

40A/300V 快恢复二极管 40A/300V Fast Recovery Diodes

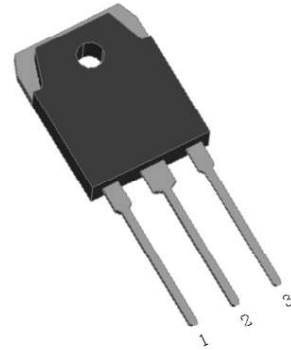
■特征 Features

- 超快恢复时间
Ultrafast Recovery Times
- 软恢复特性
Softer Recovery Characteristics
- 低正向电压
Low Forward Voltage
- 低反向漏电流
Low reverse leakage current

■应用范围 Applications

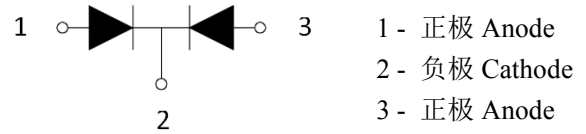
- 续流二极管
Free Wheeling Diode
- 电机控制器
Motor Controllers
- 开关式电源
Switching mode power supply
- 转换器
Converters
- 逆变器
Inverters
- 缓冲二极管
Snubber Diode
- 功率因数校正
PFC:Power Factor Correction

关键参数 KEY PARAMETERS		
参数 PARAMETER	数值 VALUE	单位 UNIT
IF(AV)	40	A
VF	1.05	V
VRRM	200	V
TRR	30	ns
Package	TO-3P	



■机械参数 Mechanical Data

- 安装扭矩: 8.0kgf.cm
Mounting torque: 8.0kgf.cm max
- 重量: 约 5.4 克
Weight : About 5.4 grams



■最大额定值 Maximum Ratings @ Ta = 25°C unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	单位 UNIT
反向重复峰值电压 Maximum recurrent peak reverse voltage	VRRM	200	V
最大平均正向电流 Maximum Average Forward Current	IF(AV)	40 (20*2)	A
最大正向浪涌电流, 8.3ms 单半正弦波叠加在额定负载上 Peak surge forward current, 8.3ms single half sine-wave superimposed on rated load	IFSM	300	A
存储温度 Storage Temperature Range	TSTG	-55 ~ +150	°C
结温 Junction Temperature	TJ	-55 ~ +150	°C
耐焊接热, 高温持续 10 秒 Resistance to Soldering Heat, Lead Temperature for 10 Sec	TL	260	°C

■电性特性 Electrical Characteristics @ Ta = 25°C unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	最大值 MAX	单位 UNIT	
正向峰值电压 Peak Forward Voltage	VF	IF=20A, Tj=25°C	1.05	1.15	V
		IF=20A, Tj=150°C	0.95	1.05	V
VR=VRRM, 脉冲测试, 单个二极管的额定值 VR=VRRM, Pulse measurement Rating of per diode	IR	Tj=25°C		10	μA
		Tj=150°C		500	
反向恢复时间 Reverse Recovery Time	TRR	IF=0.5A IRM=1A IRR=0.25A TC=25°C	30	35	ns

■热特性 Thermal Characteristics @ Ta = 25°C unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	最大值 MAX	单位 UNIT
结到管壳的热阻,有散热片 Junction to case Thermal Resistance, with heat sink	RθJC		1.0	°C/W

■特性曲线 Characteristic Curve

FIG.1 . Derating Curve For Output Rectified Current

图 1. 电流降额曲线

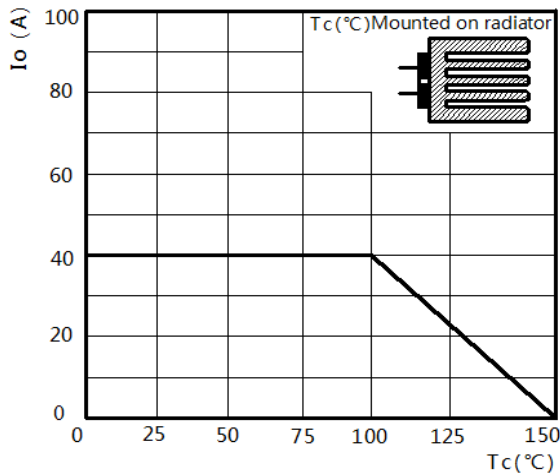


FIG3. Typical Reverse Characteristics Per Bridge Element

图 3. 典型反向特性

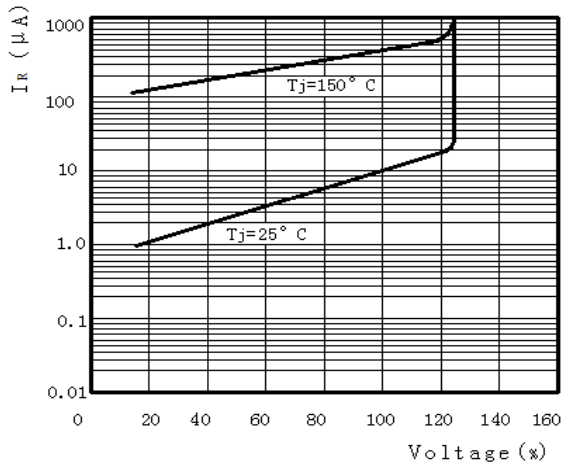


FIG.2 . Maximum Non-Repetitive Peak Forward Surge Current Per Bridge Element

图 2. 最大正向不重复峰值浪涌电流

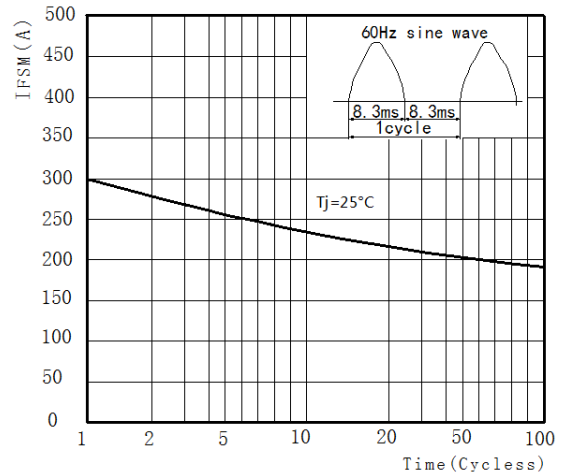
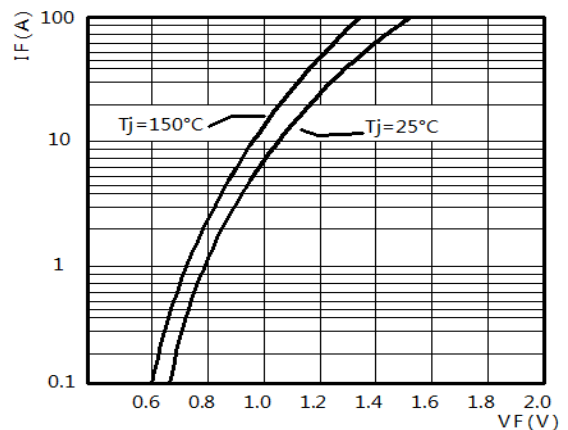


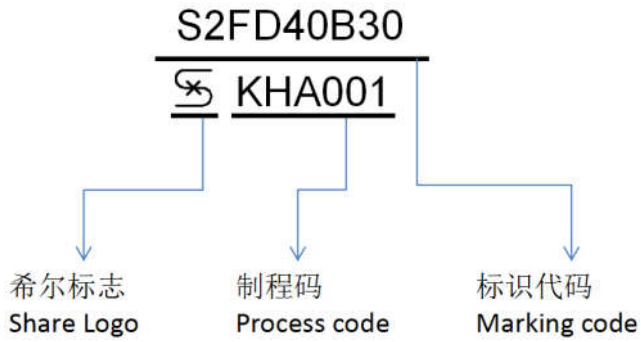
FIG4. Typical Forward Characteristics Per Bridge Element

图 4. 典型正向特性

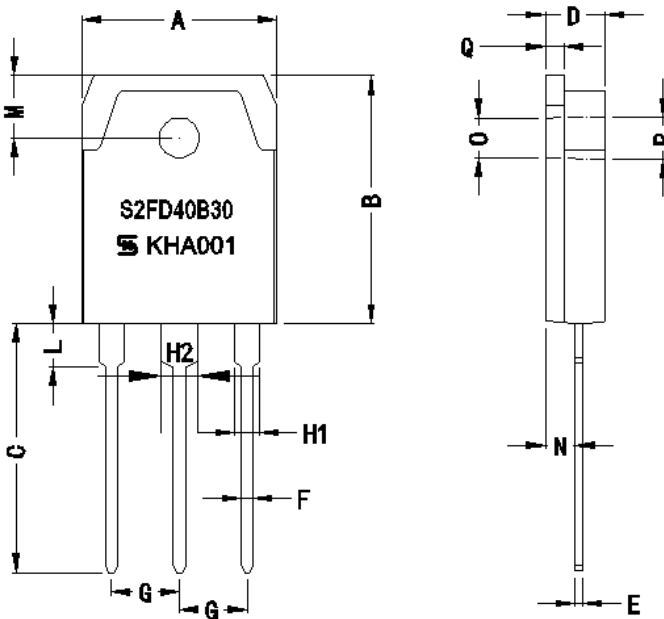


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■ 标记图 Marking Diagram



■ 尺寸图 Dimension Drawing



Dim.	Unit(mm)		Unit(inch)	
	min	max	min	max
A	15.1	16.1	0.594	0.634
B	19.4	20.4	0.764	0.803
C	19	20	0.748	0.787
D	4.3	5.3	0.169	0.209
E	0.4	0.8	0.016	0.031
F	0.8	1.2	0.031	0.047
G	5.25	5.65	0.207	0.222
H1	1.8	2.2	0.071	0.087
H2	2.8	3.2	0.110	0.126
L	2.7	3.1	0.106	0.122
M	4.7	5.3	0.185	0.209
N	2.2	2.6	0.087	0.102
O	3	3.3	0.118	0.130
P	3.3	3.6	0.130	0.142

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