

Transistor		Transistor	
Elektrische Eigenschaften		Electrical properties	
Höchstzulässige Werte		Maximum rated values	
V _{CES}		1200	V
I _C		300	A
I _{CRM}	t _p = 1 ms	600	A
P _{tot}	t _C = 25°C	2000	W
V _{GE}		20	V
V _{EG}		20	V

Charakteristische Werte		Characteristic values	
V _{CE sat}	i _{CM} = 300 A, v _{GE} = 15 V, t _{vj} = 25°C	typ.	3 V
	i _{CM} = 300 A, v _{GE} = 15 V, t _{vj} = 25°C	max.	4 V
V _{GE (th)}	v _{CE} = 5 V, i _C = 300 mA, t _{vj} = 25°C	min.	3 V
	v _{CE} = 5 V, i _C = 300 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.	36 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.	4 µA
	v _{GE} = 20 V, t _{vj} = 25°C	max.	40 µA
i _{EGS}	v _{EG} = 20 V, t _{vj} = 25°C	typ.	4 µA
	v _{EG} = 20 V, t _{vj} = 25°C	max.	40 µA
t _{on}	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 2,7 Ω, t _{vj} = 25°C	typ.	0,4 µs
	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 2,7 Ω, t _{vj} = 125°C	typ.	0,6 µs
t _s	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 2,7 Ω, t _{vj} = 25°C	typ.	0,6 µs
	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 2,7 Ω, t _{vj} = 125°C	typ.	0,8 µs
t _f	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 2,7 Ω, t _{vj} = 25°C	typ.	0,2 µs
	i _{CM} = 300 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 2,7 Ω, t _{vj} = 125°C	typ.	0,3 µs

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
t _{ig} = 10 µs,	V _{CC} = 750 V,
v _{LF} = v _{LR} = 15 V,	V _{CEM} = 1000 V,
R _G = 2,7 Ω,	i _{CMK 1} ≈ 3600 A,
t _{vj} = 125°C,	i _{CMK 2} ≈ 2500 A,

Thermische Eigenschaften		Thermal properties	
R _{thJC}	DC, pro Baustein / per module	0,063	°C/W
R _{thCK}	pro Baustein / per module	0,03	°C/W
t _{vj max}		150	°C
t _{vj op}		- 40 / + 150	°C
t _{stg}		- 40 / + 125	°C

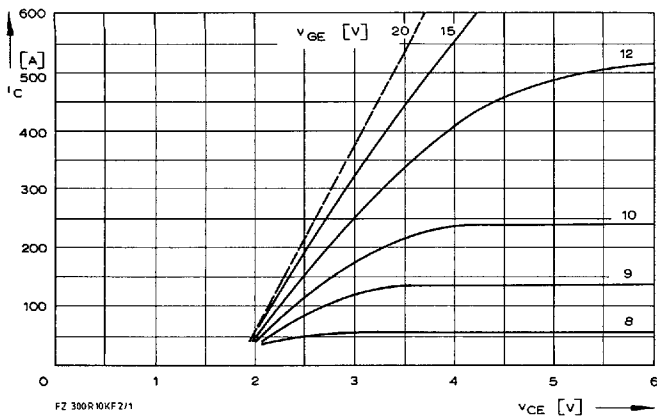
Inversdiode		Inverse diode	
Elektrische Eigenschaften		Electrical properties	
Höchstzulässige Werte		Maximum rated values	
I _{F(max)}		300	A
I _{FRM}	t _p = 1 ms	600	A

Charakteristische Werte		Characteristic values	
v _F	i _F = 300 A, v _{GE} = 0 V, t _{vj} = 25°C	typ.	1,8 V
	i _F = 300 A, v _{GE} = 0 V, t _{vj} = 25°C	max.	3 V
I _{RM}	i _{FM} = 300 A, -di _F /dt = 300 A/µs		
	v _{EG} = 10 V, t _{vj} = 25°C	typ.	24 A
	i _{FM} = 300 A, -di _F /dt = 300 A/µs		
	v _{EG} = 10 V, t _{vj} = 125°C	typ.	46 A
Q _r	i _{FM} = 300 A, -di _F /dt = 300 A/µs		
	v _{EG} = 10 V, t _{vj} = 25°C	typ.	3,5 µAs
	i _{FM} = 300 A, -di _F /dt = 300 A/µs		
	v _{EG} = 10 V, t _{vj} = 125°C	typ.	13 µAs

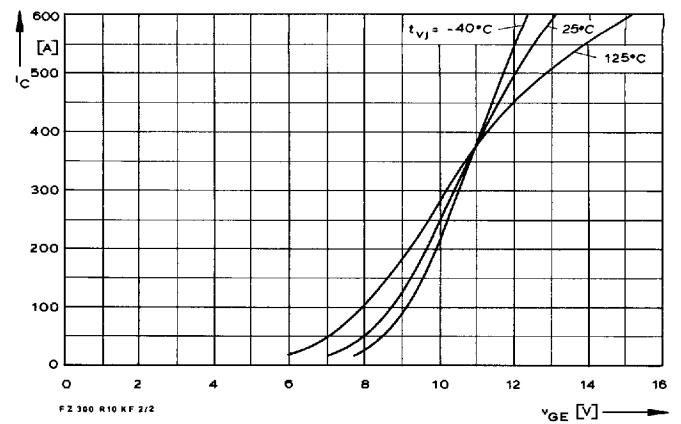
Thermische Eigenschaften		Thermal properties	
R _{thJC}	DC, pro Baustein / per module	0,2	°C/W
	DC, pro Zweig / per arm		
R _{thCK}	pro Baustein / per module	0,03	°C/W
	pro Zweig / per arm		
t _{vj max}		125	°C
t _{vj op}		- 40 / + 125	°C
t _{stg}		- 40 / + 125	°C

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

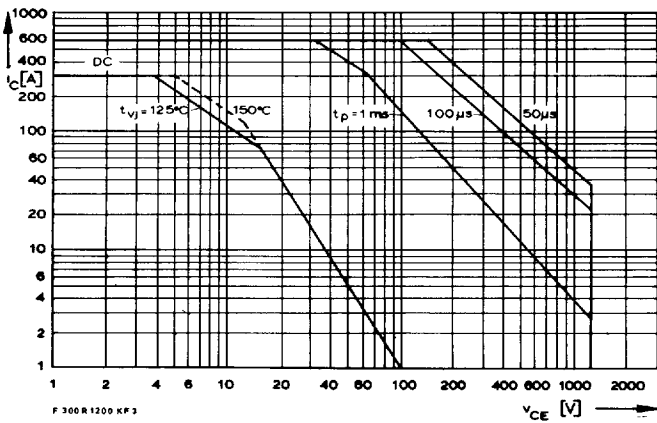
Mechanische Eigenschaften		Mechanical properties	
G		465	g
M 1		3	Nm
M 2	terminals M 4 / M 6	2 Nm / 3	Nm
Maßbild ¹⁾ Seite 183, Nr. 5		outline ¹⁾ page 183, no. 5	



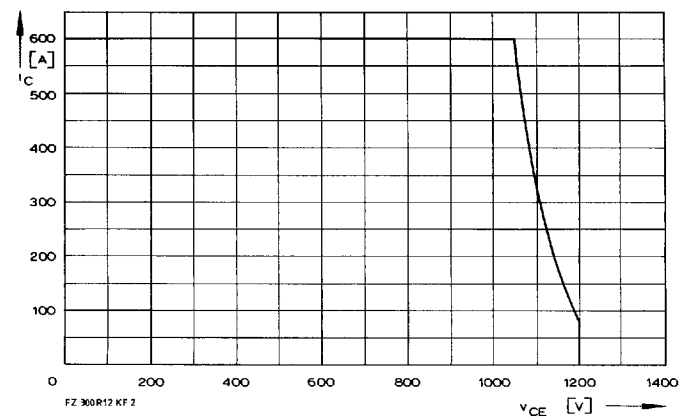
1 Kollektor-Emitter-Spannung im Sättigungsbereich (typisch).
Collector-emitter-voltage in saturation region (typical).
 $t_{vj} = 25^\circ\text{C}$



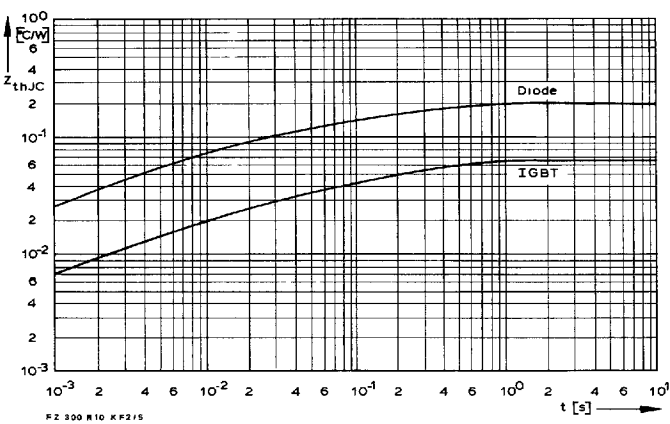
2 Übertragungscharakteristik (typisch).
Transfer characteristic (typical).
 $V_{CE} = 5\text{ V}$



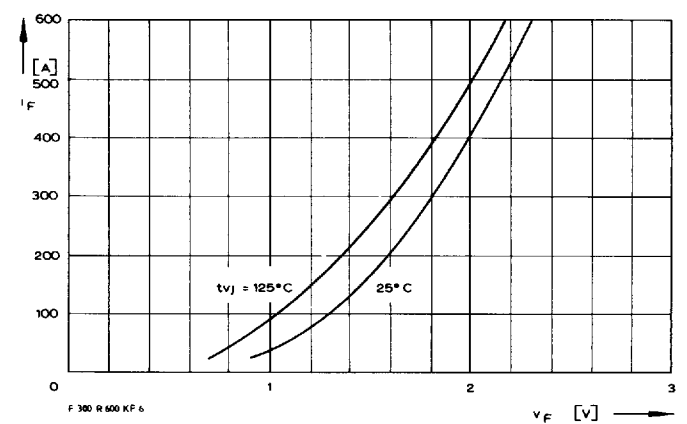
3 Vorwärts-Arbeitsbereich FBSOA (Einzelimpuls, nicht periodisch).
Forward biased safe operating area (single pulse, non repetitive).
 $t_C = 25^\circ\text{C}$



4 Rückwärts-Arbeitsbereich RBSOA.
Reverse biased safe operating area.
 $t_{vj} = 125^\circ\text{C}$, $V_{LF} = V_{LR} = 15\text{ V}$, $R_G = 2,7\ \Omega$



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



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