Diode, Wechselrichter / Diode, Inverter

Höchstzulässige Werte / Maximum Rated Values

Periodische Spitzensperrspannung Repetitive peak reverse voltage	T_{vj} = 25°C	V_{RRM}	1200	V
Dauergleichstrom Continuous DC forward current		I_F	1500	A
Periodischer Spitzenstrom Repetitive peak forward current	t_P = 1 ms	I_{FRM}	3000	A
Grenzlastintegral I²t - value	V_R = 0 V, t_P = 10 ms, T_{vj} = 125°C V_R = 0 V, t_P = 10 ms, T_{vj} = 175°C	I²t	575 445	kA²s kA²s

Charakteristische Werte / Characteristic Values

			min.	typ.	max.	
Durchlassspannung Forward voltage	I_F = 1500 A, V_{GE} = 0 V T_{vj} = 25°C I_F = 1500 A, V_{GE} = 0 V T_{vj} = 125°C I_F = 1500 A, V_{GE} = 0 V T_{vj} = 175°C	V_F		1,95 1,85 1,80	2,45 2,30 2,25	V V V
Rückstromspitze Peak reverse recovery current	I_F = 1500 A, - di_F/dt = 7900 A/µs (T_{vj}=175°C) T_{vj} = 25°C V_R = 600 V T_{vj} = 125°C V_{GE} = -15 V T_{vj} = 175°C	I_{RM}		745 1000 1150		A A A
Sperrverzögerungsladung Recovered charge	I_F = 1500 A, - di_F/dt = 7900 A/µs (T_{vj}=175°C) T_{vj} = 25°C V_R = 600 V T_{vj} = 125°C V_{GE} = -15 V T_{vj} = 175°C	Q_r		175 300 365		µC µC µC
Abschaltenergie pro Puls Reverse recovery energy	I_F = 1500 A, - di_F/dt = 7900 A/µs (T_{vj}=175°C) T_{vj} = 25°C V_R = 600 V T_{vj} = 125°C V_{GE} = -15 V T_{vj} = 175°C	E_{rec}		82,0 135 160		mJ mJ mJ
Wärmewiderstand, Chip bis Kühlkörper Thermal resistance, junction to heatsink	pro Diode / per diode valid with IFX pre-applied thermal interface material	R_{thJH}			47,1	K/kW
Temperatur im Schaltbetrieb Temperature under switching conditions		$T_{vj\,op}$	-40		175	°C

NTC-Widerstand / NTC-Thermistor

Charakteristische Werte / Characteristic Values

			min.	typ.	max.	
Nennwiderstand Rated resistance	T_{NTC} = 25°C	R_{25}		5,00		kΩ
Abweichung von R100 Deviation of R100	T_{NTC} = 100°C, R_{100} = 493 Ω	ΔR/R	-5		5	%
Verlustleistung Power dissipation	T_{NTC} = 25°C	P_{25}			20,0	mW
B-Wert B-value	$R_2 = R_{25} \exp [B_{25/50}(1/T_2 - 1/(298{,}15\ K))]$	$B_{25/50}$		3375		K
B-Wert B-value	$R_2 = R_{25} \exp [B_{25/80}(1/T_2 - 1/(298{,}15\ K))]$	$B_{25/80}$		3411		K
B-Wert B-value	$R_2 = R_{25} \exp [B_{25/100}(1/T_2 - 1/(298{,}15\ K))]$	$B_{25/100}$		3433		K

Angaben gemäß gültiger Application Note.
Specification according to the valid application note.

Modul / Module

Isolations-Prüfspannung Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V_{ISOL}		4,0		kV
Material Modulgrundplatte Material of module baseplate				Cu		
Innere Isolation Internal isolation	Basisisolierung (Schutzklasse 1, EN61140) basic insulation (class 1, IEC 61140)			Al_2O_3		
Kriechstrecke Creepage distance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal			36,0 28,0		mm
Luftstrecke Clearance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal			21,0 19,0		mm
Vergleichszahl der Kriechwegbildung Comperative tracking index		CTI		> 400		
			min.	typ.	max.	
Modulstreuinduktivität Stray inductance module		L_{sCE}		10		nH
Modulleitungswiderstand, Anschlüsse - Chip Module lead resistance, terminals - chip	T_H = 25°C, pro Schalter / per switch	$R_{CC'+EE'}$ $R_{AA'+CC'}$		0,10 0,09		mΩ
Lagertemperatur Storage temperature		T_{stg}	-40		150	°C
Höchstzulässige Bodenplattenbetriebstemperatur Maximum baseplate operation temperature		T_{BPmax}			150	°C
Anzugsdrehmoment f. Modulmontage Mounting torque for modul mounting	Schraube M5 - Montage gem. gültiger Applikationsschrift Screw M5 - Mounting according to valid application note	M	3,00		6,00	Nm
Anzugsdrehmoment f. elektr. Anschlüsse Terminal connection torque	Schraube M4 - Montage gem. gültiger Applikationsschrift Screw M4 - Mounting according to valid application note Schraube M8 - Montage gem. gültiger Applikationsschrift Screw M8 - Mounting according to valid application note	M	1,8 8,0	- -	2,1 10	Nm Nm
Gewicht Weight		G		1400		g

Lagerung und Transport von Modulen mit TIM: siehe AN2012-07
Storage and shipment of modules with TIM: see AN2012-07