

Transistor	Transistor
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
V _{CES}	600 V
I _C	300 A
I _{CRM} t _p = 1 ms	600 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} = 300 A, V _{GE} = 15 V, t _{vj} = 25°C typ. 2,1 V
	i _{CM} = 300 A, V _{GE} = 15 V, t _{vj} = 25°C max. 2,7 V
V _{GE (th)}	V _{CE} = 5 V, i _C = 30 mA, t _{vj} = 25°C min. 5 V
	V _{CE} = 5 V, i _C = 30 mA, t _{vj} = 25°C max. 8 V
C _{ies}	V _{CE} = 10 V, V _{GE} = 300 V, f _o = 1 MHz, t _{vj} = 25°C, typ. 27 nF
i _{CES}	V _{CE} = 600 V, V _{GE} = 0 V, t _{vj} = 25°C typ. 1 mA
	V _{CE} = 600 V, V _{GE} = 0 V, t _{vj} = 125°C typ. 6 mA
i _{GES}	V _{GE} = 20 V, t _{vj} = 25°C, typ. 50 nA
	V _{GE} = 20 V, t _{vj} = 25°C, max. 500 nA
i _{EGS}	V _{EG} = 20 V, t _{vj} = 25°C, typ. 50 nA
	V _{EG} = 20 V, t _{vj} = 25°C, max. 500 nA
t _{on}	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, R _G = 3,3 Ω, t _{vj} = 25°C typ. 0,4 μs
	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, R _G = 3,3 Ω, t _{vj} = 125°C typ. 0,5 μs
t _s	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, V _{LR} = 15 V, R _G = 3,3 Ω, t _{vj} = 25°C typ. 0,35 μs
	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, V _{LR} = 15 V, R _G = 3,3 Ω, t _{vj} = 125°C typ. 0,45 μs
t _f	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, V _{LR} = 15 V, R _G = 3,3 Ω, t _{vj} = 25°C typ. 0,15 μs
	i _{CM} = 300 A, V _{CE} = 300 V, V _{LF} = 15 V, V _{LR} = 15 V, R _G = 3,3 Ω, t _{vj} = 125°C typ. 0,25 μs

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
t _{ig} = 10 μs,	V _{CC} = 350 V,
V _{LF} = V _{LR} = 15 V,	V _{CEM} = 500 V,
R _G = 3,3 Ω,	i _{CMK 1} ≈ 1200 A,
t _{vj} = 125°C,	i _{CMK 2} ≈ 900 A.

Thermische Eigenschaften	Thermal properties
R _{thJC}	DC, pro Baustein / per module 0,045 °C/W
	DC, pro Zweig / per arm 0,090 °C/W
R _{thCK}	pro Baustein / per module 0,030 °C/W
	pro Zweig / per arm 0,060 °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. 1,7 V
	i _F = 300 A, V _{GE} = 0 V, t _{vj} = 25°C max. 2,5 V
I _{RM}	i _{FM} = 300 A, -di _F /dt = 300 A/μs typ. 13 A
	V _{EG} = 10 V, t _{vj} = 25°C
	i _{FM} = 300 A, -di _F /dt = 300 A/μs typ. 24 A
	V _{EG} = 10 V, t _{vj} = 125°C
Q _r	i _{FM} = 300 A, -di _F /dt = 300 A/μs typ. 2 μAs
	V _{EG} = 10 V, t _{vj} = 25°C
	i _{FM} = 300 A, -di _F /dt = 300 A/μs typ. 7 μAs
	V _{EG} = 10 V, t _{vj} = 125°C

Thermische Eigenschaften	Thermal properties
R _{thJC}	DC, pro Baustein / per module 0,085 °C/W
	DC, pro Zweig / per arm 0,170 °C/W
R _{thCK}	pro Baustein / per module 0,030 °C/W
	pro Zweig / per arm 0,060 °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	430 g
M 1	3 Nm
M 2	3 Nm
Maßbild Seite 182, Nr. 3	outline page 182, no. 3