

16A/200V 快恢复二极管 16A/200V Fast Recovery Diodes

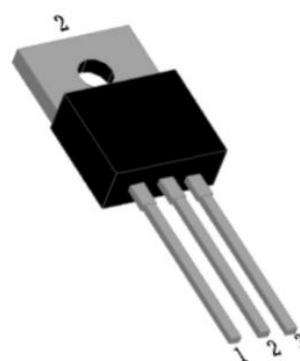
■特征 Features

- 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

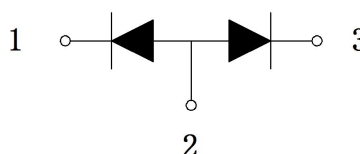
- 续流二极管
Free Wheeling Diode
- 电机控制器
Motor Controllers
- 开关式电源
Switching mode power supply
- 转换器
Converters
- 逆变器
Inverters
- 缓冲二极管
Snubber Diode
- 功率因数校正
PFC:Power Factor Correction

关键参数 KEY PARAMETERS		
参数 PARAMETER	数值 VALUE	单位 UNIT
$I_{F(AV)}$	16	A
V_F	1.1	V
V_{RRM}	200	V
TRR	20	ns
Package	TO-220	



■机械参数 Mechanical Data

- 安装扭矩: 8.0kgf.cm
Mounting torque: 8.0kgf.cm max
- 重量: 约 2.1 克
Weight : About 2.1 grams



- 1 - 负极 Cathode
- 2 - 正极 Anode
- 3 - 负极 Cathode

■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	$I_{F(AV)}$	16(8*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	100	A
热容量值, 1ms<t<10ms, Tj=25°C, 单个二极管 Rating for fusing, 1ms<t<10ms, Tj=25°C, Rating of per diode	I^2t	50	A ² s
结温 Junction temperature	Tj	-55 ~ +150	°C

存储温度 Storage Temperature Range	TSTG	-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=8A, Tj=25°C	1.1	1.2	V
		IF=8A, Tj=150°C	1.0	1.1	V
VR=VRRM, 脉冲测试, 单个二极管的额定值 VR=VRRM, Pulse measurement Rating of per diode	IRM	VR = 200V, Tj=25°C		2.0	μA
		VR = 200V, Tj=150°C		100.0	
反向恢复时间 Reverse Recovery Time	TRR	IF=0.5A IRM=1A IRR=0.25A TC=25°C	20	25	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
结到壳体的热阻, 带散热器 Junction-to-case thermal resistance with heat sink	R _{θJC}	1.4	/	°C/W
结到环境的热阻 Junction-to-ambient thermal resistance	R _{θJA}	30	/	°C/W

■特性曲线 Characteristic Curve

FIG.1 . Derating Curve For Output Rectified Current

图 1. 电流降额曲线

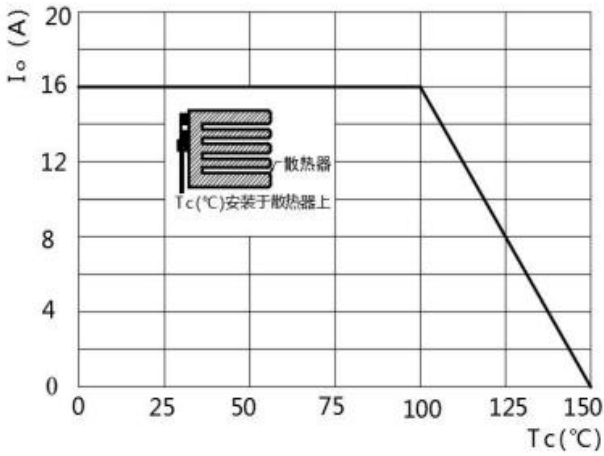


FIG.2 . Maximum Non-Repetitive Peak Forward Surge Current Per Bridge Element

图 2. 最大正向不重复峰值浪涌电流

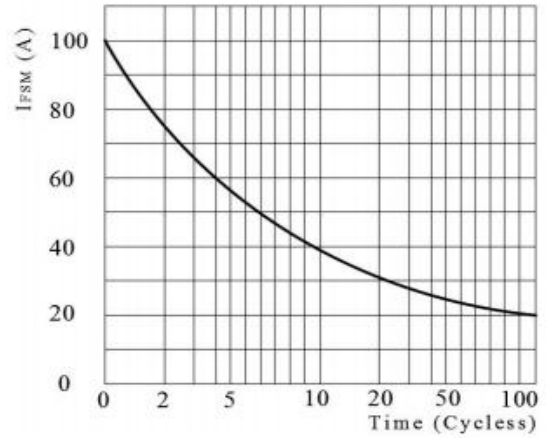


FIG3.Typical Reverse Characteristics Per Bridge Element

图 3. 典型反向特性

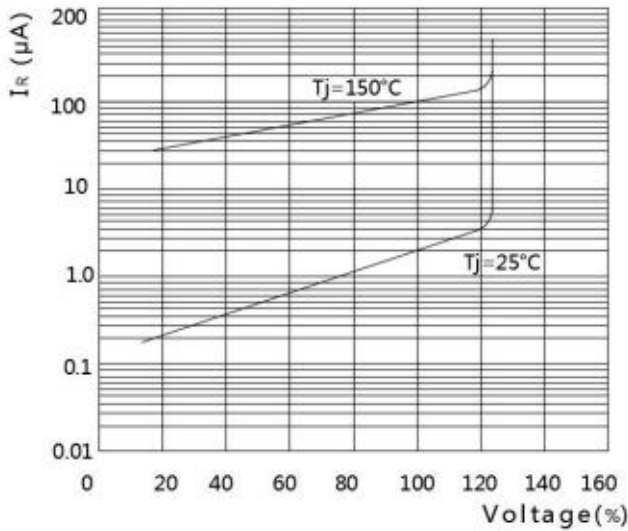
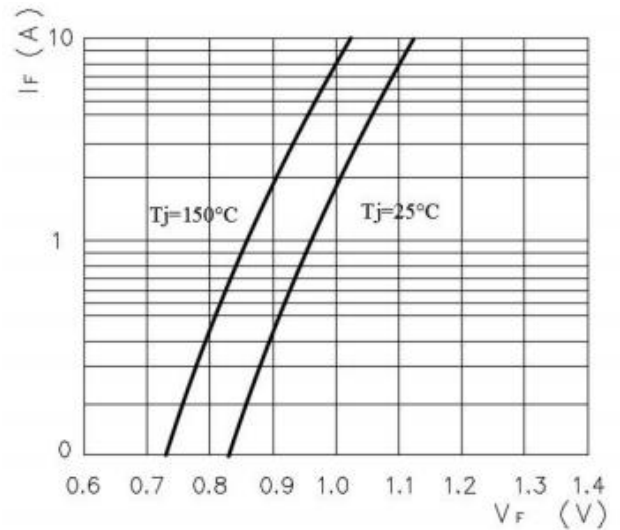
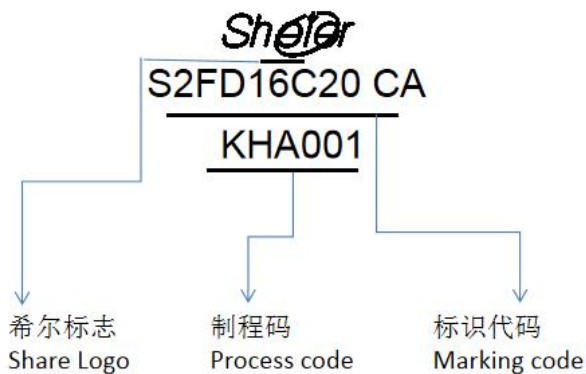


FIG4.Typical Forward Characteristics Per Bridge Element

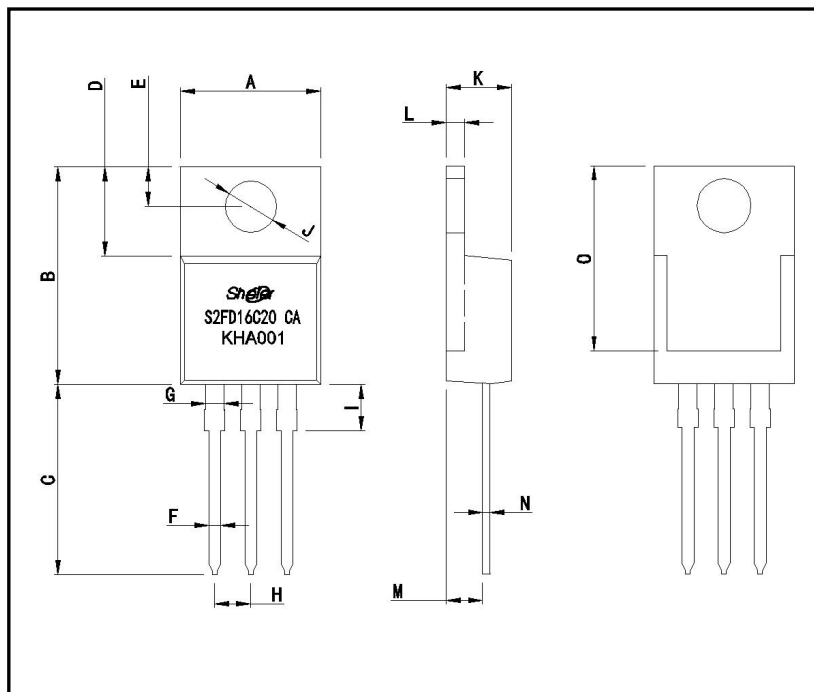
图 4. 典型正向特性



■标记图 Marking Diagram



■尺寸图 Dimension Drawing



Dim.	Millimeter		Inches	
	min	max	min	max
A	9.7	10.1	0.381	0.397
B	15.1	15.3	0.594	0.602
C	13.2	13.6	0.519	0.535
D	6.10	6.50	0.240	0.255
E	2.60	3.00	0.102	0.118
F	0.80	0.90	0.031	0.035
G	1.25	1.35	0.049	0.053
H	2.44	2.64	0.196	0.203
I	3.05	3.45	0.120	0.135
J	3.50	3.70	0.137	0.145
K	4.40	4.80	0.173	0.188
L	1.25	1.35	0.049	0.053
M	2.50	2.60	0.098	0.102
N	0.45	0.55	0.017	0.0215
O	12.8	13.2	0.503	0.519

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