

Diode, Wechselrichter / Diode, Inverter

Höchstzulässige Werte / Maximum Rated Values

Periodische Spitzensperrspannung Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{RRM}	1200	V
Dauergleichstrom Continuous DC forward current		I_F	2400	A
Periodischer Spitzenstrom Repetitive peak forward current	$t_P = 1\text{ ms}$	I_{FRM}	4800	A
Grenzlastintegral I^2t - value	$V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$	I^2t	750 725	kA^2s kA^2s

Charakteristische Werte / Characteristic Values

		min. typ. max.				
Durchlassspannung Forward voltage	$I_F = 2400\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		1,80	2,35	V
	$I_F = 2400\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$	V_F	1,75	2,30	V
	$I_F = 2400\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		1,70	2,25	V
Rückstromspitze Peak reverse recovery current	$I_F = 2400\text{ A}, -di_F/dt = 6250\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$	$T_{vj} = 25^{\circ}\text{C}$		805		A
	$V_R = 600\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$	I_{RM}	1150		A
	$V_{GE} = -15\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		1200		A
Sperrverzögerungsladung Recovered charge	$I_F = 2400\text{ A}, -di_F/dt = 6250\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$	$T_{vj} = 25^{\circ}\text{C}$		245		μC
	$V_R = 600\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$	Q_r	430		μC
	$V_{GE} = -15\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		490		μC
Abschaltenergie pro Puls Reverse recovery energy	$I_F = 2400\text{ A}, -di_F/dt = 6250\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$	$T_{vj} = 25^{\circ}\text{C}$		105		mJ
	$V_R = 600\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$	E_{rec}	185		mJ
	$V_{GE} = -15\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		210		mJ
Wärmewiderstand, Chip bis Kühlkörper Thermal resistance, junction to heatsink	pro Diode / per diode valid with IFX pre-applied thermal interface material	R_{thJH}			21,2	K/kW
Temperatur im Schaltbetrieb Temperature under switching conditions		$T_{vj\text{ op}}$	-40		150	$^{\circ}\text{C}$

Modul / Module

Isolations-Prüfspannung Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V _{ISOL}	2,5		kV
Material Modulgrundplatte Material of module baseplate			Cu		
Innere Isolation Internal isolation	Basisisolierung (Schutzklasse 1, EN61140) basic insulation (class 1, IEC 61140)		Al ₂ O ₃		
Kriechstrecke Creepage distance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal		32,0 32,0		mm
Luftstrecke Clearance	Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal		19,0 19,0		mm
Vergleichszahl der Kriechwegbildung Comperative tracking index		CTI	> 400		
			min.	typ.	max.
Modulstreuinduktivität Stray inductance module		L _{sCE}		6,0	nH
Modulleitungswiderstand, Anschlüsse - Chip Module lead resistance, terminals - chip	T _H = 25°C, pro Schalter / per switch	R _{CC'+EE'}		0,10	mΩ
Lagertemperatur Storage temperature		T _{stg}	-40		125 °C
Höchstzulässige Bodenplattenbetriebstemperatur Maximum baseplate operation temperature		T _{BPmax}			125 °C
Anzugsdrehmoment f. Modulmontage Mounting torque for modul mounting	Schraube M6 - Montage gem. gültiger Applikationsschrift Screw M6 - Mounting according to valid application note	M	4,25		5,75 Nm
Anzugsdrehmoment f. elektr. Anschlüsse Terminal connection torque	Schraube M4 - Montage gem. gültiger Applikationsschrift Schraube M8 - Montage gem. gültiger Applikationsschrift Screw M4 - Mounting according to valid application note Screw M8 - Mounting according to valid application note	M	1,7 8,0	- -	2,1 10 Nm
Gewicht Weight		G		1900	g

Lagerung und Transport von Modulen mit TIM laut AN2012-07
Storage and shipment of modules with TIM according to AN2012-07