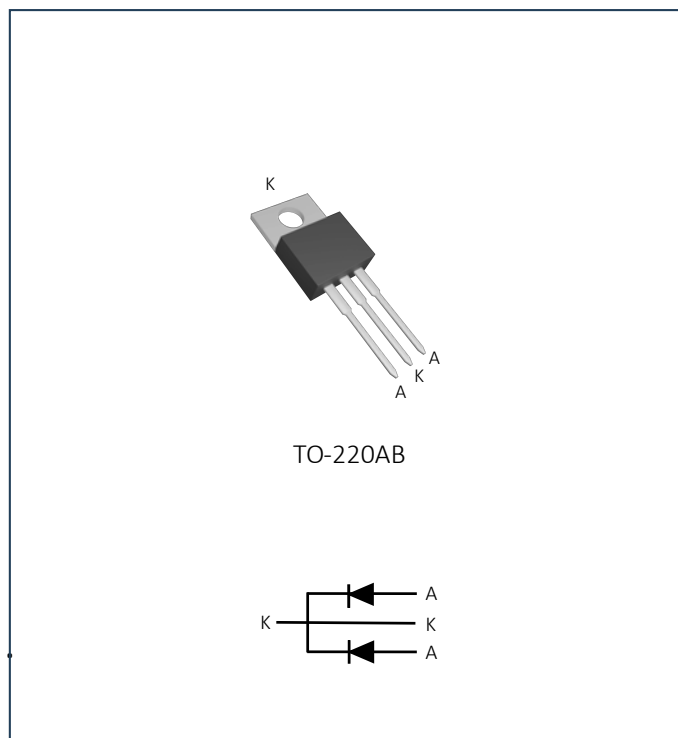


ER4004CT

超快恢复二极管整流器

Ultra Fast Recovery Rectifier

封装外形 Package



主要参数 Device summary

Symbol	Value
$I_F(AV)$	40A
V_{RRM}	400V
$V_F(typ)$	1.02V@20A 125°C
$I_R(typ)$	0.05mA@400V 125°C
$T_j(max)$	150°C

机械数据 Mechanical Data

- 模塑料符合 UL 94 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

产品特点 Features

- 超快恢复时间 Ultra-fast recovery time
- 低正向压降 Low forward voltage
- 高结温 High Junction temperature
- 低漏电 Low leakage current
- 高可靠性 High reliability
- 环保产品 RoHS product

最大额定值 Maximum ratings

项目 Parameter	符合 Symbol	数值 Value	单位 Unit
反向重复峰值电压 Peak repetitive reverse voltage	V _{RRM}	400	V
平均正向电流 Average forward current	I _{F(AV)}	40	A
		20	
浪涌电流 Non-repetitive single pulse surge current t=8.3ms	I _{FSM}	250	A
结温 Junction temperature	T _j	-55~+150	°C
存储温度 Storage temperature	T _{STG}	-55~+150	°C

电特性 Electrical characteristics(T_c=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)	
V _{RRM}	I _R =0.05mA		400	-	-	V
I _R 反向漏电流	T _j =25°C	V _R =V _{RRM}	-	-	0.05	mA
	T _j =125°C		-	-	0.5	
V _F 正向电压	T _j =25°C	I _F =20A	-	-	1.35	V
	T _j =125°C	I _F =1A	-	0.58	-	
		I _F =10A	-	0.88	-	
		I _F =20A	-	1.02	-	
T _{rr} 反向恢复时间	T _j =25°C	Reverse recovery condition I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	-	-	35	nS

热特性 Thermal characteristics(T_c=25°C)

Parameter	Symbol	Value	Unit
热阻 Thermal resistance from junction to case	R _{th(j-c)}	2.5	°C/W

典型特征曲线图 Typical Characteristic Curve

图 1: 正向电流与外壳温度

FIG 1: $I_F - T_C$

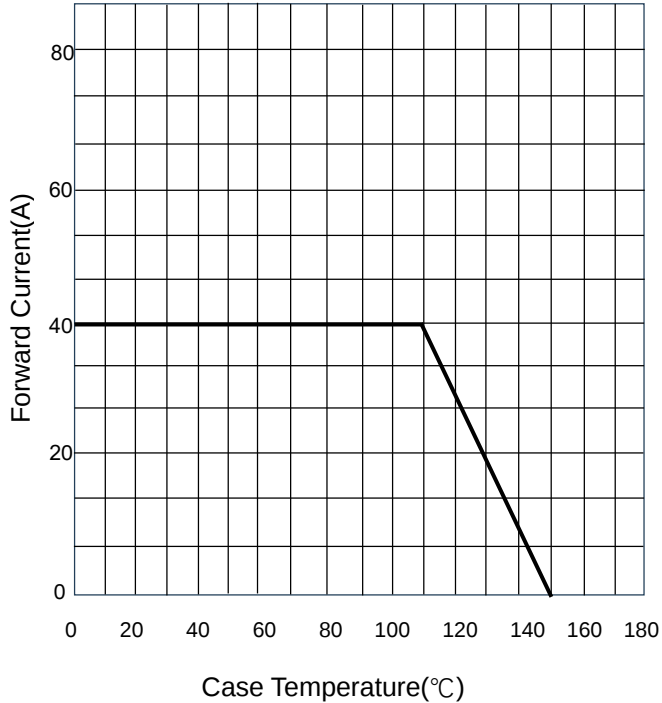


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

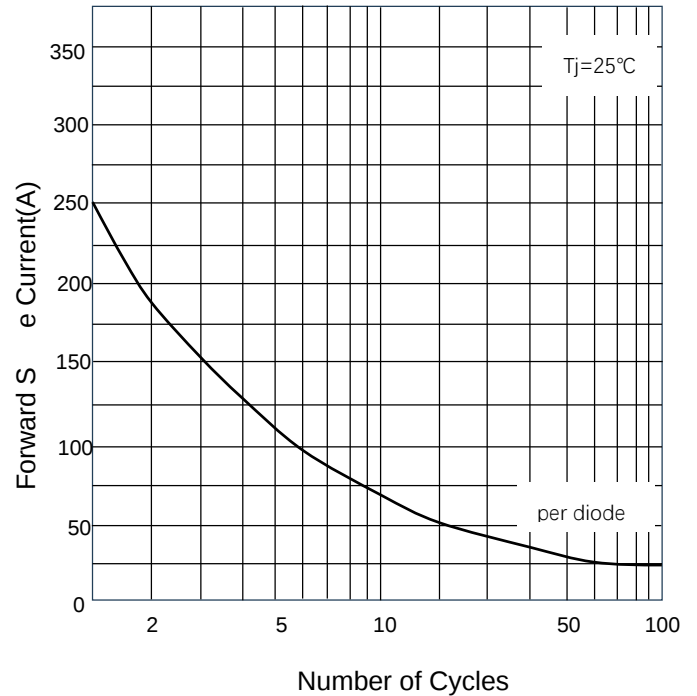


图 3: 反向电压与反向电流

FIG 3: $V_R - I_R$

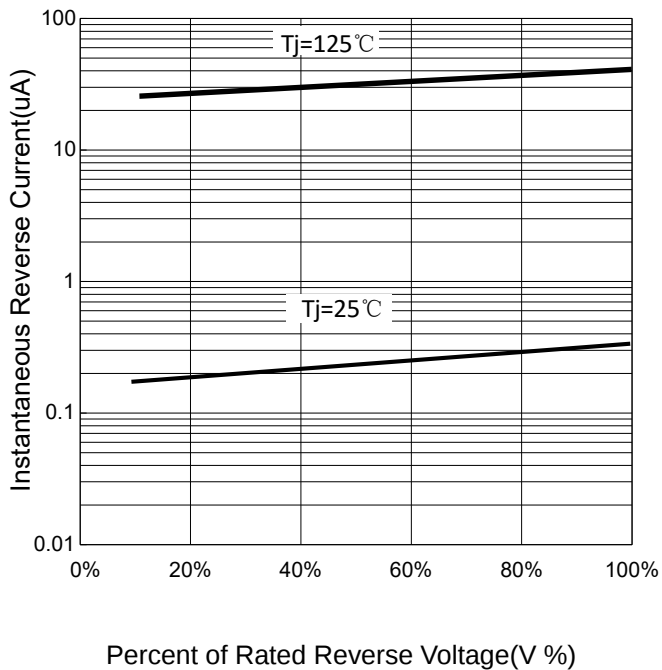
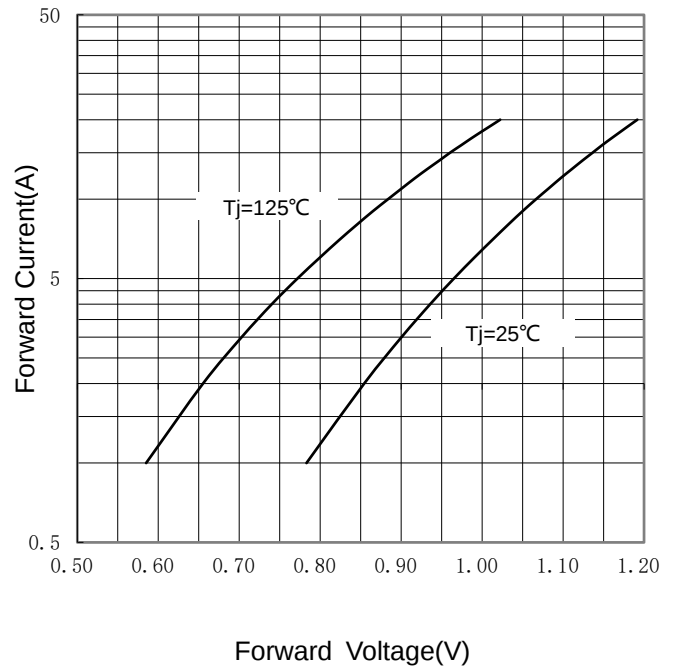
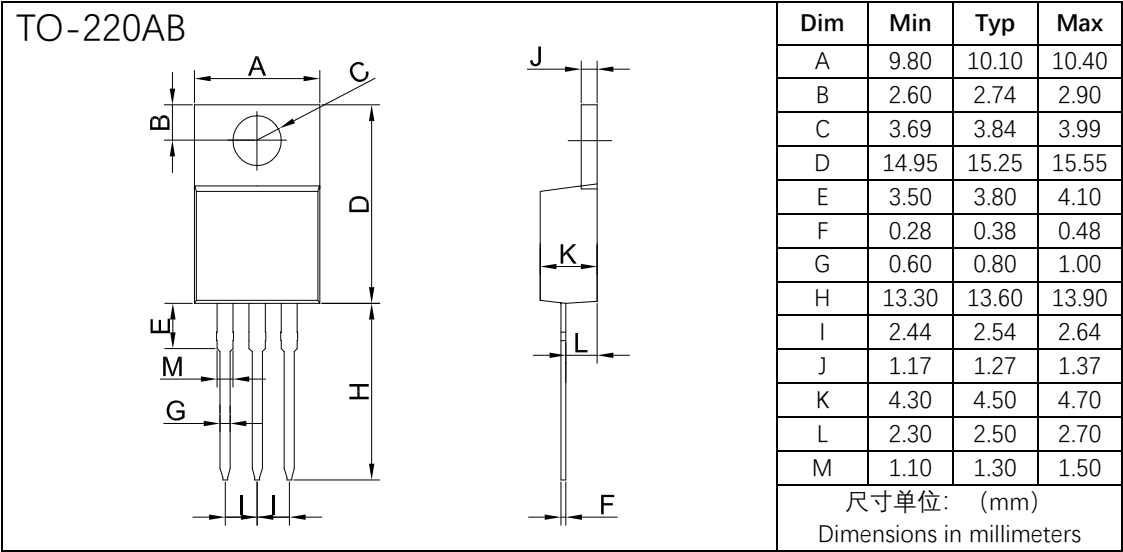


图 4: 正向电流与正向电压

FIG 4: $I_F - V_F$



外形尺寸图及焊盘布局参考 Outline Dimensions and Pad Layout Reference



订购信息 Ordering Information

订单型号 Order code	印记 Marking	封装 Package	重量 Weight (g)	包装形式 Packing	基本包装 Base qty (pcs)	盒 Box (pcs)	箱 Carton (pcs)
CER4004CT000P	ER4004CT	TO-220AB	1.9	管装 Tube	50	1000	5000

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