

初步数据
Preliminary Data

Diode-斩波器 / Diode-Chopper
最大额定值 / Maximum Rated Values

反向重复峰值电压 Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{RRM}	1700	V
连续正向直流电流 Continuous DC forward current		I_F	1000	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1\text{ ms}$	I_{FRM}	2000	A
I_{2t} -值 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}	185 175	kA^2s kA^2s

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$ $I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$ $I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	V_F	1,70 1,70 1,70	2,15	V V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	I_{RM}	1300 1400 1450		A A A
恢复电荷 Recovered charge	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	Q_r	285 460 520		μC μC μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	E_{rec}	145 260 295		mJ mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		R_{thJC}		35,0	K/kW
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{\text{Paste}} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{\text{grease}} = 1\text{ W}/(\text{m}\cdot\text{K})$		R_{thCH}	15,0		K/kW
在开关状态下温度 Temperature under switching conditions			$T_{vj\text{ op}}$	-40	150	$^{\circ}\text{C}$

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初步数据
Preliminary Data

反向二极管 / Diode, Reverse
最大额定值 / Maximum Rated Values

反向重复峰值电压 Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{RRM}	1700	V
连续正向直流电流 Continuous DC forward current		I_F	1000	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1\text{ ms}$	I_{FRM}	2000	A
I ² t-值 I ² t - 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	185	kA ² s
			175	kA ² s

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		1,70	2,15	V
	$I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$		1,70		V
	$I_F = 1000\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		1,70		V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		1300		A
		$T_{vj} = 125^{\circ}\text{C}$		1400		A
		$T_{vj} = 150^{\circ}\text{C}$		1450		A
恢复电荷 Recovered charge	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		285		μC
		$T_{vj} = 125^{\circ}\text{C}$		460		μC
		$T_{vj} = 150^{\circ}\text{C}$		520		μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 1000\text{ A}, -di_F/dt = 8900\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 900\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		145		mJ
		$T_{vj} = 125^{\circ}\text{C}$		260		mJ
		$T_{vj} = 150^{\circ}\text{C}$		295		mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode	R_{thJC}			35,0	K/kW
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{Paste} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{grease} = 1\text{ W}/(\text{m}\cdot\text{K})$	R_{thCH}		15,0		K/kW
在开关状态下温度 Temperature under switching conditions		$T_{vj\text{ op}}$	-40		150	$^{\circ}\text{C}$

负温度系数热敏电阻 / NTC-Thermistor

特征值 / Characteristic Values

			min.	typ.	max.	
额定电阻值 Rated resistance	$T_C = 25^{\circ}\text{C}$	R_{25}		5,00		k Ω
R100 偏差 Deviation of R100	$T_C = 100^{\circ}\text{C}, R_{100} = 493\ \Omega$	$\Delta R/R$	-5		5	%
耗散功率 Power dissipation	$T_C = 25^{\circ}\text{C}$	P_{25}			20,0	mW
B-值 B-value	$R_2 = R_{25} \exp [B_{25/50}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/50}$		3375		K
B-值 B-value	$R_2 = R_{25} \exp [B_{25/80}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/80}$		3411		K
B-值 B-value	$R_2 = R_{25} \exp [B_{25/100}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/100}$		3433		K

根据应用手册标定

Specification according to the valid application note.

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