

Technische Information / Technical Information

IGBT-Module
IGBT-Modules

DD 800 S 17 K6C B2

eupec

vorläufige daten
preliminary data

Höchstzulässige Werte / Maximum rated values

Periodische Spitzensperrspannung repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{CES}	1700	V
Dauergleichstrom DC forward current		I_F	800	A
Periodischer Spitzenstrom repetitive peak forward current	$t_p = 1 \text{ ms}$	I_{FRM}	1600	A
Grenzlastintegral der Diode I^2t - value, Diode	$V_R = 0\text{V}, t_p = 10\text{ms}, T_{vj} = 125^{\circ}\text{C}$	I^2t	170	kA^2s
Isolations-Prüfspannung insulation test voltage	RMS, $f = 50 \text{ Hz}, t = 1 \text{ min.}$	V_{ISOL}	4	kV

Charakteristische Werte / Characteristic values

			min.	typ.	max.	
Durchlaßspannung forward voltage	$I_F = 800\text{A}, V_{GE} = 0\text{V}, T_{vj} = 25^{\circ}\text{C}$ $I_F = 800\text{A}, V_{GE} = 0\text{V}, T_{vj} = 125^{\circ}\text{C}$	V_F		2,1 2,1	2,5 2,5	V V
Sperrstrom reverse current	$V_R = 1700\text{V}, T_{vj} = 25^{\circ}\text{C}$	I_R			5	mA
Rückstromspitze peak reverse recovery current	$I_F = 800\text{A}, -di_F/dt = 6300\text{A}/\mu\text{sec}$ $V_R = 900\text{V}, T_{vj} = 25^{\circ}\text{C}$ $V_R = 900\text{V}, T_{vj} = 125^{\circ}\text{C}$	I_{RM}		710 860		A A
Sperrverzögerungsladung recovered charge	$I_F = 800\text{A}, -di_F/dt = 6300\text{A}/\mu\text{sec}$ $V_R = 900\text{V}, T_{vj} = 25^{\circ}\text{C}$ $V_R = 900\text{V}, T_{vj} = 125^{\circ}\text{C}$	Q_r		135 265		μAs μAs
Abschaltenergie pro Puls reverse recovery energy	$I_F = 800\text{A}, -di_F/dt = 6300\text{A}/\mu\text{sec}$ $V_R = 900\text{V}, T_{vj} = 25^{\circ}\text{C}$ $V_R = 900\text{V}, T_{vj} = 125^{\circ}\text{C}$	E_{rec}		75 155		mWs mWs
Modulinduktivität stray inductance module	pro Diode / per Diode	L_{sAC}		20		nH
Modulleitungswiderstand, Anschlüsse - Chip module lead resistance, terminals - chip	pro Zweig / per arm	$R_{CC'+EE'}$		0,16		m Ω

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Thermische Eigenschaften / Thermal properties

			min.	typ.	max.	
Innerer Wärmewiderstand thermal resistance, junction to case	pro Diode / per diode, DC	R_{thJC}			0,034	K/W
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	pro Modul / per module $\lambda_{paste} = 1 \text{ W/m}^2\text{K}$ / $\lambda_{grease} = 1 \text{ W/m}^2\text{K}$	R_{thCK}		0,008		K/W
Höchstzulässige Sperrschichttemperatur maximum junction temperature		T_{vj}			150	°C
Betriebstemperatur operation temperature		T_{vjop}	-40		125	°C
Lagertemperatur storage temperature		T_{stg}	-40		125	°C

Mechanische Eigenschaften / Mechanical properties

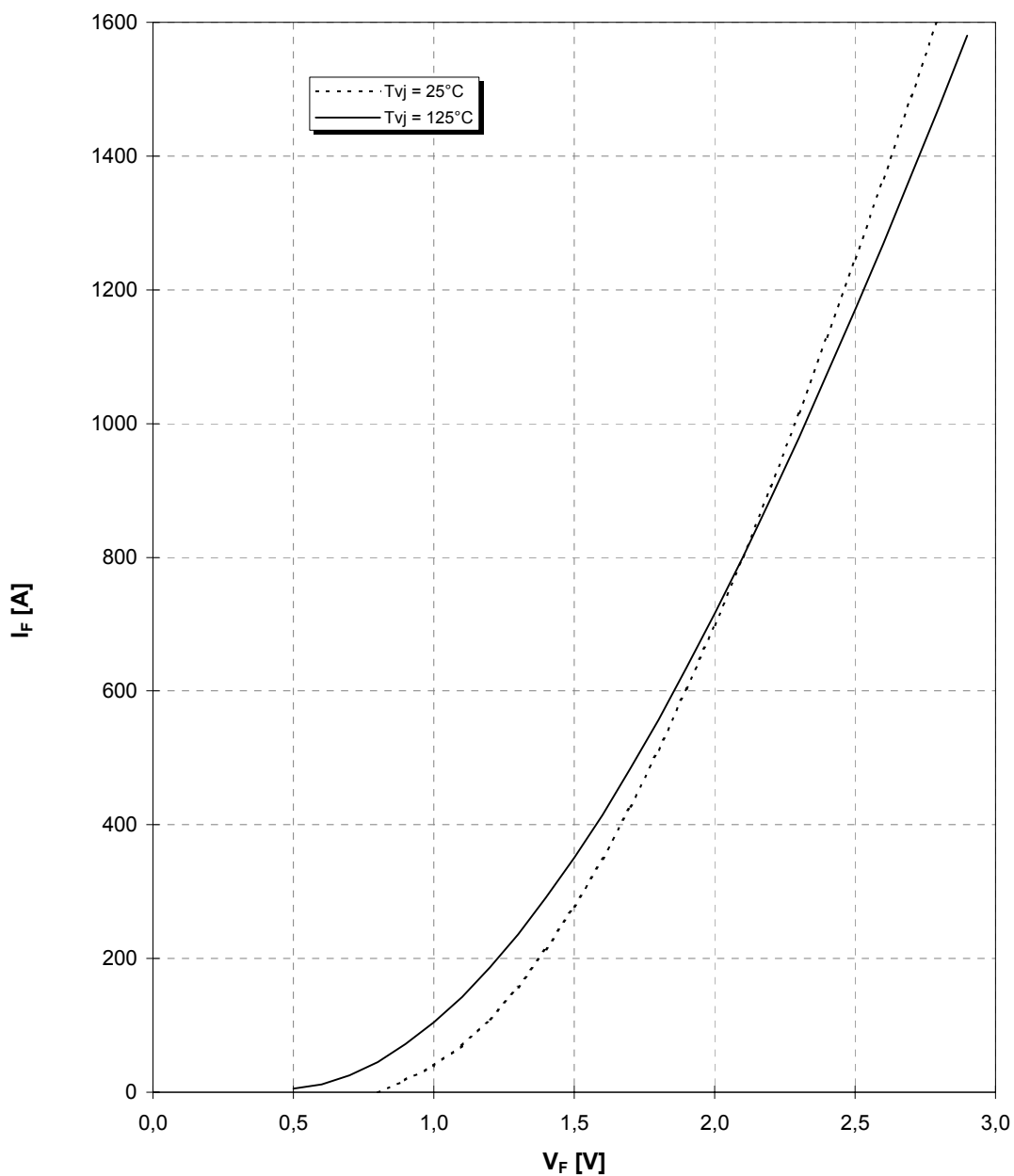
Gehäuse, siehe Anlage case, see appendix				
Innere Isolation internal insulation			AIN	
Kriechstrecke creepage distance			15	mm
Luftstrecke clearance			10	mm
CTI comperative tracking index		min.	275	
Anzugsdrehmoment f. mech. Befestigung mounting torque		M1	5	Nm
Anzugsdrehmoment f. elektr. Anschlüsse terminal connection torque	terminals M8	M2	8 - 10	Nm
Gewicht weight		G	1050	g

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 promises no characteristics. It is
valid in combination with the belonging technical notes.

Durchlaßkennlinie der Inversdiode (typisch)
Forward characteristic of inverse diode (typical)

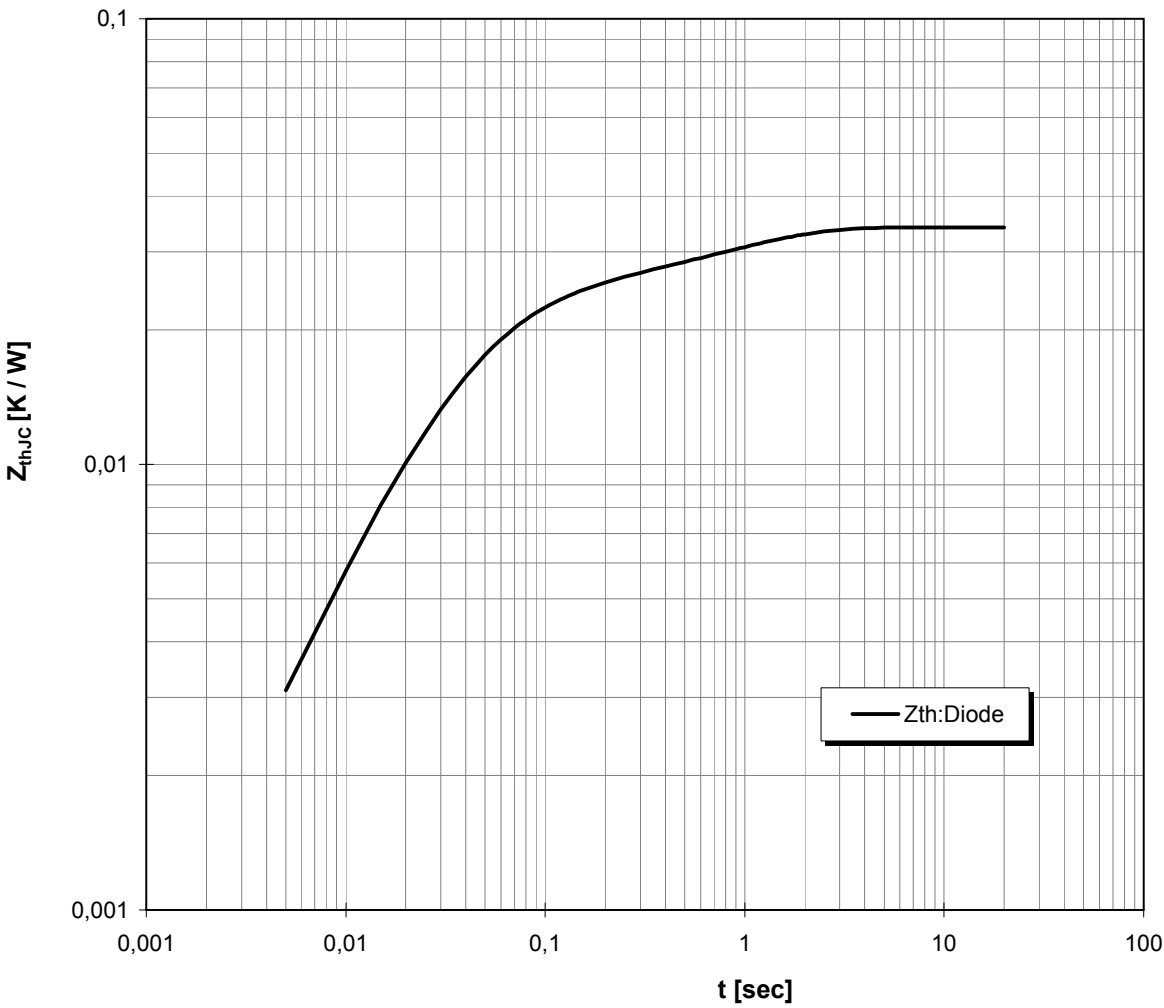
$$I_F = f(V_F)$$



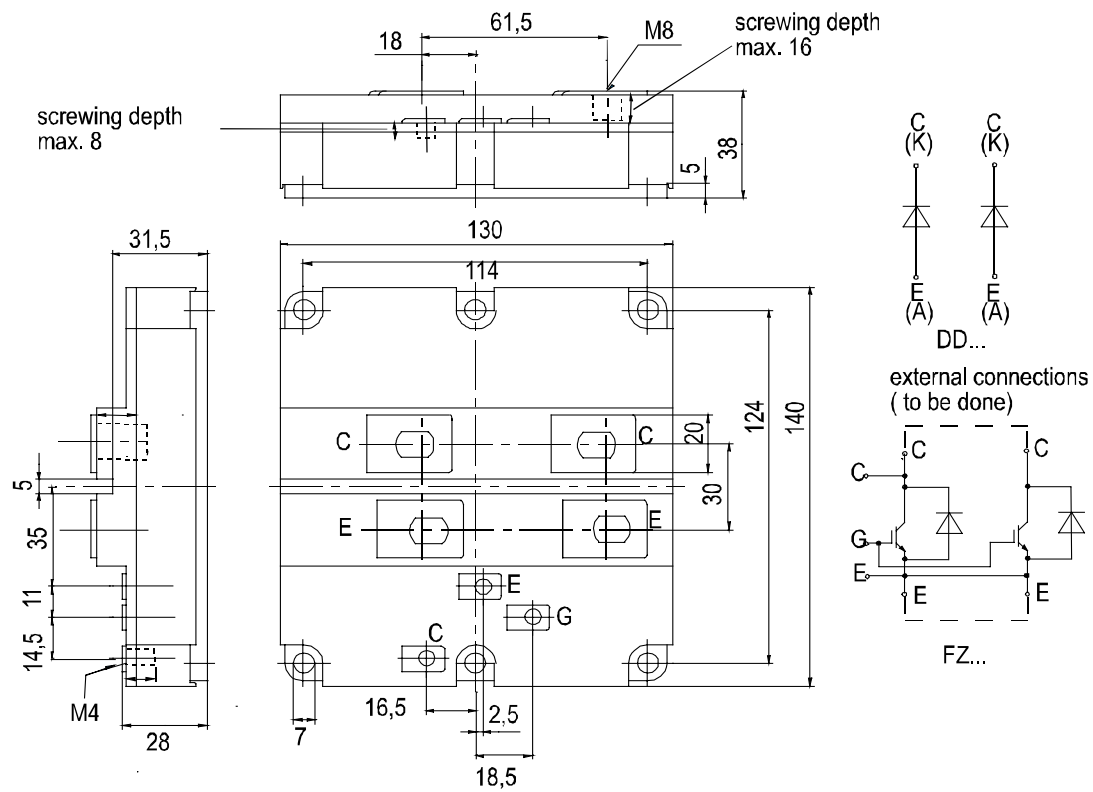
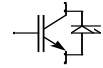


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Transienter Wärmewiderstand $Z_{thJC} = f(t)$
Transient thermal impedance



i	1	2	3	4
r_i [K/kW] : Diode	15,7	7,05	2,24	9,05
τ_i [sec] : Diode	0,0287	0,0705	0,153	0,988



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