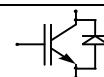


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Elektrische Eigenschaften / Electrical properties

Charakteristische Werte / Characteristic values

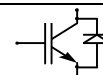
			min.	typ.	max.	
Modulinduktivität stray inductance module		$L_{\sigma CE}$	-	-	100	nH
Modul Leitungswiderstand, Anschlüsse-Chip lead resistance, terminals-chip	$T_C = 25^\circ\text{C}$	R_{CC+EE}	-	7	-	mΩ
Diode Wechselrichter/ Diode Inverter			min.	typ.	max.	
Durchlaßspannung forward voltage	$V_{GE} = 0\text{V}, T_{vj} = 25^\circ\text{C}, I_F = 50\text{ A}$ $V_{GE} = 0\text{V}, T_{vj} = 125^\circ\text{C}, I_F = 50\text{ A}$	V_F	-	1,25 1,2	1,7 -	V V
Rückstromspitze peak reverse recovery current	$I_F = I_{Nenn}, -di_F/dt = 1150\text{A}/\mu\text{s}$ $V_{GE} = -10\text{V}, T_{vj} = 25^\circ\text{C}, V_R = 300\text{ V}$ $V_{GE} = -10\text{V}, T_{vj} = 125^\circ\text{C}, V_R = 300\text{ V}$	I_{RM}	- -	35 46	- -	A A
Sperrverzögerungsladung recovered charge	$I_F = I_{Nenn}, -di_F/dt = 1150\text{A}/\mu\text{s}$ $V_{GE} = -10\text{V}, T_{vj} = 25^\circ\text{C}, V_R = 300\text{ V}$ $V_{GE} = -10\text{V}, T_{vj} = 125^\circ\text{C}, V_R = 300\text{ V}$	Q_r	- -	3,4 6,2	- -	μAs μAs
Abschaltenergie pro Puls reverse recovery energy	$I_F = I_{Nenn}, -di_F/dt = 1150\text{A}/\mu\text{s}$ $V_{GE} = -10\text{V}, T_{vj} = 25^\circ\text{C}, V_R = 300\text{ V}$ $V_{GE} = -10\text{V}, T_{vj} = 125^\circ\text{C}, V_R = 300\text{ V}$	E_{RQ}	- -	0,8 1,3	- -	mWs mWs
Transistor Brems-Chopper/ Transistor Brake-Chopper			min.	typ.	max.	
Kollektor-Emitter Sättigungsspannung collector-emitter saturation voltage	$V_{GE} = 15\text{V}, T_{vj} = 25^\circ\text{C}, I_C = 25,0\text{ A}$ $V_{GE} = 15\text{V}, T_{vj} = 125^\circ\text{C}, I_C = 25,0\text{ A}$	$V_{CE sat}$	- -	2,2 2,5	2,75 -	V V
Gate-Schwellenspannung gate threshold voltage	$V_{CE} = V_{GE}, T_{vj} = 25^\circ\text{C}, I_C = 0,5\text{ mA}$	$V_{GE(TH)}$	4,5	5,5	6,5	V
Eingangskapazität input capacitance	$f = 1\text{MHz}, T_{vj} = 25^\circ\text{C}$ $V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}$	C_{ies}	-	1,1	-	nF
Kollektor-Emitter Reststrom collector-emitter cut-off current	$V_{GE} = 0\text{V}, T_{vj} = 25^\circ\text{C}, V_{CE} = 600\text{ V}$ $V_{GE} = 0\text{V}, T_{vj} = 125^\circ\text{C}, V_{CE} = 600\text{ V}$	I_{CES}	- -	0,7 1,0	500 -	μA mA
Gate-Emitter Reststrom gate-emitter leakage current	$V_{CE} = 0\text{V}, V_{GE} = 20\text{V}, T_{vj} = 25^\circ\text{C}$	I_{GES}	-	-	300	nA
Diode Brems-Chopper/ Diode Brake-Chopper			min.	typ.	max.	
Durchlaßspannung forward voltage	$T_{vj} = 25^\circ\text{C}, I_F = 25,0\text{ A}$ $T_{vj} = 125^\circ\text{C}, I_F = 25,0\text{ A}$	V_F	- -	1,6 1,65	2,05 -	V V
NTC-Widerstand/ NTC-Thermistor			min.	typ.	max.	
Nennwiderstand rated resistance	$T_C = 25^\circ\text{C}$	R_{25}	-	5	-	kΩ
Abweichung von R_{100} deviation of R_{100}	$T_C = 100^\circ\text{C}, R_{100} = 493\text{ Ω}$	$\Delta R/R$	-5		5	%
Verlustleistung power dissipation	$T_C = 25^\circ\text{C}$	P_{25}			20	mW
B-Wert B-value	$R_2 = R_1 \exp [B(1/T_2 - 1/T_1)]$	$B_{25/50}$		3375		K

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Thermische Eigenschaften / Thermal properties

			min.	typ.	max.	
Innerer Wärmewiderstand thermal resistance, junction to case	Gleichr. Diode/ Rectif. Diode	R_{thJC}	-	-	1	K/W
	Trans. Wechsr./ Trans. Inverter		-	-	0,5	K/W
	Diode Wechsr./ Diode Inverter		-	-	0,8	K/W
	Trans. Bremse/ Trans. Brake		-	-	1	K/W
	Diode Bremse/ Diode Brake		-	-	2,3	K/W
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	Gleichr. Diode/ Rectif. Diode	$\lambda_{paste}=1W/m^2K$ R_{thCK}	-	0,04	-	K/W
	Trans. Wechsr./ Trans. Inverter	$\lambda_{grease}=1W/m^2K$	-	0,02	-	K/W
	Diode Wechsr./ Diode Inverter		-	0,04	-	K/W
Höchstzulässige Sperrschichttemperatur maximum junction temperature		T_{vj}	-	-	150	°C
Betriebstemperatur operation temperature		T_{op}	-40	-	125	°C
Lagertemperatur storage temperature		T_{stg}	-40	-	125	°C

Mechanische Eigenschaften / Mechanical properties

Innere Isolation internal insulation			Al_2O_3	
CTI comperative tracking index			225	
Anzugsdrehmoment f. mech. Befestigung mounting torque		M	3 ±10%	Nm
Gewicht weight		G	300	g