

Transistor		Transistor	
Elektrische Eigenschaften		Electrical properties	
Höchstzulässige Werte		Maximum rated values	
$V_{CES}$		600	V
$I_C$		400	A
$I_{CRM}$	$t_p = 1 \text{ ms}$	800	A
$P_{tot}$	$t_C = 25^\circ\text{C}$	1680	W
$V_{GE}$		20	V
$V_{EG}$		20	V

Charakteristische Werte		Characteristic values	
$V_{CE \text{ sat}}$	$i_{CM} = 400 \text{ A}, v_{GE} = 15 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	2 V
	$i_{CM} = 400 \text{ A}, v_{GE} = 15 \text{ V}, t_{vj} = 25^\circ\text{C}$	max.	2,4 V
$v_{GE (th)}$	$v_{CE} = 5 \text{ V}, i_C = 40 \text{ mA}, t_{vj} = 25^\circ\text{C}$		min. 5 V
	$v_{CE} = 5 \text{ V}, i_C = 40 \text{ mA}, t_{vj} = 25^\circ\text{C}$		max. 8 V
$C_{ies}$	$v_{CE} = 10 \text{ V}, v_{GE} = 0 \text{ V}, f_0 = 1 \text{ MHz}, t_{vj} = 25^\circ\text{C}$	typ.	32 nF
	$v_{CE} = 600 \text{ V}, v_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	1 mA
$i_{CES}$	$v_{CE} = 600 \text{ V}, v_{GE} = 0 \text{ V}, t_{vj} = 125^\circ\text{C}$	typ.	6 mA
	$v_{GE} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	50 nA
$i_{GES}$	$v_{GE} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$		max. 500 nA
	$v_{EG} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	50 nA
$i_{EGS}$	$v_{EG} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$		max. 500 nA
	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,4 $\mu\text{s}$
$t_{on}$	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,5 $\mu\text{s}$
	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, v_{LR} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,35 $\mu\text{s}$
$t_s$	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, v_{LR} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,45 $\mu\text{s}$
	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, v_{LR} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,15 $\mu\text{s}$
$t_f$	$i_{CM} = 400 \text{ A}, v_{CE} = 300 \text{ V}, v_{LF} = 15 \text{ V}, v_{LR} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,25 $\mu\text{s}$

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
$t_{ig} = 10 \mu\text{s}, v_{LF} = v_{LR} = 15 \text{ V}, R_G = 2,4 \Omega, t_{vj} = 125^\circ\text{C}$	$V_{CC} = 350 \text{ V}, v_{CEM} = 500 \text{ V}, i_{CMK 1} \approx 1500 \text{ A}, i_{CMK 2} \approx 1200 \text{ A}$

Thermische Eigenschaften	Thermal properties
$R_{thJC}$ DC, pro Baustein / per module	0,074 $^\circ\text{C/W}$
$R_{thCK}$ pro Baustein / per module	0,03 $^\circ\text{C/W}$
$t_{vj \text{ max}}$	150 $^\circ\text{C}$
$t_{vj \text{ op}}$	- 40 / + 150 $^\circ\text{C}$
$t_{stg}$	- 40 / + 125 $^\circ\text{C}$

Inversdiode	Inverse diode
Elektrische Eigenschaften	Electrical properties
Höchstzulässige Werte	Maximum rated values
$I_{F(max)}$	400 A
$I_{FRM}$ $t_p = 1 \text{ ms}$	800 A

Charakteristische Werte	Characteristic values
$v_F$ $i_F = 400 \text{ A}, v_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ. 2 V
$i_F = 400 \text{ A}, v_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	max. 2,7 V

Thermische Eigenschaften	Thermal properties
$R_{thJC}$ DC, pro Baustein / per module	0,170 $^\circ\text{C/W}$
$R_{thCK}$ DC, pro Zweig / per arm pro Baustein / per module pro Zweig / per arm	0,03 $^\circ\text{C/W}$
$t_{vj \text{ max}}$	125 $^\circ\text{C}$
$t_{vj \text{ op}}$	- 40 / + 125 $^\circ\text{C}$
$t_{stg}$	- 40 / + 125 $^\circ\text{C}$

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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