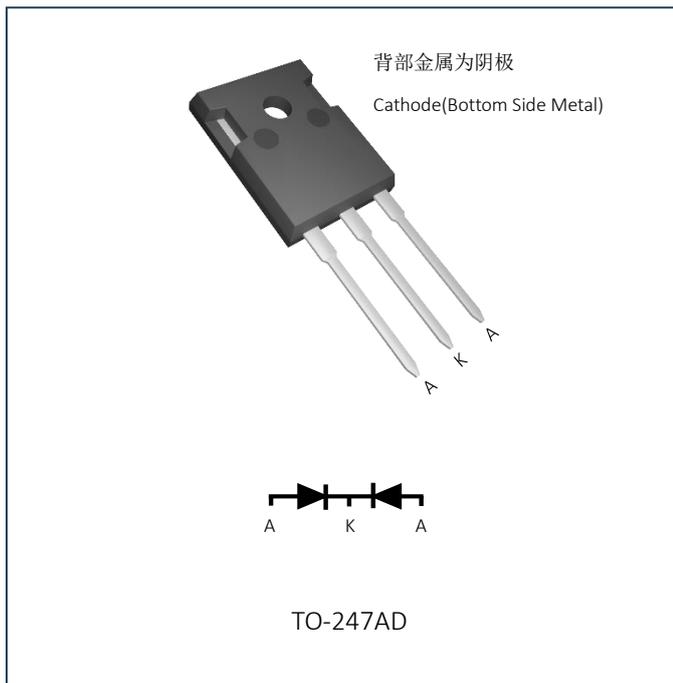


超快软恢复整流

## ULTRA SOFT RECOVERY RECTIFIER

### 封装外形 Package



### 主要参数 Device summary

Symbol	Value
$I_F(AV)$	40A
$V_{RRM}$	600V
$V_F(\text{typ})$	1.20V@20A 125°C
$I_R(\text{typ})$	12 $\mu$ A@ $V_{RRM}$ 125°C
$T_{j(\text{max})}$	175°C

### 产品特点 Features

- 外延芯片 FRED chip
- 低正向压降 Low Forward Voltage
- 软恢复特性 Soft Recovery Features
- 符合 RoHS 指令 2011/65/EU  
Compliant to RoHS directive 2011/65/EU
- 焊料浸渍温度最高为 275°C，持续 7 秒  
Solder dip 275 °C max. 7 s

### 产品应用 Typical Applications

开关电源，变换器，逆变器，续流二极管和电池反向保护等。

Typical applications are in switching power supplies, converters, inverters, freewheeling diodes and reverse battery protection.

### 机械数据 Mechanical Data

- 模塑料符合 UL94 V-0 易燃等级，符合 RoHS 标准  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- 端子：镀锡引线，可焊接 J-STD-002 和 JESD22-B102  
Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- 极性：本体标记  
Polarity: As marked on body
- 重量：约 6.0 克/5.8 克（短脚）  
Weight: Approximate 6.0g/5.8g(short pin)

### 最大额定值 Maximum ratings(Ta=25°C)

项目 Parameter	符号 Symbol	数值 Value	单位 Unit
反向重复峰值电压 Peak repetitive reverse voltage	VRRM	600	V
正向电流 Forward current	IF	40 20×2	A
浪涌电流 Non-repetitive single pulse surge current t=8.3ms	IFSM	250	A
结温 Junction temperature	Tj	-55~+175	°C
存储温度 Storage temperature	TSTG	-55~+175	°C

### 电特性 Electrical characteristics(Ta=25°C)

项目 Parameter	测试条件 Tests conditions		数值 Value			单位 Unit
			最小值 (min)	典型值 (typ)	最大值 (max)	
VRRM 反向电压	IR=0.05mA		600	-	-	V
IR 反向漏电	Tj=25°C	VR=VRRM	-	-	5	μA
	Tj=125°C		-	-	250	
VF 正向电压	Tj=25°C	IF=20A	-	-	1.60	V
		IF=8A	-	1.02	-	
	Tj=125°C	IF=10A	-	1.07	-	
		IF=8A	-	0.98	-	
Tj=125°C	IF=10A	-	1.03	-		
Trr 反向恢复时间	Tj=25°C	IF=0.5A IRM=1A IRR=0.25A	-	-	35	ns

### 热特性 Thermal characteristics(Ta=25°C)

Parameter	Symbol	Value	Unit
结到外壳热阻 Thermal resistance from junction to case	Rth(j-c)	1.2	°C/W

典型特征图 Typical Characteristics

图 1: 正向电流与外壳温度

FIG 1:IF-Tc

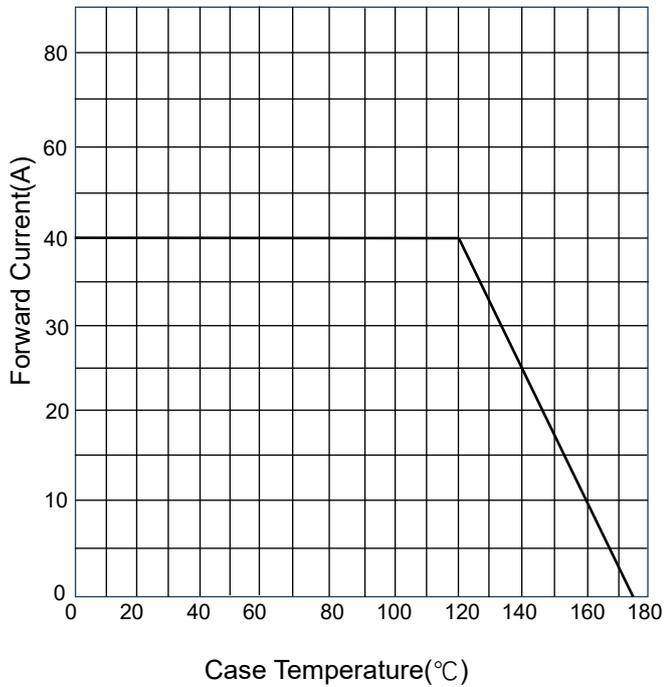


图 2: 正向浪涌循环次数

FIG 2:Surge Forward Current Capability

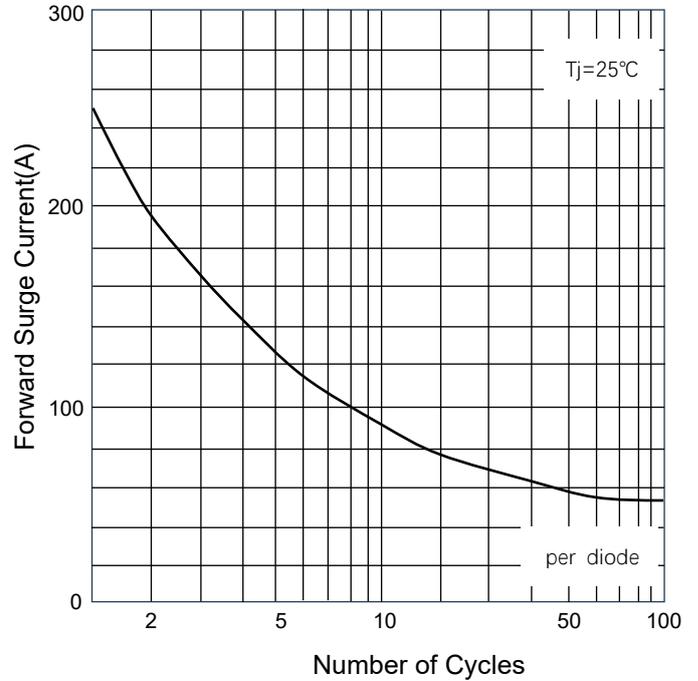


图 3: 反向电压与反向电流

FIG 3:VR-IR

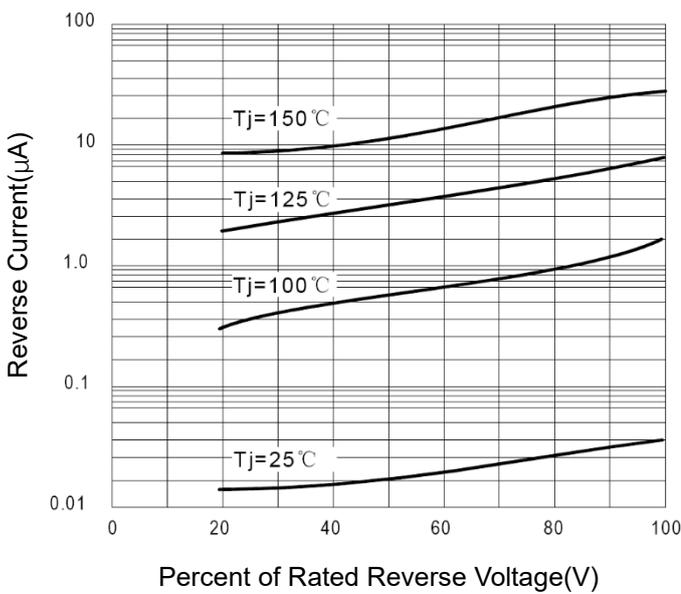
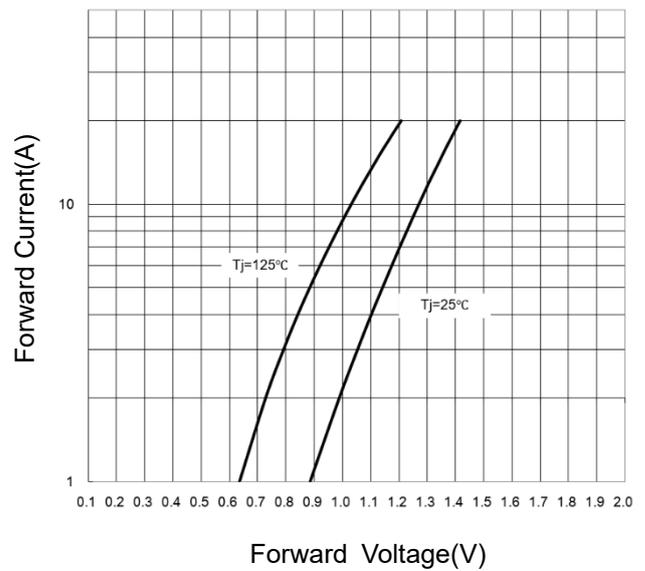
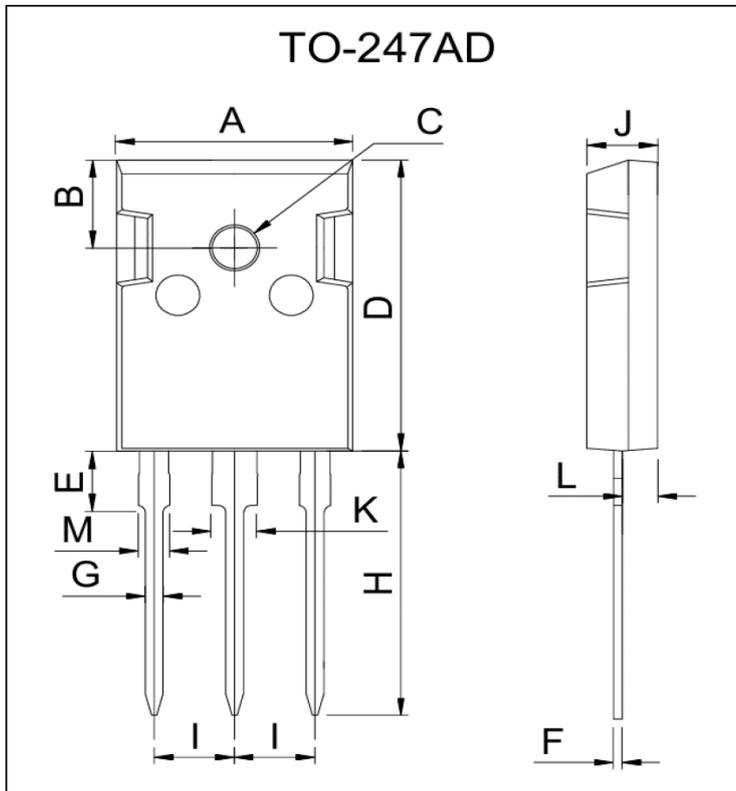


图 4: 正向电流与正向电压

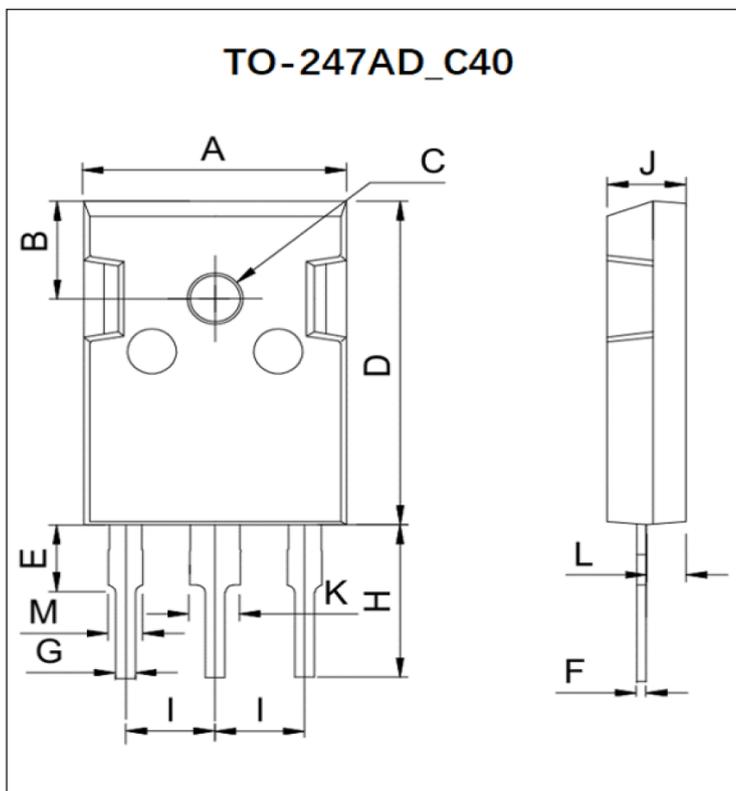
FIG 4:IF-VF



外形尺寸 Outline Dimensions



TO-247AD <sub>(mm)</sub>			
Dim	Min	Typ	Max
A	15.80	16.00	16.20
B	6.30	6.50	6.70
C	3.05	3.20	3.35
D	21.20	21.50	21.80
E	3.80	4.00	4.20
F	0.50	0.60	0.70
G	1.00	1.20	1.40
H	19.20	19.50	19.70
I	5.35	5.45	5.60
J	4.60	4.80	5.00
K	2.90	3.10	3.30
L	2.20	2.40	2.60



TO-247AD_C40 <sub>(mm)</sub>			
Dim	Min	Typ	Max
A	15.80	16.00	16.20
B	6.30	6.50	6.70
C	3.05	3.20	3.35
D	21.20	21.50	21.80
E	3.80	4.00	4.20
F	0.50	0.60	0.70
G	1.00	1.20	1.40
H	7.80	8.00	8.20
I	5.35	5.45	5.60
J	4.60	4.80	5.00
K	2.90	3.10	3.30
L	2.20	2.40	2.60

## 订购信息 Ordering Information

订单型号 Order code	印记 Marking	包装形式 Delivery Mode	基本包装 Min PKG (pcs)	盒 Box pcs	箱 Carton pcs	重量 Weight Kg
DSEK40S06PG	DSEK40S06P	管装 Tube	30	600	2400	19.1
DSEK40S06PH						18.6
DSEK40S06PGC40						
DSEK40S06PHC40						

注 note:

1. “C40”为短脚，详见外形尺寸。“C40” is short pin, the size is shown in the Outline Dimensions.
2. “G”为无铅版本，“H”为无卤版本。“G” is Lead-free version, “H” is Halogen-free version.

### 请仔细阅读

感谢您使用或即将使用本公司的产品。建议您在使用前仔细阅读本资料。

- 本公司竭力为用户提供更优质的产品及服务。
- 江苏信达兴微电子有限公司会不定期的优化产品及相应规格书，也许无法及时通知到您，请定期下载最新的版本。
- 江苏信达兴微电子有限公司对任何将其产品用于特殊目的的行为不承担任何责任与风险。
- 江苏信达兴微电子有限公司对自身的产品拥有专利权。
- 任何半导体产品在特定条件下都有一定的失效或发生故障的可能。买方在使用江苏信达兴微电子有限公司产品进行系统设计和整机制造时请遵守安全标准并采取安全措施，以避免可能造成人身伤害或财产损失的情况！

### Please Read Carefully

Thank you for choosing our company's products. We suggest that you carefully read this material before use.

- Our company strives to provide users with higher quality products and services.
- Jiangsu POWERSi Microelectronics Co., Ltd. will periodically optimize its products and corresponding specifications, and may not be able to notify you in a timely manner. Please download the latest version regularly.
- Jiangsu POWERSi Microelectronics Co., Ltd. assumes no responsibility or risk for any use of its products for special purposes.
- Jiangsu POWERSi Microelectronics Co., Ltd. holds patent rights for its own products.
- Any semiconductor product has a certain possibility of failure or malfunction under specific conditions. The user is requested to comply with safety standards and take safety measures when using products from Jiangsu POWERSi Microelectronics Co., Ltd. for system design and complete machine manufacturing, in order to avoid situations that may cause personal injury or property damage!