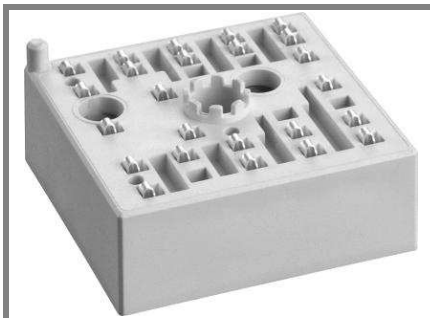


SKiiP 14NAB065V1



MiniSKiiP[®] 1

3-phase bridge rectifier +
brake chopper + 3-phase
bridge inverter
SKiiP 14NAB065V1

Features

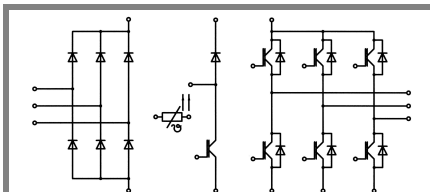
- Ultrafast NPT IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications*

- Inverter up to 6,3 kVA
- Typical motor power 4,0 kW

Remarks

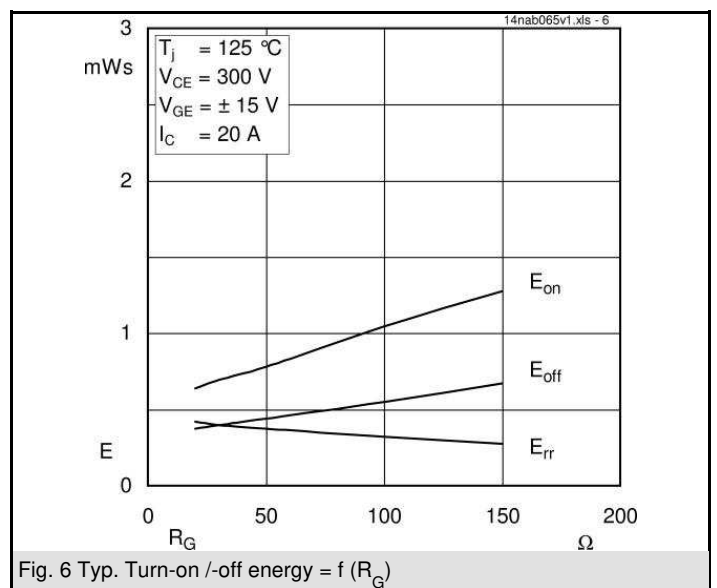
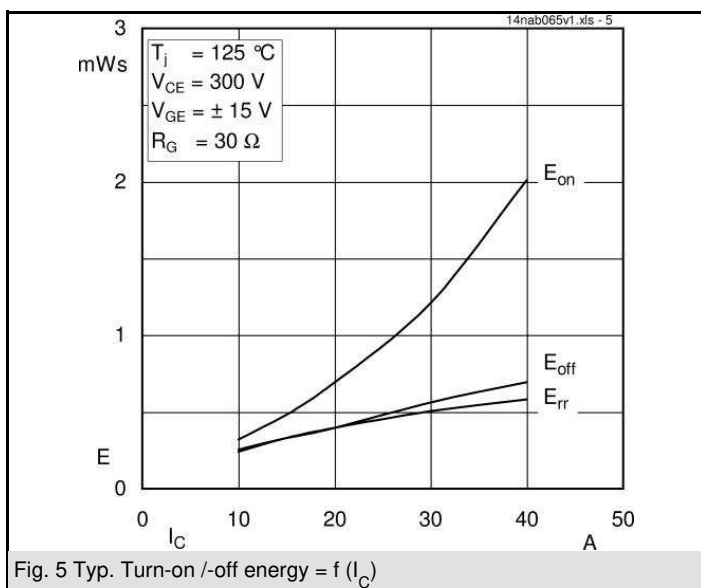
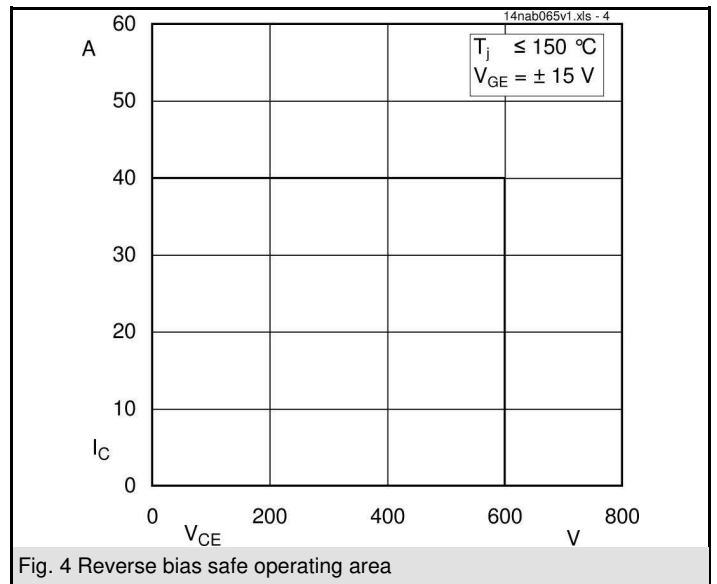
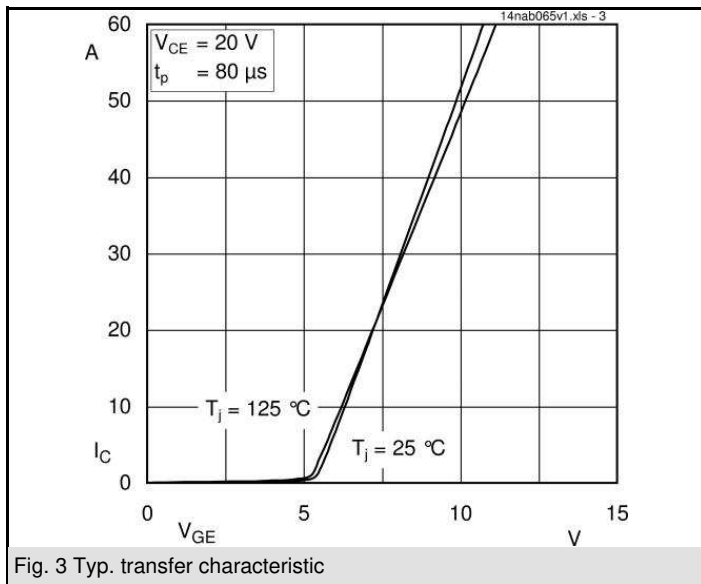
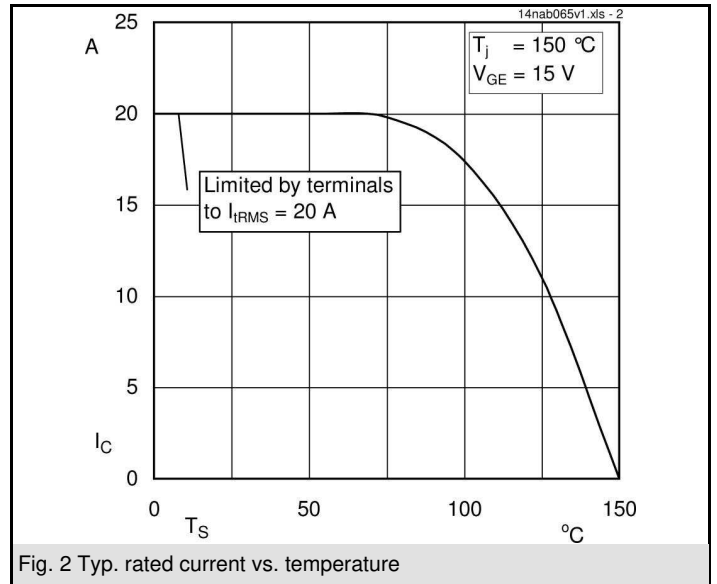
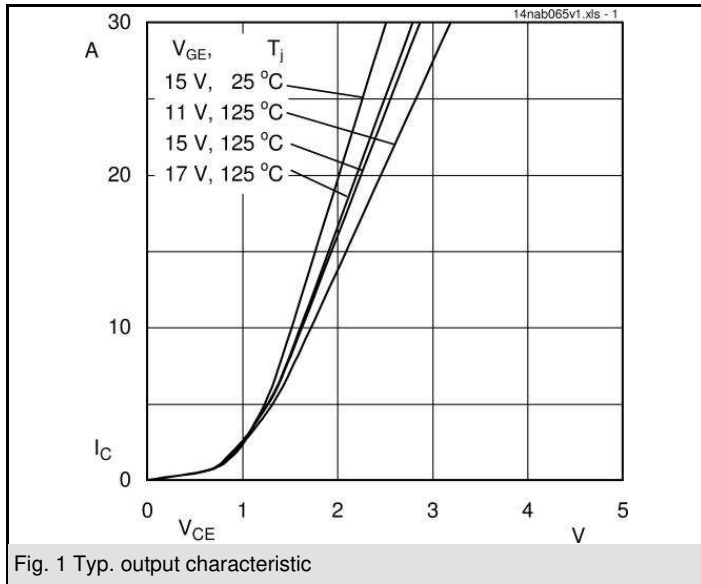
- V_{CEsat} , V_F = chip level value



NAB

Absolute Maximum Ratings		$T_s = 25\text{ °C}$, unless otherwise specified		
Symbol	Conditions	Values	Units	
IGBT - Inverter, Chopper				
V_{CES}	$T_s = 25\text{ (70) °C}$	600	V	
I_C		29 (22)	A	
I_{CRM}		40	A	
V_{GES}		± 20	V	
T_j		- 40 ... + 150	°C	
Diode - Inverter, Chopper				
I_F	$T_s = 25\text{ (70) °C}$	26 (19)	A	
I_{FRM}		40	A	
T_j		- 40 ... + 150	°C	
Diode - Rectifier				
V_{RRM}	$T_s = 70\text{ °C}$	800	V	
I_F		46	A	
I_{FSM}		$t_p = 10\text{ ms, sin } 180\text{ °, } T_j = 25\text{ °C}$	370	A
i^2t		$t_p = 10\text{ ms, sin } 180\text{ °, } T_j = 25\text{ °C}$	680	A ² s
T_j		- 40 ... + 150	°C	
Module				
I_{tRMS}	per power terminal (20 A / spring)	20	A	
T_{stg}		- 40 ... + 125	°C	
V_{isol}	AC, 1 min.	2500	V	

Characteristics		$T_s = 25\text{ °C}$, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT - Inverter, Chopper					
V_{CEsat}	$I_{Cnom} = 20\text{ A, } T_j = 25\text{ (125) °C}$		2 (2,2)	2,5 (2,7)	V
$V_{GE(th)}$	$V_{GE} = V_{CE}, I_C = 0,5\text{ mA}$	3	4	5	V
$V_{CE(TO)}$	$T_j = 25\text{ (125) °C}$		1,2 (1,1)	1,3 (1,2)	V
r_T	$T_j = 25\text{ (125) °C}$		40 (55)	60 (75)	mΩ
C_{ies}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		1,1		nF
C_{oes}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		0,2		nF
C_{res}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		0,1		nF
$R_{th(j-s)}$	per IGBT		1,25		K/W
$t_{d(on)}$	under following conditions		25		ns
t_r	$V_{CC} = 300\text{ V, } V_{GE} = \pm 15\text{ V}$		30		ns
$t_{d(off)}$	$I_{Cnom} = 20\text{ A, } T_j = 125\text{ °C}$		170		ns
t_f	$R_{Gon} = R_{Goff} = 30\text{ Ω}$		20		ns
E_{on}	inductive load		0,7		mJ
E_{off}			0,4		mJ
Diode - Inverter, Chopper					
$V_F = V_{EC}$	$I_{Fnom} = 20\text{ A, } T_j = 25\text{ (125) °C}$		1,6 (1,6)	1,9 (1,9)	V
$V_{(TO)}$	$T_j = 25\text{ (125) °C}$		1 (0,9)	1,1 (1)	V
r_T	$T_j = 25\text{ (125) °C}$		30 (33)	40 (47)	mΩ
$R_{th(j-s)}$	per diode		2,2		K/W
I_{RRM}	under following conditions		27		A
Q_{rr}	$I_{Fnom} = 20\text{ A, } V_R = 300\text{ V}$		2,3		μC
E_{rr}	$V_{GE} = 0\text{ V, } T_j = 125\text{ °C}$		0,4		mJ
	$di_F/dt = 1350\text{ A/μs}$				
Diode - Rectifier					
V_F	$I_{Fnom} = 25\text{ A, } T_j = 25\text{ °C}$		1,1		V
$V_{(TO)}$	$T_j = 150\text{ °C}$		0,8		V
r_T	$T_j = 150\text{ °C}$		13		mΩ
$R_{th(j-s)}$	per diode		1,25		K/W
Temperature Sensor					
R_{ts}	3 %, $T_r = 25\text{ (100) °C}$		1000(1670)		Ω
Mechanical Data					
w			35		g
M_s	Mounting torque	2		2,5	Nm



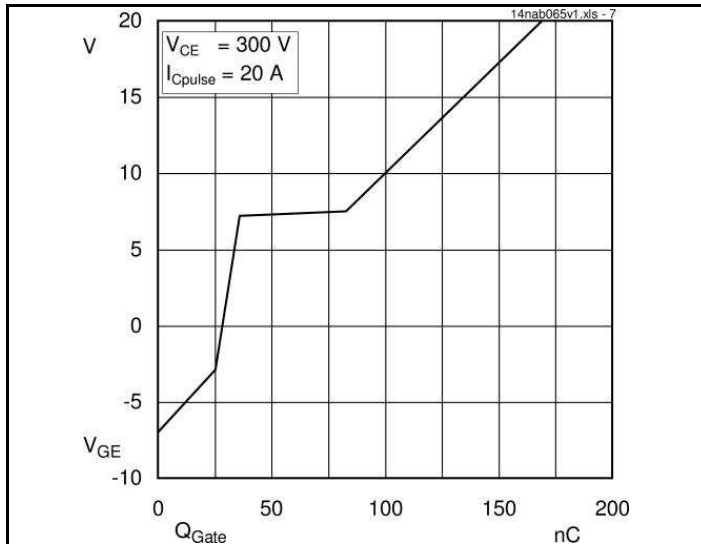


Fig. 7 Typ. gate charge characteristic

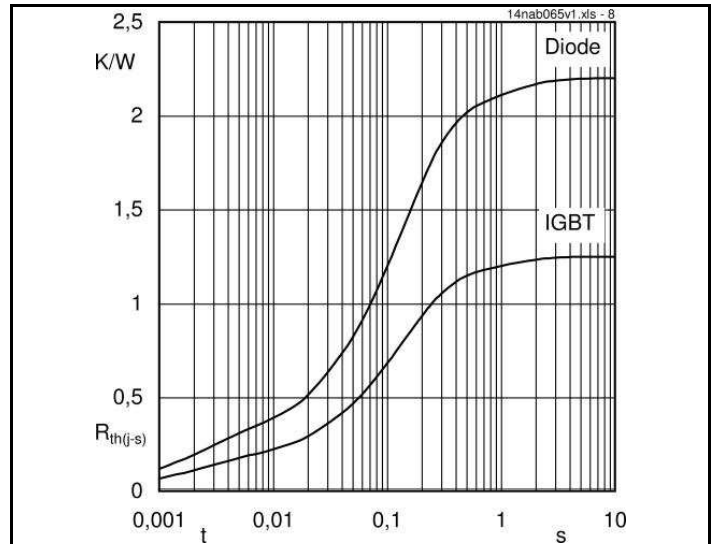


Fig. 8 Typ. thermal impedance

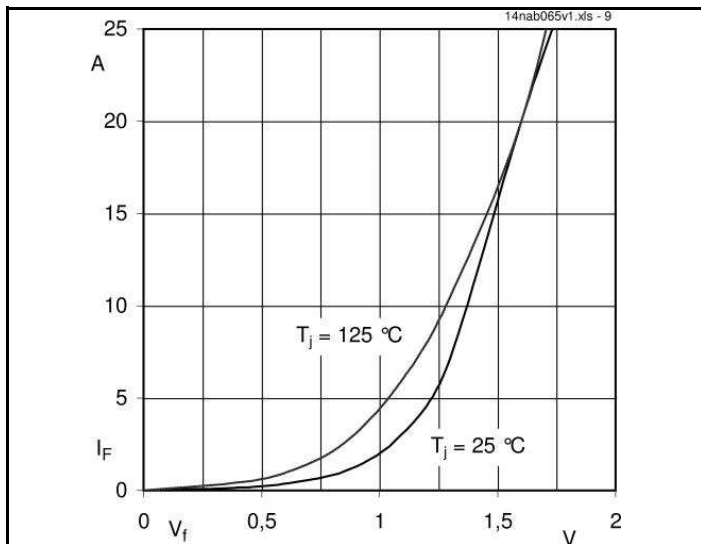


Fig. 9 Typ. freewheeling diode forward characteristic

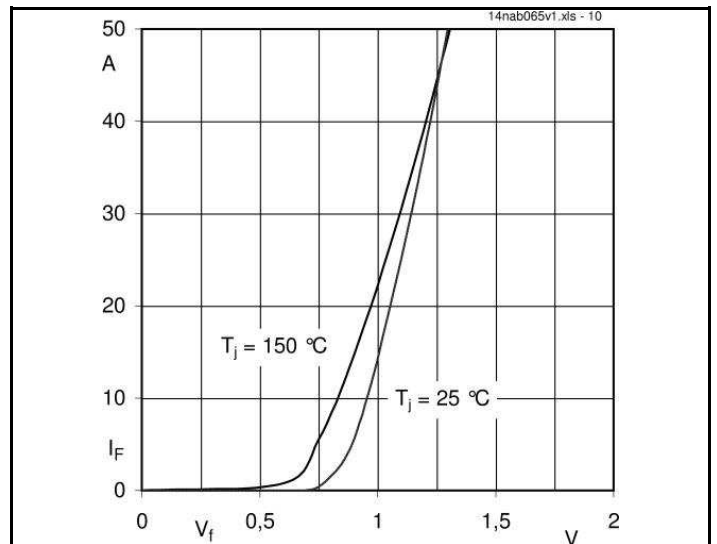


Fig. 10 Typ. input bridge forward characteristic

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [IGBT Modules category](#):

Click to view products by [Semikron manufacturer](#):

Other Similar products are found below :

[F3L100R07W2E3_B11](#) [F3L15R12W2H3_B27](#) [F3L400R07ME4_B22](#) [F3L400R12PT4_B26](#) [F4-100R12KS4](#) [F4-50R07W2H3_B51](#) [F4-75R12KS4_B11](#) [FB15R06W1E3](#) [FB20R06W1E3_B11](#) [FD1000R33HE3-K](#) [FD300R06KE3](#) [FD300R12KE3](#) [FD300R12KS4_B5](#) [FD400R12KE3](#) [FD400R33KF2C-K](#) [FD401R17KF6C_B2](#) [FD-DF80R12W1H3_B52](#) [FF100R12KS4](#) [FF1200R17KE3_B2](#) [FF150R12KE3G](#) [FF200R06KE3](#) [FF200R06YE3](#) [FF200R12KT3](#) [FF200R12KT3_E](#) [FF200R12KT4](#) [FF200R17KE3](#) [FF300R06KE3_B2](#) [FF300R12KE4_E](#) [FF300R12KS4HOSA1](#) [FF300R12ME4_B11](#) [FF300R12MS4](#) [FF300R17ME4](#) [FF450R12ME4P](#) [FF450R17IE4](#) [FF600R12IE4V](#) [FF600R12IP4V](#) [FF800R17KP4_B2](#) [FF900R12IE4V](#) [MIXA30W1200TED](#) [MIXA450PF1200TSF](#) [FP06R12W1T4_B3](#) [FP100R07N3E4](#) [FP100R07N3E4_B11](#) [FP10R06W1E3_B11](#) [FP10R12W1T4_B11](#) [FP10R12YT3](#) [FP10R12YT3_B4](#) [FP150R07N3E4](#) [FP15R12KT3](#) [FP15R12W2T4](#)