

Transistor	Transistor
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
V _{CES}	1200 V
I _C	200 A
I _{CRM} t _p = 1 ms	400 A
P _{tot} t _C = 25°C	1400 W
V _{GE}	20 V
V _{EG}	20 V

Charakteristische Werte	Characteristic values
V _{CE sat} i _{CM} = 200 A, v _{GE} = 15 V, t _{vj} = 25°C	typ. 3 V
i _{CM} = 200 A, v _{GE} = 15 V, t _{vj} = 25°C	max. 4 V
V _{GE} (th) v _{CE} = 5 V, i _C = 200 mA, t _{vj} = 25°C	min. 3 V
v _{CE} = 5 V, i _C = 200 mA, t _{vj} = 25°C	max. 6 V
C _{ies} v _{CE} = 10 V, v _{GE} = 0 V, f _o = 1 MHz, t _{vj} = 25°C	typ. 24 nF
i _{CES} v _{CE} = 1200 V, v _{GE} = 0 V, t _{vj} = 25°C	typ. 1 mA
v _{CE} = 1200 V, v _{GE} = 0 V, t _{vj} = 125°C	typ. 6 mA
i _{GES} v _{GE} = 20 V, t _{vj} = 25°C	typ. 2 µA
v _{GE} = 20 V, t _{vj} = 25°C	max. 20 µA
i _{EGS} v _{EG} = 20 V, t _{vj} = 25°C	typ. 2 µA
v _{EG} = 20 V, t _{vj} = 25°C	max. 20 µA
t _{on} i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 4,7 Ω, t _{vj} = 25°C	typ. 0,4 µs
i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 4,7 Ω, t _{vj} = 125°C	typ. 0,6 µs
t _s i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 4,7 Ω, t _{vj} = 25°C	typ. 0,6 µs
i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 4,7 Ω, t _{vj} = 125°C	typ. 0,8 µs
t _f i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 4,7 Ω, t _{vj} = 25°C	typ. 0,2 µs
i _{CM} = 200 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 4,7 Ω, t _{vj} = 125°C	typ. 0,25 µs

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
t _{fg} = 10 µs, v _{LF} = v _{LR} = 15 V, R _G = 4,7 Ω, t _{vj} = 125°C,	V _{CC} = 750 V, V _{CEM} = 1000 V, i _{CMK 1} ≈ 2400 A, i _{CMK 2} ≈ 1600 A,

Thermische Eigenschaften	Thermal properties
R _{thJC} DC, pro Baustein / per module	0,089 °C/W
R _{thCK} pro Baustein / per module	0,04 °C/W
t _{vj max}	150 °C
t _{vj op}	- 40 / + 150 °C
t _{stg}	- 40 / + 125 °C

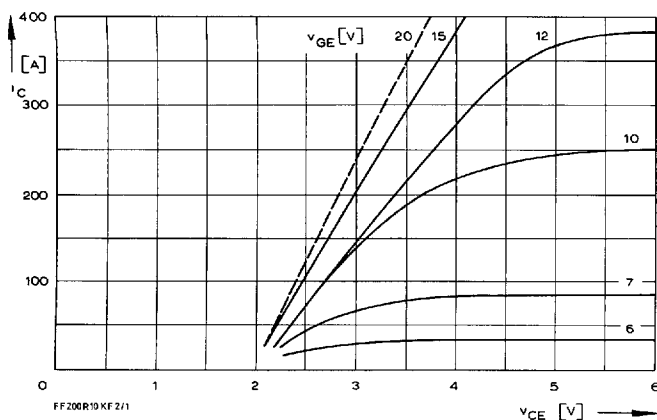
Inversdiode	Inverse diode
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
I _{F(max)}	200 A
I _{FRM} t _p = 1 ms	400 A

Charakteristische Werte	Characteristic values
v _F i _F = 200 A, v _{GE} = 0 V, t _{vj} = 25°C	typ. 1,8 V
i _F = 200 A, v _{GE} = 0 V, t _{vj} = 25°C	max. 3 V
I _{RM} i _{FM} = 200 A, -di _F /dt = 300 A/µs	typ. 23 A
v _{EG} = 10 V, t _{vj} = 25°C	
i _{FM} = 200 A, -di _F /dt = 300 A/µs	typ. 45 A
v _{EG} = 10 V, t _{vj} = 125°C	
Q _r i _{FM} = 200 A, -di _F /dt = 300 A/µs	typ. 3 µAs
v _{EG} = 10 V, t _{vj} = 25°C	
i _{FM} = 200 A, -di _F /dt = 300 A/µs	typ. 10 µAs
v _{EG} = 10 V, t _{vj} = 125°C	

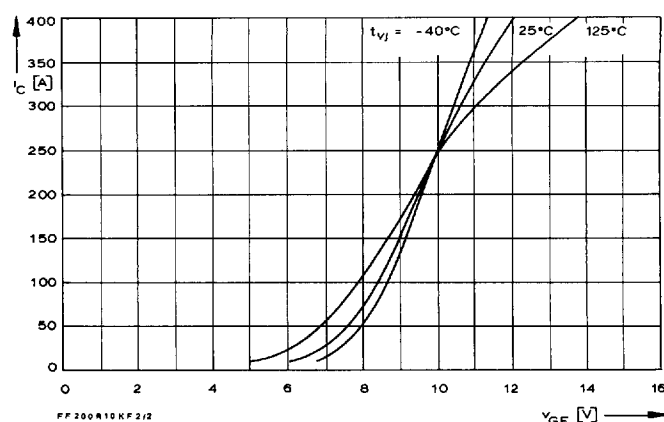
Thermische Eigenschaften	Thermal properties
R _{thJC} DC, pro Baustein / per module	0,25 °C/W
R _{thCK} pro Baustein / per module	0,04 °C/W
t _{vj max}	125 °C
t _{vj op}	- 40 / + 125 °C
t _{stg}	- 40 / + 125 °C

Innere Isolation	Internal insulation
Isoliermaterial: Al N	Insulating material: Al N
V _{ISOL} RMS (f=50 Hz, t=1 min)	2,5 kV

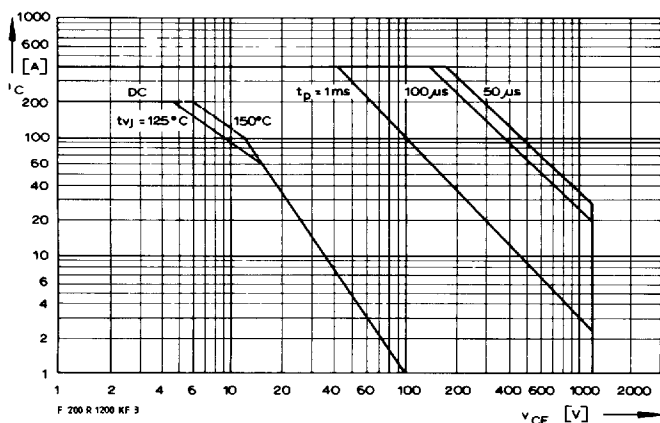
Mechanische Eigenschaften	Mechanical properties
G	465 g
M 1	3 Nm
M 2 terminals M 4 / M 6	2 Nm / 3 Nm
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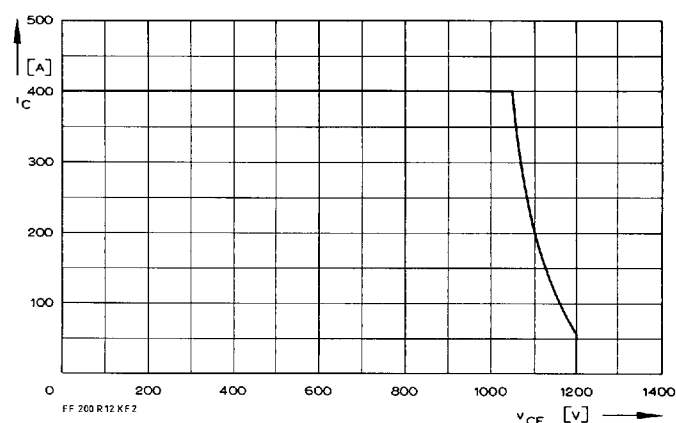
1 Kollektor-Emitter-Spannung im Sättigungsbereich (typisch).
Collector-emitter-voltage in saturation region (typical).
 $t_{vj} = 25^\circ\text{C}$



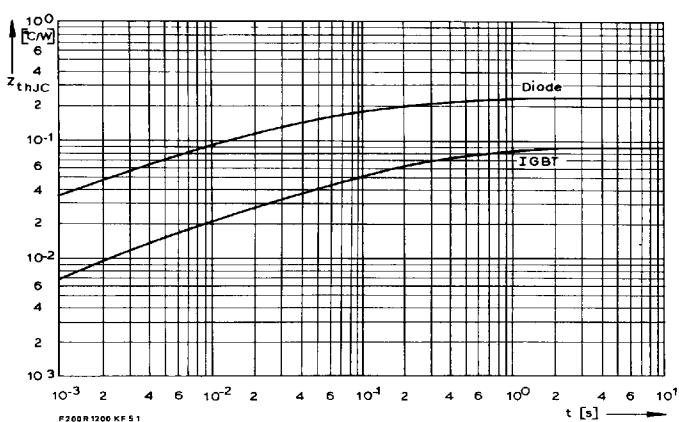
2 Übertragungscharakteristik (typisch).
Transfer characteristic (typical).
 $V_{CE} = 5\text{ V}$



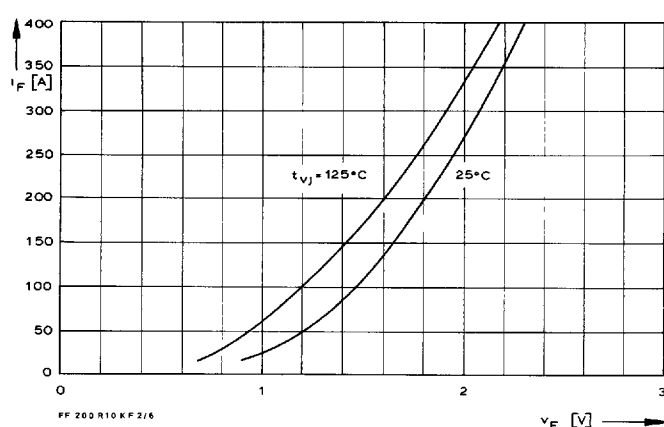
3 Vorwärts-Arbeitsbereich FBSOA (Einzelimpuls, nicht periodisch).
Forward biased safe operating area (single pulse, non repetitive).
 $t_C = 25^\circ\text{C}$



4 Rückwärts-Arbeitsbereich RBSOA.
Reverse biased safe operating area.
 $t_{vj} = 125^\circ\text{C}$, $V_{LF} = V_{LR} = 15\text{ V}$, $R_G = 4,7\ \Omega$



5 Transienter innerer Warmewiderstand je Zweig (DC).
Transient thermal impedance per arm (DC).



6 Durchlaßkennlinie der Inversdiode (typisch).
Forward characteristic of the inverse diode (typical).
 $V_{GE} = 0\text{ V}$