

Transistor	Transistor
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
V _{CES}	1200 V
I _C	50 A
I _{CRM} t _p = 1 ms	100 A
P _{tot} t _C = 25°C	300 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. 3 V i _{CM} = 50 A, v _{GE} = 15 V, t _{vj} = 25°C max. 4 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, f _o = 1 MHz, t _{vj} = 25°C typ. 7,8 nF
i _{CES}	v _{CE} = 1200 V, v _{GE} = 0 V, t _{vj} = 25°C typ. 0,3 mA v _{CE} = 1200 V, v _{GE} = 0 V, t _{vj} = 125°C typ. 2 mA
i _{GES}	v _{GE} = 20 V, t _{vj} = 25°C typ. 1 µA v _{GE} = 20 V, t _{vj} = 25°C max. 10 µA
i _{EGS}	v _{EG} = 20 V, t _{vj} = 25°C typ. 1 µA v _{EG} = 20 V, t _{vj} = 25°C max. 10 µA
t _{on}	i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 24 Ω, t _{vj} = 25°C typ. 0,4 µs i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, R _G = 24 Ω, t _{vj} = 125°C typ. 0,5 µs
t _s	i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 24 Ω, t _{vj} = 25°C typ. 0,5 µs i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 24 Ω, t _{vj} = 125°C typ. 0,6 µs
t _f	i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 24 Ω, t _{vj} = 25°C typ. 0,2 µs i _{CM} = 50 A, v _{CE} = 600 V, v _{LF} = 15 V, v _{LR} = 15 V, R _G = 24 Ω, t _{vj} = 125°C typ. 0,25 µs

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
t _{ig} = 10 µs, v _{LF} = v _{LR} = 15 V, R _G = 24 Ω, t _{vj} = 125°C,	V _{CC} = 750 V, V _{CEM} = 1000 V, i _{CMK 1} ≈ 600 A, i _{CMK 2} ≈ 400 A.

Thermische Eigenschaften	Thermal properties
R _{thJC}	DC, pro Baustein / per module 0,068 °C/W DC, pro Zweig / per arm 0,410 °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. 2 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. 7 A i _{FM} = 50 A, -di _F /dt = 100 A/µs v _{EG} = 10 V, t _{vj} = 125°C typ. 15 A
Q _r	i _{FM} = 50 A, -di _F /dt = 100 A/µs v _{EG} = 10 V, t _{vj} = 25°C typ. 1 µAs i _{FM} = 50 A, -di _F /dt = 100 A/µs v _{EG} = 10 V, t _{vj} = 125°C typ. 3,5 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	690 g
M 1	3 Nm
M 2	3 Nm
Maßbild Seite 184, Nr. 9	outline page 184, no. 9