

Transistor		Transistor	
Elektrische Eigenschaften		Electrical properties	
Höchstzulässige Werte		Maximum rated values	
$V_{CES}$		600	V
$I_C$		75	A
$I_{CRM}$	$t_p = 1 \text{ ms}$	150	A
$P_{tot}$	$t_C = 25^\circ\text{C}$	390	W
$V_{GE}$		20	V
$V_{EG}$		20	V

Charakteristische Werte		Characteristic values	
$V_{CE \text{ sat}}$	$i_{CM} = 75 \text{ A}, V_{GE} = 15 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	2,1 V
	$i_{CM} = 75 \text{ A}, V_{GE} = 15 \text{ V}, t_{vj} = 25^\circ\text{C}$	max.	2,7 V
$V_{GE} \text{ (th)}$	$V_{CE} = 5 \text{ V}, i_C = 7,5 \text{ mA}, t_{vj} = 25^\circ\text{C}$	min.	5 V
	$V_{CE} = 5 \text{ V}, i_C = 7,5 \text{ mA}, t_{vj} = 25^\circ\text{C}$	max.	8 V
$C_{ies}$	$V_{CE} = 10 \text{ V}, V_{GE} = 0 \text{ V}, f_o = 1 \text{ MHz}, t_{vj} = 25^\circ\text{C}$	typ.	7,1 nF
$i_{CES}$	$V_{CE} = 600 \text{ V}, V_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	0,3 mA
	$V_{CE} = 600 \text{ V}, V_{GE} = 0 \text{ V}, t_{vj} = 125^\circ\text{C}$	typ.	2 mA
$i_{GES}$	$V_{GE} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	50 nA
	$V_{GE} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	max.	500 nA
$i_{EGS}$	$V_{EG} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	50 nA
	$V_{EG} = 20 \text{ V}, t_{vj} = 25^\circ\text{C}$	max.	500 nA
$t_{on}$	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,4 $\mu\text{s}$
	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,5 $\mu\text{s}$
$t_s$	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, V_{LR} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,35 $\mu\text{s}$
	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, V_{LR} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,45 $\mu\text{s}$
$t_f$	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, V_{LR} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 25^\circ\text{C}$	typ.	0,15 $\mu\text{s}$
	$i_{CM} = 75 \text{ A}, V_{CE} = 300 \text{ V}, V_{LF} = 15 \text{ V}, V_{LR} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 125^\circ\text{C}$	typ.	0,25 $\mu\text{s}$

Bedingungen für den Kurzschlußschutz	Conditions for protection against short circuits
$t_{ig} = 10 \mu\text{s}, V_{LF} = V_{LR} = 15 \text{ V}, R_G = 18 \Omega, t_{vj} = 125^\circ\text{C}$	$V_{CC} = 350 \text{ V}, V_{CEM} = 500 \text{ V}, i_{CMK 1} \approx 350 \text{ A}, i_{CMK 2} \approx 200 \text{ A}$

Thermische Eigenschaften		Thermal properties	
$R_{thJC}$	DC, pro Baustein / per module	0,054	$^\circ\text{C/W}$
	DC, pro Zweig / per arm	0,320	$^\circ\text{C/W}$

$t_{vj \text{ max}}$	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	
$I_{F(\text{max})}$		75	A
$I_{FRM}$	$t_p = 1 \text{ ms}$	150	A

Charakteristische Werte		Characteristic values	
$V_F$	$i_F = 75 \text{ A}, V_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	2,1 V
	$i_F = 75 \text{ A}, V_{GE} = 0 \text{ V}, t_{vj} = 25^\circ\text{C}$	max.	2,8 V
$I_{RM}$	$i_{FM} = 75 \text{ A}, -di_F/dt = 100 \text{ A}/\mu\text{s}, V_{EG} = 10 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	3,5 A
	$i_{FM} = 75 \text{ A}, -di_F/dt = 100 \text{ A}/\mu\text{s}, V_{EG} = 10 \text{ V}, t_{vj} = 125^\circ\text{C}$	typ.	7,5 A
$Q_r$	$i_{FM} = 75 \text{ A}, -di_F/dt = 100 \text{ A}/\mu\text{s}, V_{EG} = 10 \text{ V}, t_{vj} = 25^\circ\text{C}$	typ.	0,3 $\mu\text{As}$
	$i_{FM} = 75 \text{ A}, -di_F/dt = 100 \text{ A}/\mu\text{s}, V_{EG} = 10 \text{ V}, t_{vj} = 125^\circ\text{C}$	typ.	1,2 $\mu\text{As}$

Thermische Eigenschaften		Thermal properties	
$R_{thJC}$	DC, pro Baustein / per module	0,115	$^\circ\text{C/W}$
	DC, pro Zweig / per arm	0,690	$^\circ\text{C/W}$

$t_{vj \text{ max}}$	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 ( $f=50 \text{ Hz}, t=1 \text{ min}$ )	2,5	kV

Mechanische Eigenschaften	Mechanical properties
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G	500 g
M 1	3 Nm
M 2	2 Nm

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