

DD125P330K2

3300V 125A Fast-Diode Die 快速二极管芯片

Die Size: 13.4×13.4mm

特点 Features

- 超低损耗
Ultra low losses
- 快而软反向恢复
Fast and soft reverse-recovery
- 宽安全工作区
Large SOA
- 正温度系数
Positive temperature coefficient



最大额定值 Maximum Rated Values

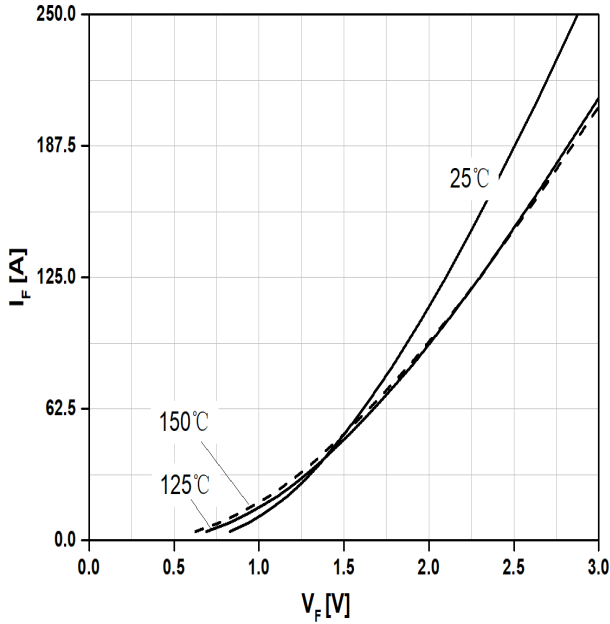
参数 Parameter	符号 Symbol	条件 Conditions	最小值 min	最大值 max	单位 Unit
可重复峰值反向电压 Repetitive peak reverse voltage	V_{RRM}			3300	V
连续正向电流 Continuous forward current	I_F			125	A
可重复峰值正向电流 Repetitive peak forward current	I_{FRM}	Limited by T_{vjmax}		250	A
结温 Junction temperature	T_{vj}		-40	150	°C

二极管特征值 Diode Characteristic Values

参数 Parameter	符号 Symbol	条件 Conditions	数值 Value			单位 Unit
			Min.	Typ.	Max.	
连续正向电压 Continuous forward voltage	V_F	$I_F = 125\text{ A}$	$T_{vj}=25^\circ\text{C}$	2.10		V
			$T_{vj}=150^\circ\text{C}$		2.30	V
连续反向电流 Continuous reverse current	I_R	$V_R = 3300\text{ V}$	$T_{vj}=25^\circ\text{C}$		50	μA
			$T_{vj}=150^\circ\text{C}$	2.5		mA
峰值反向恢复电流 Peak reverse recovery current	I_{rr}		$T_{vj}=25^\circ\text{C}$	75		A
			$T_{vj}=150^\circ\text{C}$	81		A
反向恢复电荷 Recovered charge	Q_{rr}	$I_F = 125\text{ A},$ $V_R = 1800\text{ V},$ $di/dt = 640\text{ A}/\mu\text{s},$ $L_s = 1200\text{ nH},$ Inductive load, Switch: 2x DG63P330K1	$T_{vj}=25^\circ\text{C}$	80		μC
			$T_{vj}=150^\circ\text{C}$	125		μC
反向恢复时间 Reverse recovery time	t_{rr}		$T_{vj}=25^\circ\text{C}$	1960		ns
			$T_{vj}=150^\circ\text{C}$	3100		ns
反向恢复能量 Reverse recovery energy	E_{rec}		$T_{vj}=25^\circ\text{C}$	95		mJ
			$T_{vj}=150^\circ\text{C}$	155		mJ

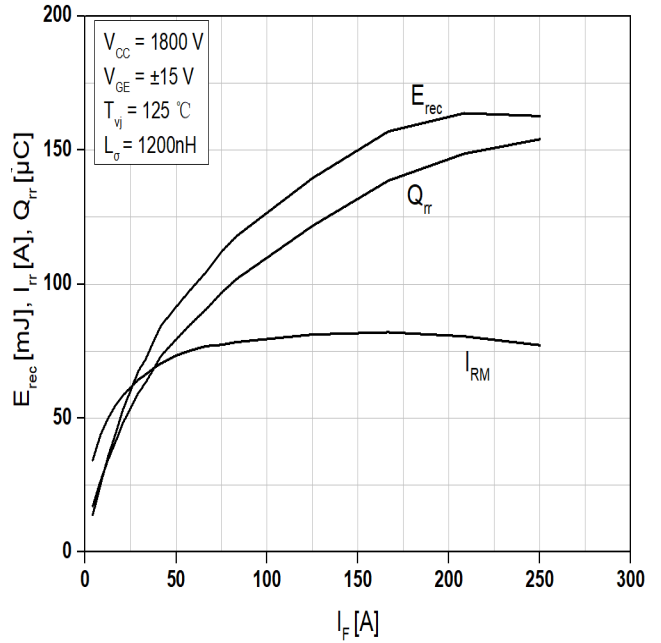
正向特性Diode

Fig.1 Typical diode forward characteristics



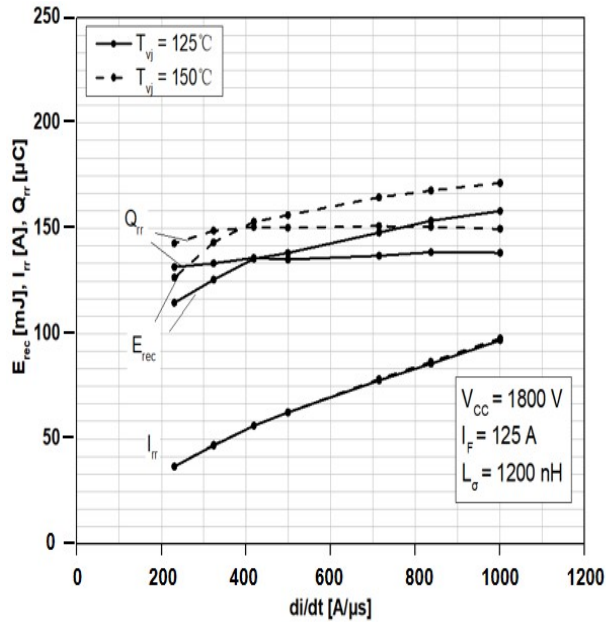
反向恢复特性Diode

Fig.2 Typical reverse recovery characteristics vs. forward current



反向恢复特性

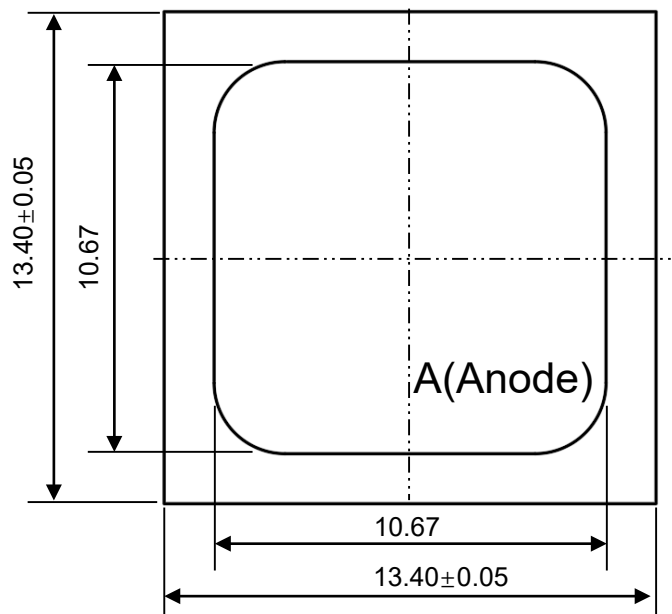
Fig.3 Typical reverse recovery vs. di/dt



机械特性Mechanical properties

参数 Parameter				单位 Unit
尺寸 Dimensions	Overall die	L×W	13.4×13.4	mm
	exposed front metal	L×W	10.7×10.7	mm
	thickness		385	μm
金属Metallization	front(A)	ALSi	5	μm
	back(K)	Al / Ti / Ni/ Ag	1.2	μm

外形图Outline Drawing



1) shadow mask position

Note : All dimensions are shown in mm