

Transistor	Transistor
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
V _{CES}	600 V
I _C	50 A
I _{CRM} t _p = 1 ms	100 A
P _{tot} t _C = 25°C	250 W
V _{GE}	20 V
V _{EG}	20 V

Charakteristische Werte	Characteristic values
V _{CE sat}	i _{CM} = 50 A, v _{GE} = 15 V, t _{vj} = 25°C typ. 2,7 V i _{CM} = 50 A, v _{GE} = 15 V, t _{vj} = 25°C max. 3,5 V
V _{GE (th)}	v _{CE} = 5 V, i _C = 50 mA, t _{vj} = 25°C min. 3 V v _{CE} = 5 V, i _C = 50 mA, t _{vj} = 25°C max. 6 V
C _{ies}	v _{CE} = 10 V, v _{GE} = 0 V, typ. 4 nF f _o = 1 MHz, t _{vj} = 25°C
i _{CES}	v _{CE} = 600 V, v _{GE} = 0 V, t _{vj} = 25°C typ. 0,3 mA v _{CE} = 600 V, v _{GE} = 0 V, t _{vj} = 125°C typ. 2 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} = 50 A, v _{CE} = 300 V, typ. 0,4 μs v _{LF} = 15 V, R _G = 51 Ω, t _{vj} = 25°C i _{CM} = 50 A, v _{CE} = 300 V, typ. 0,5 μs v _{LF} = 15 V, R _G = 51 Ω, t _{vj} = 125°C
t _s	i _{CM} = 50 A, v _{CE} = 300 V, typ. 0,4 μs v _{LF} = 15 V, v _{LR} = 15 V, typ. 0,5 μs R _G = 51 Ω, t _{vj} = 25°C
t _f	i _{CM} = 50 A, v _{CE} = 300 V, typ. 0,15 μs v _{LF} = 15 V, v _{LR} = 15 V, typ. 0,25 μs R _G = 51 Ω, t _{vj} = 25°C i _{CM} = 50 A, v _{CE} = 300 V, typ. 0,25 μs v _{LF} = 15 V, v _{LR} = 15 V, typ. 0,25 μs R _G = 51 Ω, t _{vj} = 125°C

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 = 51 Ω,	i _{CMK 1} ≈ 250 A,
t _{vj} = 125°C,	i _{CMK 2} ≈ 150 A.

Thermische Eigenschaften	Thermal properties
R _{thJC}	DC, pro Baustein / per module 0,084 °C/W DC, pro Zweig / per arm 0,5 °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)}	50 A
I _{FRM} t _p = 1 ms	100 A

Charakteristische Werte	Characteristic values
v _F	i _F = 50 A, v _{GE} = 0 V, t _{vj} = 25°C typ. 1,7 V i _F = 50 A, v _{GE} = 0 V, t _{vj} = 25°C max. 2,5 V
I _{RM}	i _{FM} = 50 A, -di _F /dt = 100 A/μs v _{EG} = 10 V, t _{vj} = 25°C typ. 4 A i _{FM} = 50 A, -di _F /dt = 100 A/μs
Q _r	v _{EG} = 10 V, t _{vj} = 125°C typ. 8 A i _{FM} = 50 A, -di _F /dt = 100 A/μs v _{EG} = 10 V, t _{vj} = 25°C typ. 0,3 μAs i _{FM} = 50 A, -di _F /dt = 100 A/μs v _{EG} = 10 V, t _{vj} = 125°C typ. 1,2 μAs

Thermische Eigenschaften	Thermal properties
R _{thJC}	DC, pro Baustein / per module 0,167 °C/W DC, pro Zweig / per arm 1 °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	500 g
M 1	3 Nm
M 2	2 Nm
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