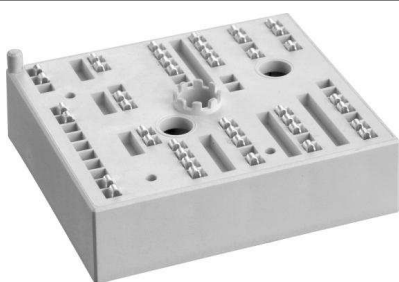


SKiiP 28ANB16V10



MiniSKiiP® 2

3-phase bridge rectifier +
brake chopper

SKiiP 28ANB16V10

Target Data

Features

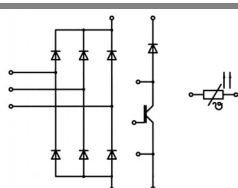
- Fast Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications*

- Input bridge for Inverter up to 39 kVA

Remarks

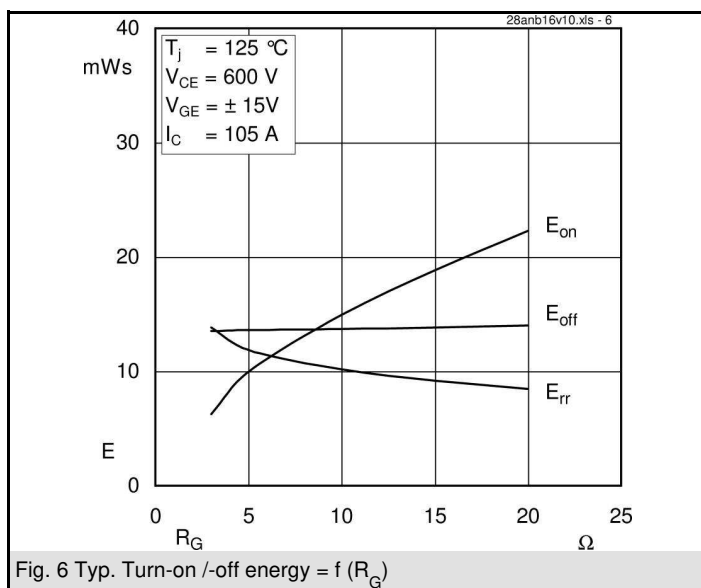
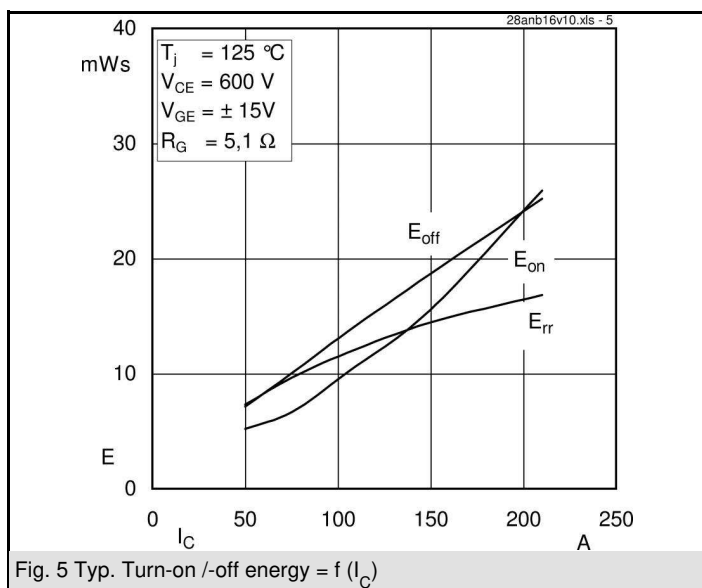
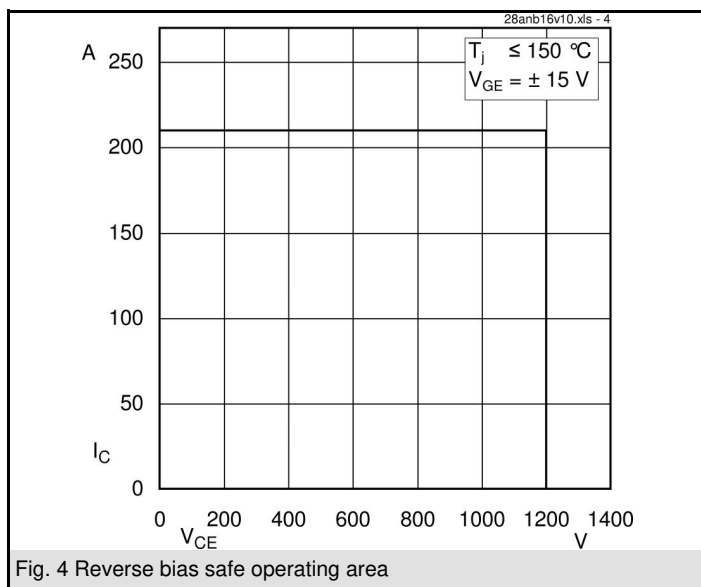
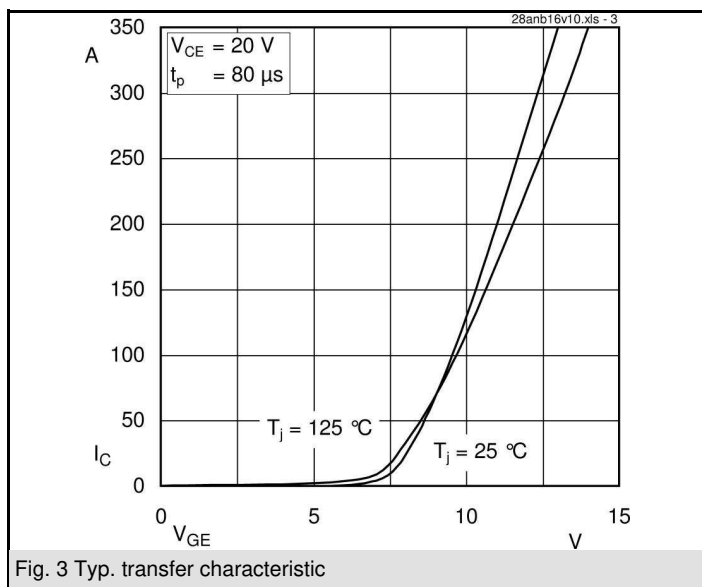
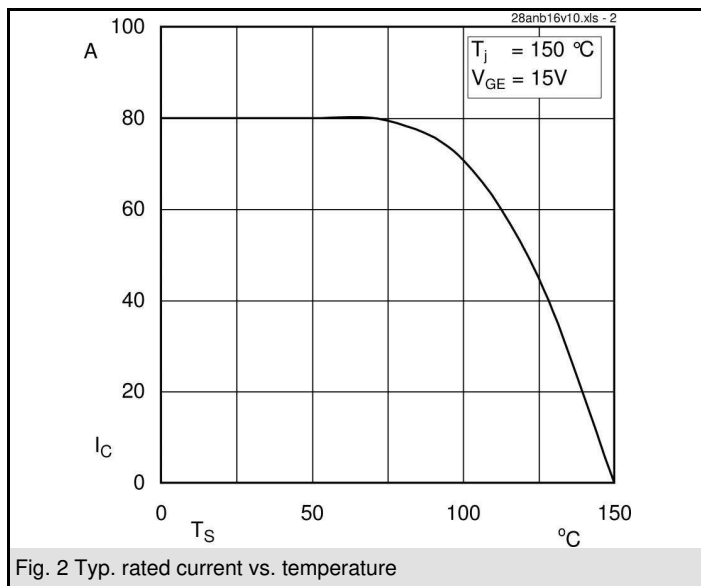
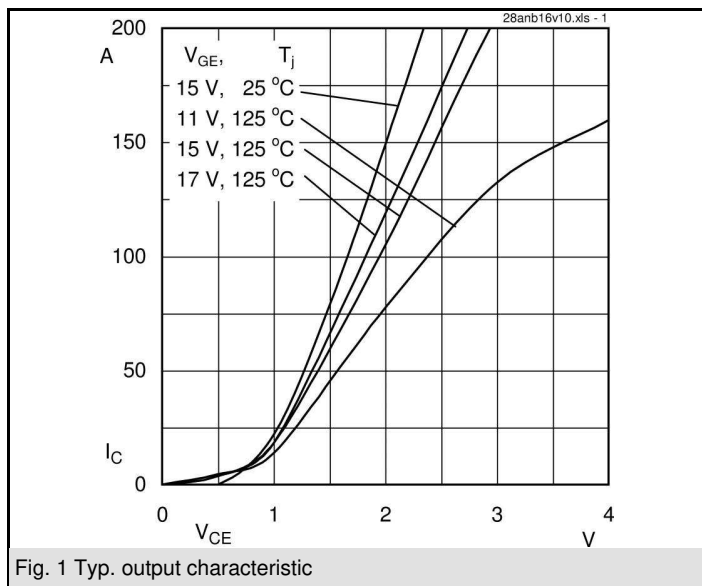
- V_{CEsat} , V_F = chip level value

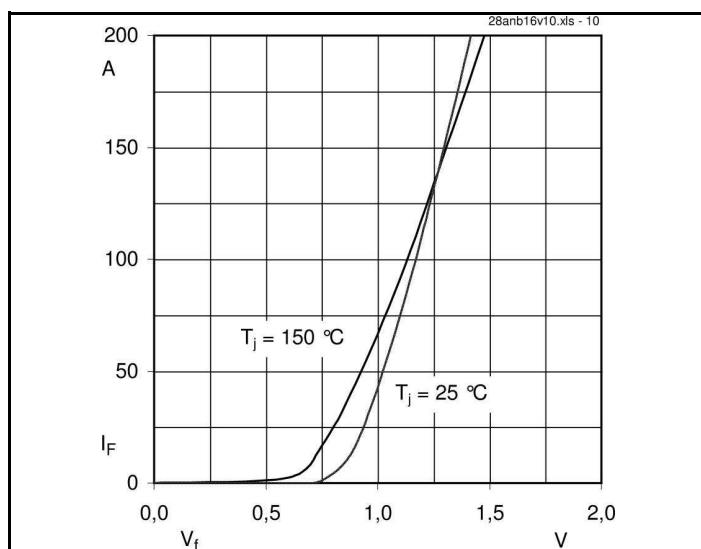
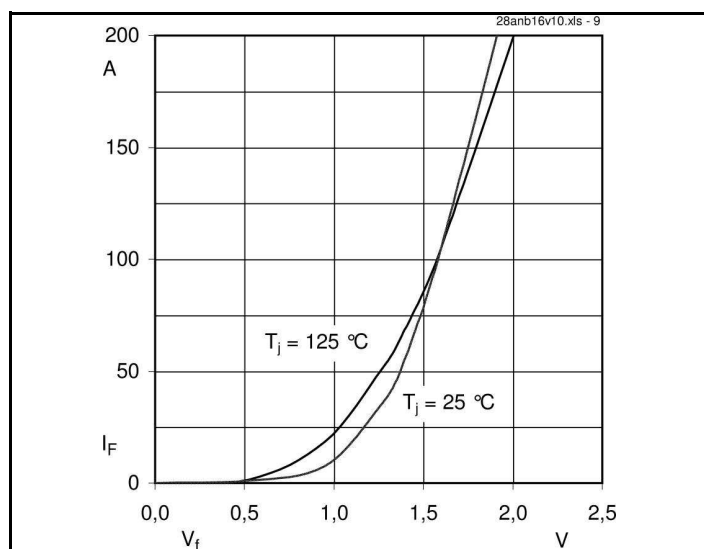
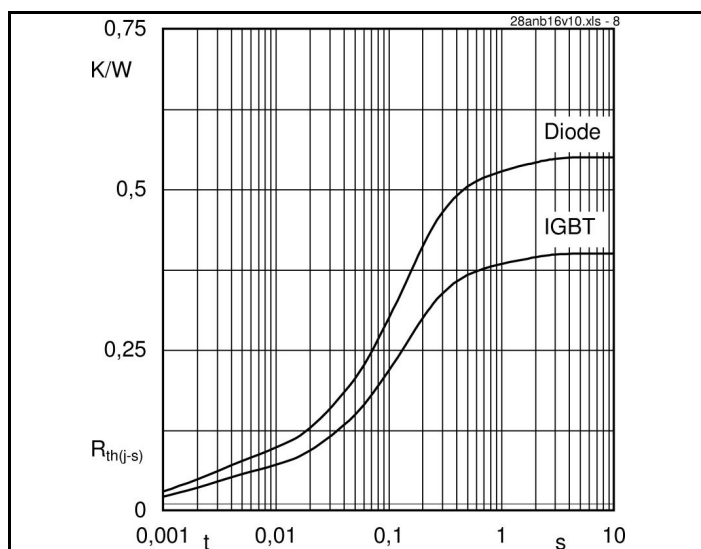
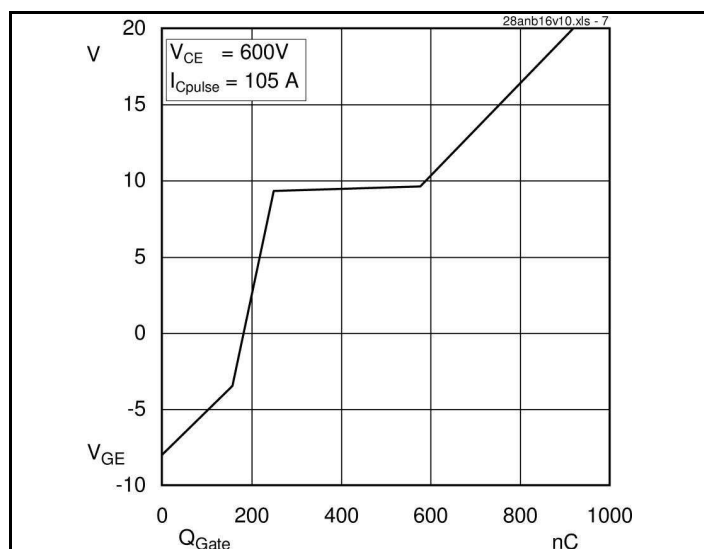


ANB

Absolute Maximum Ratings		T _s = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT - Chopper			
V _{CES}	T _s = 25 (70) °C	1200	V
I _C		118 (88)	A
I _{CRM}		210	A
V _{GES}		± 20	V
T _j		- 40 ... + 150	°C
Diode - Chopper			
I _F	T _s = 25 (70) °C	118 (88)	A
I _{FRM}		210	A
T _j		- 40 ... + 150	°C
Diode - Rectifier			
V _{RRM}	T _s = 70 °C	1600	V
I _F		83	A
I _{FSM}		1000	A
i ² t		6600	A ² s
T _j		- 40 ... + 150	°C
Module			
I _{tRMS}	per power terminal (20 A / spring)	80	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 - Chopper					
V_{CEsat}	$I_{Cnom} = 105\text{ A}$, $T_j = 25\text{ (125) °C}$		1,7 (2)	2,1 (2,4)	V
$V_{GE(th)}$	$V_{GE} = V_{CE}$, $I_C = 3\text{ mA}$	5	5,8	6,5	V
$V_{CE(TO)}$	$T_j = 25\text{ (125) °C}$		1 (0,9)	1,2 (1,1)	V
r_T	$T_j = 25\text{ (125) °C}$		6,7 (10)	8,6 (12)	mΩ
C_{ies}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		8,4		nF
C_{oes}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		1,5		nF
C_{res}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		1,1		nF
$R_{th(j-s)}$	per IGBT		0,4		K/W
$t_{d(on)}$	under following conditions		65		ns
t_r	$V_{CC} = 600\text{ V}$, $V_{GE} = \pm 15\text{ V}$		30		ns
$t_{d(off)}$	$I_{Cnom} = 105\text{ A}$, $T_j = 125\text{ °C}$		465		ns
t_f	$R_{Gon} = R_{Goff} = 5,1\text{ Ω}$		95		ns
E_{on}	inductive load		10,1		mJ
E_{off}			13,6		mJ
Diode - Chopper					
$V_F = V_{EC}$	$I_{Fnom} = 105\text{ A}$, $T_j = 25\text{ (125) °C}$		1,6 (1,6)	1,8 (1,8)	V
$V_{(TO)}$	$T_j = 25\text{ (125) °C}$		1 (0,8)	1,1 (0,9)	V
r_T	$T_j = 25\text{ (125) °C}$		5,7 (7,6)	6,7 (8,6)	mΩ
$R_{th(j-s)}$	per diode		0,55		K/W
I_{RRM}	under following conditions		180		A
Q_{rr}	$I_{Fnom} = 105\text{ A}$, $V_R = 600\text{ V}$		26		μC
E_{rr}	$V_{GE} = 0\text{ V}$, $T_j = 125\text{ °C}$ $di_F/dt = 4350\text{ A/μs}$		11,8		mJ
Diode - Rectifier					
V_F	$I_{Fnom} = 75\text{ A}$, $T_j = 25\text{ °C}$		1,2		V
$V_{(TO)}$	$T_j = 150\text{ °C}$		0,8		V
r_T	$T_j = 150\text{ °C}$		7		mΩ
$R_{th(j-s)}$	per diode		0,7		K/W
Temperature Sensor					
R_{ts}	3 %, $T_r = 25\text{ (100) °C}$		1000(1670)		Ω
Mechanical Data					
w			65		g
M_s	Mounting torque	2		2,5	Nm







These documents are Semkon property. Semkon reserves all copyrights. All copying and transmitting of this information requires written permission. For the case of industrial property rights, Semkon reserves all rights.

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.