Vorläufige Daten
preliminary data

Diode-Wechselrichter / diode-inverter

Höchstzulässige Werte / maximum rated values

Periodische Spitzensperrspannung repetitive peak reverse voltage	T_{vj} = 25°C T_{vj} = -25°C	V_{RRM}	3300 3300	V
Dauergleichstrom DC forward current		I_F	1200	A
Periodischer Spitzenstrom repetitive peak forward current	t_P = 1 ms	I_{FRM}	2400	A
Grenzlastintegral I²t - value	V_R = 0 V, t_P = 10 ms, T_{vj} = 125°C	I²t	500	kA²s
Spitzenverlustleistung maximum power dissipation	T_{vj} = 125°C	P_{RQM}	2400	kW
Mindesteinschaltdauer minimum turn-on time		$t_{Fon\ min}$	10,0	µs

Charakteristische Werte / characteristic values

			min.	typ.	max.	
Durchlassspannung forward voltage	I_F = 1200 A, V_{GE} = 0 V, T_{vj} = 25°C I_F = 1200 A, V_{GE} = 0 V, T_{vj} = 125°C	V_F		2,80 2,80	3,50 3,50	V V
Rückstromspitze peak reverse recovery current	I_F = 1200 A, - di_F/dt = 6800 A/µs V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 25°C V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 125°C	I_{RM}		1700 2000		A A
Sperrverzögerungsladung recovered charge	I_F = 1200 A, -di_F/dt = 6800 A/µs V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 25°C V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 125°C	Q_r		710 1300		µC µC
Abschaltenergie pro Puls reverse recovery energy	I_F = 1200 A, -di_F/dt = 6800 A/µs V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 25°C V_R = 1800 V, V_{GE} = -15 V, T_{vj} = 125°C	E_{rec}		735 1550		mJ mJ
Innerer Wärmewiderstand thermal resistance, junction to case	pro Diode per diode	R_{thJC}			17,0	K/kW
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	pro Diode / per diode λ_{Paste} = 1 W/(m·K) / λ_{grease} = 1 W/(m·K)	R_{thCH}		12,0		K/kW

prepared by: Jürgen Biermann	date of publication: 2003-6-12
approved by: Christoph Lübke	revision: 2.0

Vorläufige Daten
preliminary data

Modul / module

Isolations-Prüfspannung insulation test voltage	RMS, f = 50 Hz, t = 1 min	V_{ISOL}		6,0		kV
Teilentladungs Aussetzspannung partial discharge extinction voltage	RMS, f = 50 Hz, Q_{PD} ≥ 10 pC (acc. to IEC 1287)	V_{ISOL}		2,6		kV
Kollektor-Emitter-Gleichsperrspannung DC stability	T_{vj} = 25°C, 100 fit	$V_{CE\ D}$		1800		V
Material Modulgrundplatte material of module baseplate				AlSiC		
Material für innere Isolation material for internal insulation				AlN		
Kriechstrecke creepage distance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal			32,0 32,0		mm
Luftstrecke clearance distance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal			19,0 19,0		mm
Vergleichszahl der Kriechwegbildung comparative tracking index		CTI		> 400		
			min.	typ.	max.	
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	pro Modul / per module λ_{Paste} = 1 W/(m·K) / λ_{grease} = 1 W/(m·K)	R_{thCH}		6,00		K/kW
Modulinduktivität stray inductance module		L_{sCE}		25		nH
Modulleitungswiderstand, Anschlüsse - Chip module lead resistance, terminals - chip	T_C = 25°C, pro Zweig / per arm	$R_{CC'+EE'}$		0,32		mΩ
Höchstzulässige Sperrschichttemperatur maximum junction temperature		$T_{vj\ max}$			150	°C
Temperatur im Schaltbetrieb temperature under switching conditions		$T_{vj\ op}$	-40		125	°C
Lagertemperatur storage temperature		T_{stg}	-40		125	°C
Anzugsdrehmoment f. mech. Befestigung mounting torque	Schraube / screw M6	M	4,25	-	5,75	Nm
Anzugsdrehmoment f. elektr. Anschlüsse terminal connection torque	Schraube / screw M4 Schraube / screw M8	M	1,8 8,0	- -	2,1 10	Nm Nm
Gewicht weight		G		1000		g

Dauergleichstrom: chipbezogener Wert; Terminalwert pro Zweig: <1000A
DC forward current: chip related value; terminal value per arm: <1000A

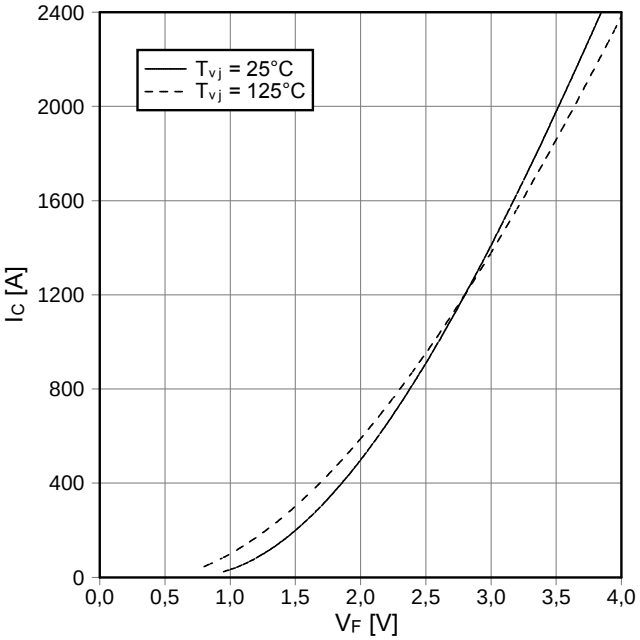
Mit dieser technischen Information werden Halbleiterbauelemente spezifiziert, jedoch keine Eigenschaften zugesichert. Sie gilt in Verbindung mit den zugehörigen technischen Erläuterungen.

This technical information specifies semiconductor devices but guarantees no characteristics. It is valid with the appropriate technical explanations.

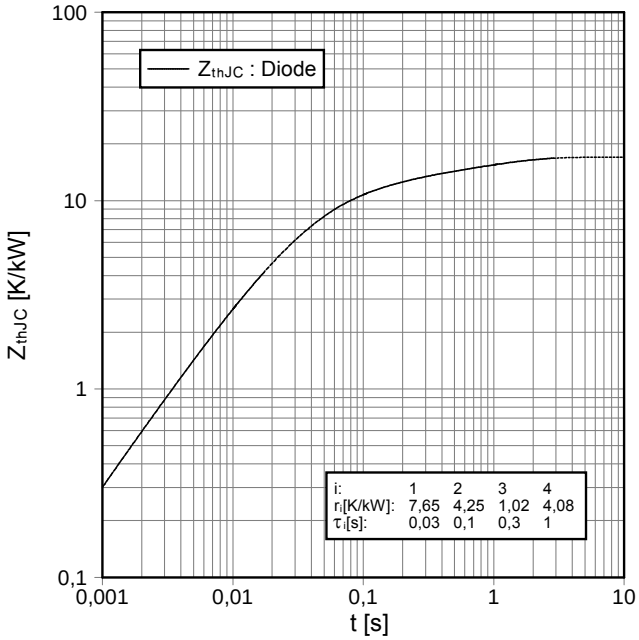
prepared by: Jürgen Biermann	date of publication: 2003-6-12
approved by: Christoph Lübke	revision: 2.0

Vorläufige Daten
preliminary data

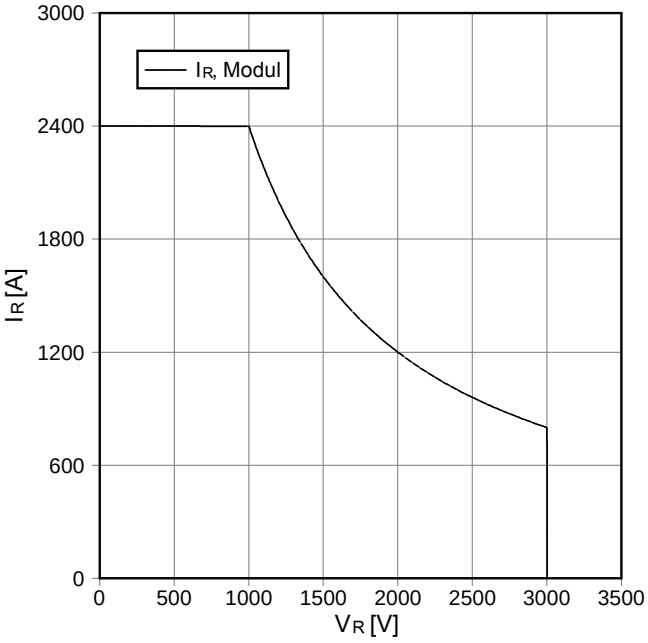
Durchlaßkennlinie der Diode-Wechselr. (typisch)
forward characteristic of diode-inverter (typical)
$I_F = f(V_F)$



Transienter Wärmewiderstand Diode-Wechselr.
transient thermal impedance diode-inverter
$Z_{thJC} = f(t)$



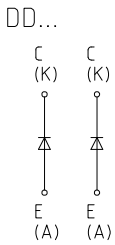
Sicherer Arbeitsbereich Diode-Wechselr. (SOA)
save operation area diode-inverter (SOA)
$I_R = f(V_R)$
$T_{vj} = 125°C$



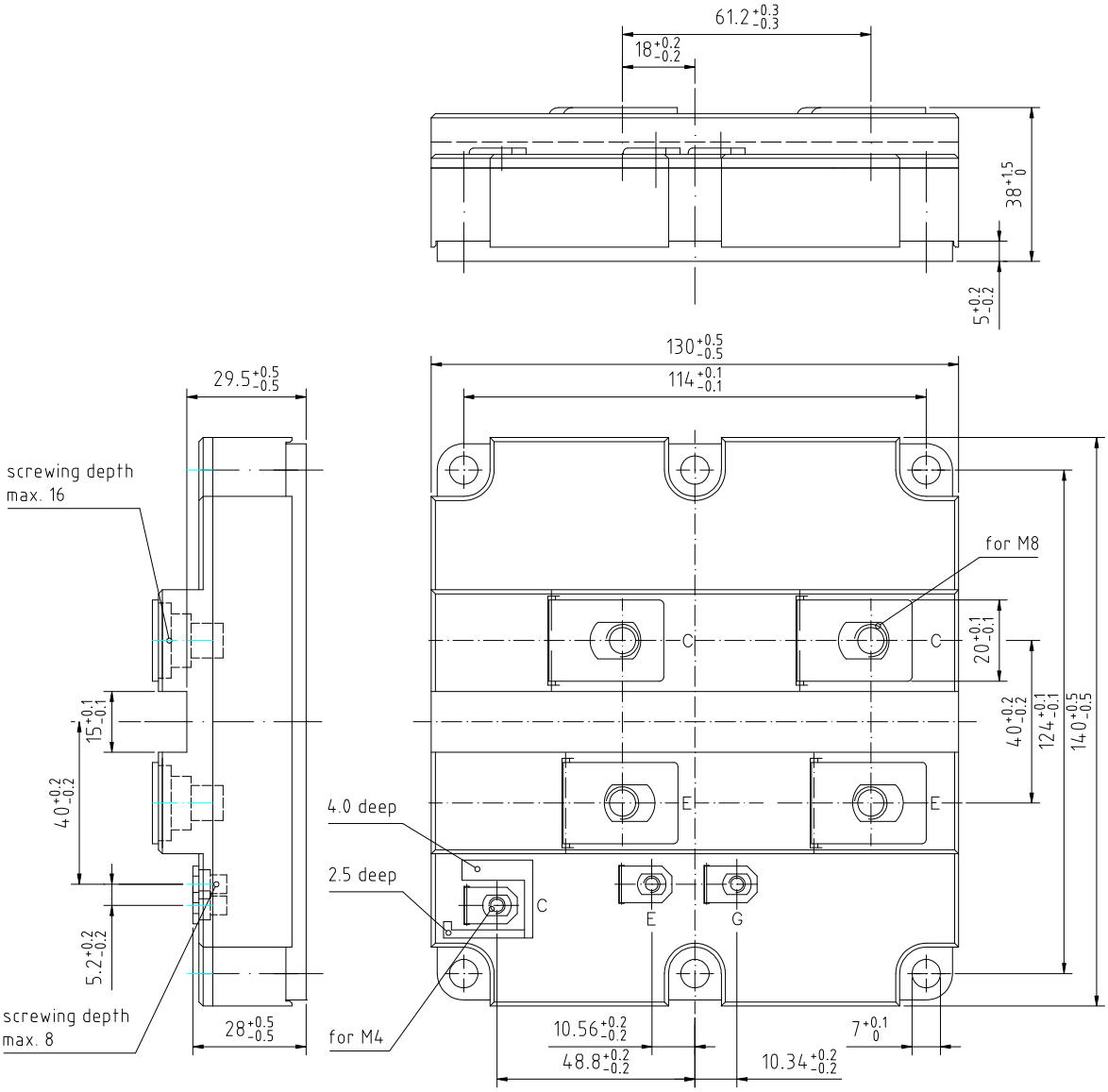
prepared by: Jürgen Biermann	date of publication: 2003-6-12
approved by: Christoph Lübke	revision: 2.0

Vorläufige Daten
preliminary data

Schaltplan / circuit diagram



Gehäuseabmessungen / package outlines



prepared by: Jürgen Biermann	date of publication: 2003-6-12
approved by: Christoph Lübke	revision: 2.0

Terms & Conditions of Usage

Attention
The present product data is exclusively subscribed to technically experienced staff. This Data Sheet is describing the specification of the products for which a warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its specifications. Changes to the Data Sheet are reserved.

You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Should you require product information in excess of the data given in the Data Sheet, please contact your local Sales Office via "www.eupec.com / sales & contact".

Warning
Due to technical requirements the products may contain dangerous substances. For information on the types in question please contact your local Sales Office via "www.eupec.com / sales & contact".