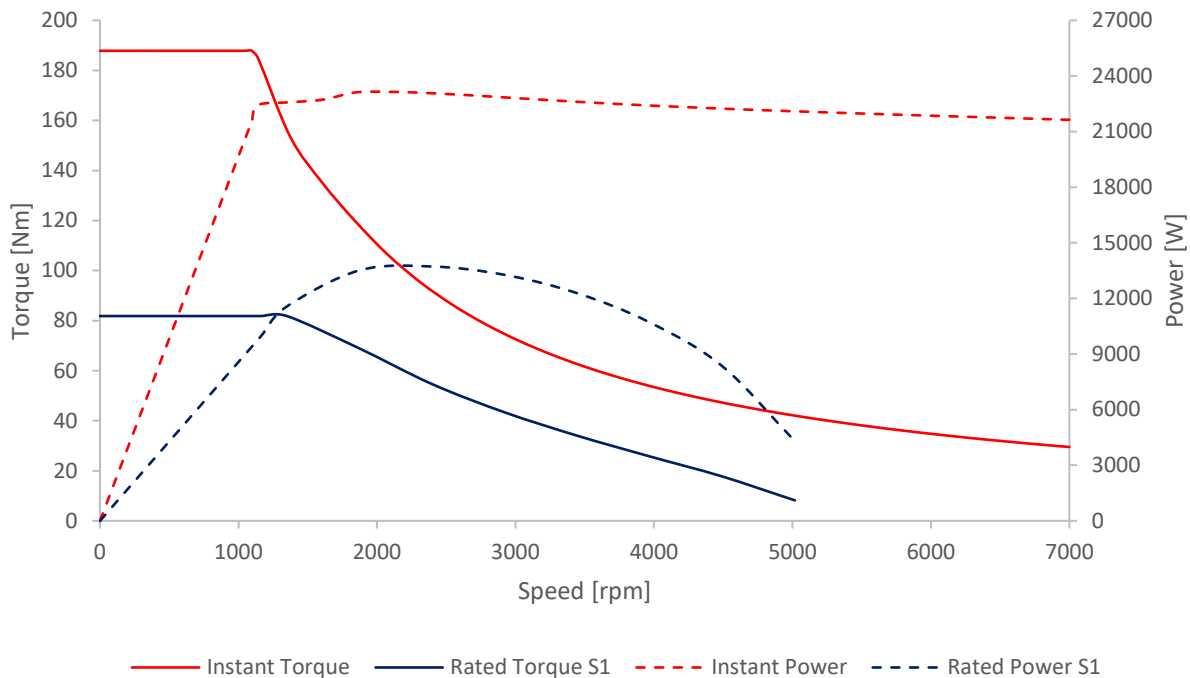
Inverter Power Supply			48Vdc	
------------------------------	--	--	--------------	--

Description	Symbol	Unit		
Duty	-	-	S1	
Nominal Speed	n_n	rpm	1200	
Frequency (N° poles)	$f (2p)$	Hz	80.0 (8)	
Costant Voltage	K_e	Vrms/Krpm	20.0	
Costant Torque	K_t	Nm/Arms	0.33	
Instant Torque	T_i	Nm	185.0	
Instant Current	I_i	Arms	660.0	
Rated Torque S1	T_r	Nm	80.0	
Rated Current S1	I_r	Arms	240.0	
Rotor Inertia	J_r	kg x m ²	0.015	
Ambient Temperature	θ_a	°C	-15 ÷ +40	
Protection Degree	IP		IP 54	up to IP67
Insulation Class	-	-	F	
Thermal protection	-	-	KTY 84-130	
Cooling system			Liquid	

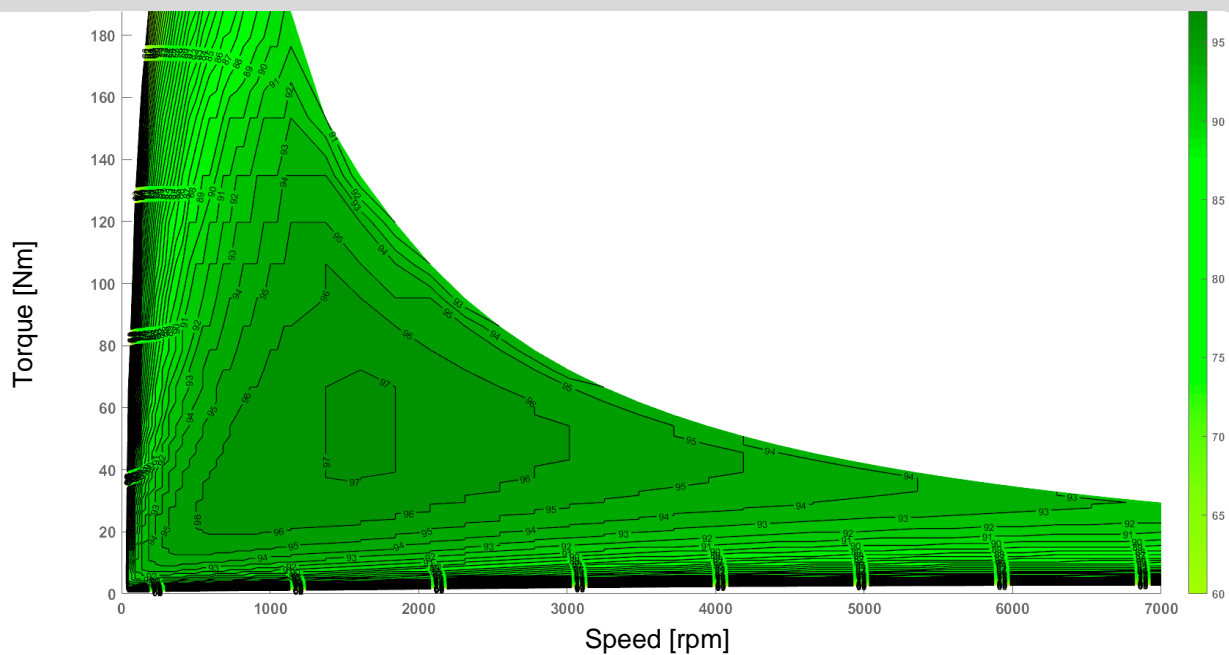
PRELIMINARY

Speed-Torque & Speed Power Motor Curves (*)

SMAC 200-157



Efficiency Map % (*)



* MTPA / MTPV Field Weakening strategy control & Optimized Advance Angle



ELECTRIC POWERTRAIN SOLUTIONS

SMAC SERIE

TECHNICAL DATA SHEET
3-PHASE SYNCHRONOUS MOTOR

Code	51J20021019HT080400		
Rev.	02		
Date	01/06/2021		
Page	1	di	2

Motor Rated Power			20000W	
--------------------------	--	--	---------------	--

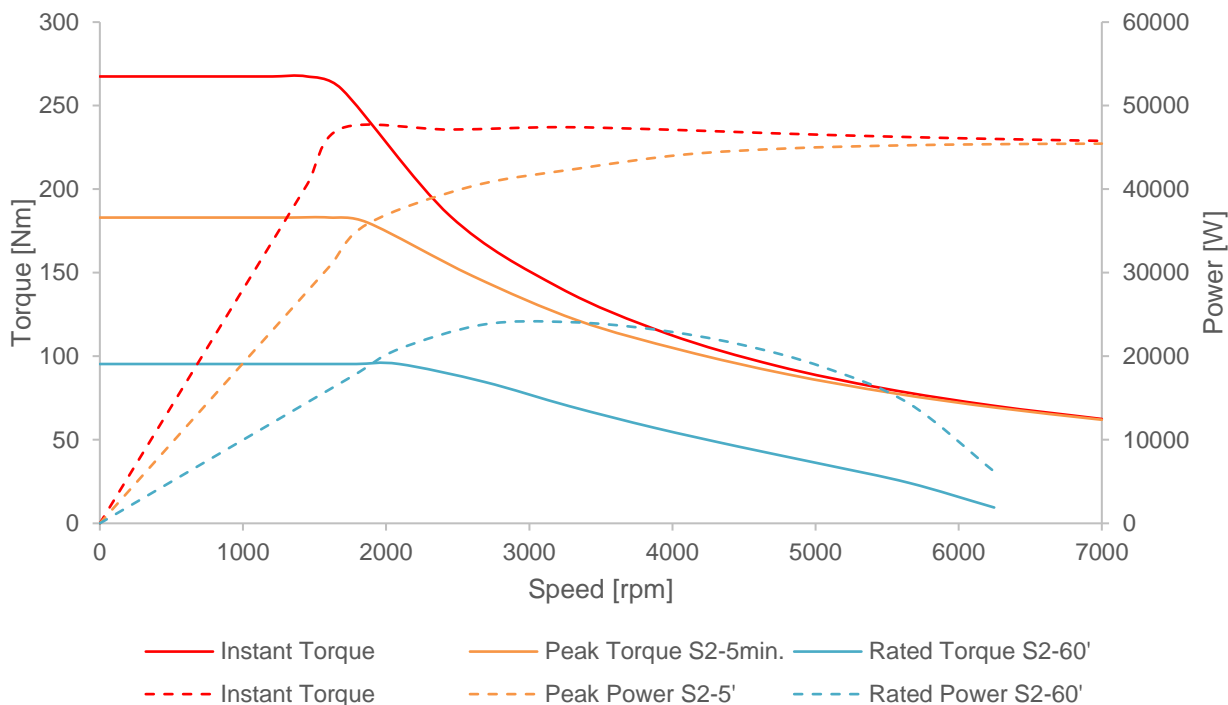
Inverter Power Supply			96Vdc	
------------------------------	--	--	--------------	--

Description	Symbol	Unit		
Duty	-	-	S2-60min	
Nominal Speed	n_n	rpm	2000	
Frequency (N° poles)	$f (2p)$	Hz	133.3 (8)	
Costant Voltage	K_e	Vrms/Krpm	28.0	
Costant Torque	K_t	Nm/Arms	0.46	
Instant Torque	T_i	Nm	265.0	
Instant Current	I_i	Arms	730.0	
Peak Torque S2-5min	T_p	Nm	180.0	
Peak Current S2-5min	I_p	Arms	420.0	
Rated Torque S2-60min	T_r	Nm	95.0	
Rated Current S2-60min	I_r	Arms	210.0	
Rotor Inertia	J_r	kg x m ²	0.036	
Ambient Temperature	θ_a	°C	-15 ÷ +40	
Protection Degree	IP		IP54	
Insulation Class	-	-	F	
Thermal protection	-	-	PTY 84-130	
Cooling system			Air	

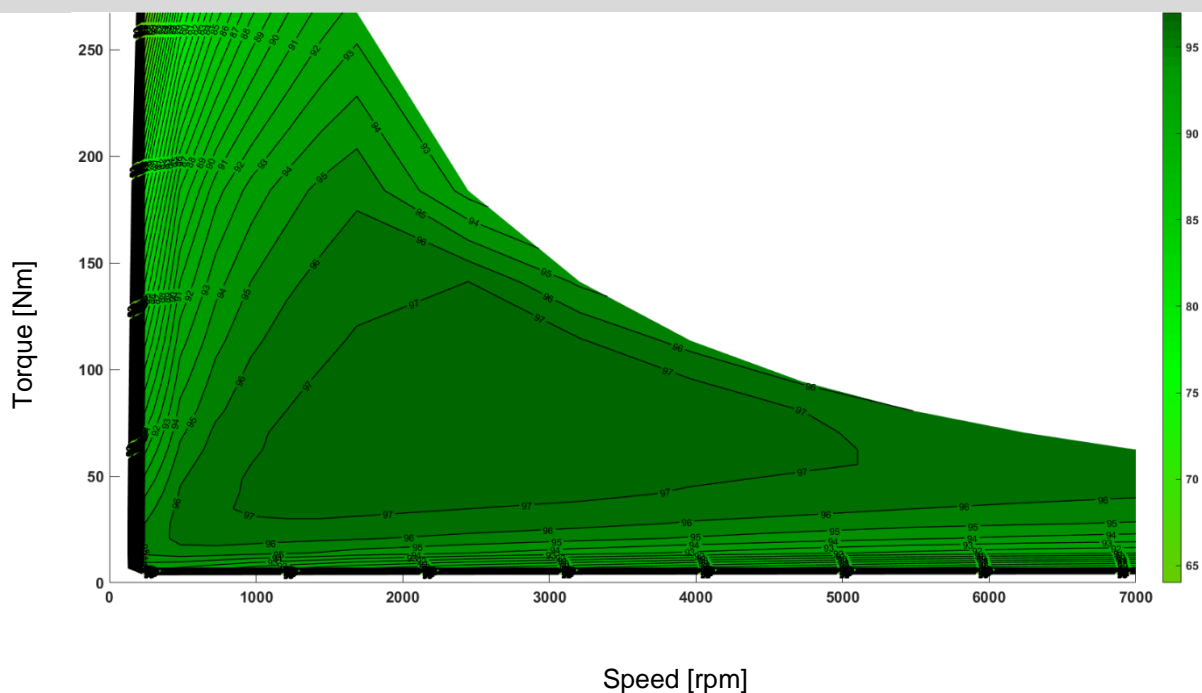
PRELIMINARY

Speed-Torque & Speed Power Motor Curves (*)

SMAC 200-210



Efficiency Map % (*)



* MTPA – MTPV Field Weakening strategy control & Optimized Advance Angle