

Elektrische Eigenschaften / Electrical properties

Charakteristische Werte / Characteristic values

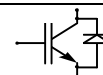
			min.	typ.	max.		
Modulinduktivität stray inductance module		L_{GCE}	-	-	100	nH	
Modul Leitungswiderstand, Anschlüsse-Chip lead resistance, terminals-chip	$T_C = 25^\circ C$	$R_{CC'+EE'}$	-	7	-	m Ω	
Diode Wechselrichter/ Diode Inverter			min.	typ.	max.		
Durchlaßspannung forward voltage	$V_{GE} = 0V, T_{vj} = 25^\circ C, I_F = 75 A$ $V_{GE} = 0V, T_{vj} = 125^\circ C, I_F = 75 A$	V_F	-	1,25 1,2	1,7 -	V V	
Rückstromspitze peak reverse recovery current	$I_F = I_{Nenn}, - di_F/dt = 1500A/\mu s$ $V_{GE} = -10V, T_{vj} = 25^\circ C, V_R = 300 V$ $V_{GE} = -10V, T_{vj} = 125^\circ C, V_R = 300 V$	I_{RM}	-	48 62	- -	A A	
Sperrverzögerungsladung recovered charge	$I_F = I_{Nenn}, - di_F/dt = 1500A/\mu s$ $V_{GE} = -10V, T_{vj} = 25^\circ C, V_R = 300 V$ $V_{GE} = -10V, T_{vj} = 125^\circ C, V_R = 300 V$	Q_r	-	4,5 7,3	- -	μAs μAs	
Abschaltenergie pro Puls reverse recovery energy	$I_F = I_{Nenn}, - di_F/dt = 1500A/\mu s$ $V_{GE} = -10V, T_{vj} = 25^\circ C, V_R = 300 V$ $V_{GE} = -10V, T_{vj} = 125^\circ C, V_R = 300 V$	E_{RO}	-	1 1,5	- -	mWs mWs	
Transistor Brems-Chopper/ Transistor Brake-Chopper			min.	typ.	max.		
Kollektor-Emitter Sättigungsspannung collector-emitter saturation voltage	$V_{GE} = 15V, T_{vj} = 25^\circ C, I_C = 37,5 A$ $V_{GE} = 15V, T_{vj} = 125^\circ C, I_C = 37,5 A$	$V_{CE sat}$	-	2,2 2,5	2,85 -	V V	
Gate-Schwellenspannung gate threshold voltage	$V_{CE} = V_{GE}, T_{vj} = 25^\circ C, I_C = 0,7 mA$	$V_{GE(To)}$	4,5	5,5	6,5	V	
Eingangskapazität input capacitance	$f = 1MHz, T_{vj} = 25^\circ C$ $V_{CE} = 25 V, V_{GE} = 0 V$	C_{ies}	-	1,6	-	nF	
Kollektor-Emitter Reststrom collector-emitter cut-off current	$V_{GE} = 0V, T_{vj} = 25^\circ C, V_{CE} = 600 V$ $V_{GE} = 0V, T_{vj} = 125^\circ C, V_{CE} = 600 V$	I_{CES}	-	1,0 1,2	500 -	μA mA	
Gate-Emitter Reststrom gate-emitter leakage current	$V_{CE} = 0V, V_{GE} = 20V, T_{vj} = 25^\circ C$	I_{GES}	-	-	300	nA	
Diode Brems-Chopper/ Diode Brake-Chopper			min.	typ.	max.		
Durchlaßspannung forward voltage	$T_{vj} = 25^\circ C, I_F = 37,5 A$ $T_{vj} = 125^\circ C, I_F = 37,5 A$	V_F	-	1,6 1,65	1,95 -	V V	
NTC-Widerstand/ NTC-Thermistor			min.	typ.	max.		
Nennwiderstand rated resistance	$T_C = 25^\circ C$	R_{25}	-	5	-	k Ω	
Abweichung von R_{100} deviation of R_{100}	$T_C = 100^\circ C, R_{100} = 493 \Omega$	$\Delta R/R$	-5		5	%	
Verlustleistung power dissipation	$T_C = 25^\circ C$	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	

Technische Information / Technical Information

IGBT-Module
IGBT-Modules

BSM75GP60

eupec



Thermische Eigenschaften / Thermal properties

			min.	typ.	max.	
Innerer Wärmewiderstand thermal resistance, junction to case	Gleicher. Diode/ Rectif. Diode	R_{thJC}	-	-	0,65	K/W
	Trans. Wechr./ Trans. Inverter		-	-	0,4	K/W
	Diode Wechr./ Diode Inverter		-	-	0,7	K/W
	Trans. Bremse/ Trans. Brake		-	-	0,7	K/W
	Diode Bremse/ Diode Brake		-	-	1,8	K/W
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	Gleicher. Diode/ Rectif. Diode	R_{thCK}	-	0,04	-	K/W
	Trans. Wechr./ Trans. Inverter	$\lambda_{paste}=1W/m^2K$	-	0,02	-	K/W
	Diode Wechr./ Diode Inverter	$\lambda_{grease}=1W/m^2K$	-	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 $\pm 10\%$	Nm
Gewicht weight		G		300	g