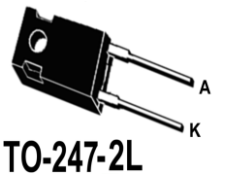
SC40M120BS

主要参数 MAIN CHARACTERISTICS

V_{RRM}	1200V
I_F, T_C≤150℃	40A
Q_C Typ	190nC

封装 Package



TO-247-2L

用途 APPLICATIONS

- ●光伏逆变器 ●Solar Inverters
- ●开关模式电源 ●Switch Mode Power Supplies
- ●高压 DC/DC 转换器 ●High Voltage DC/DC Converters
- ●电池充电器 ●Battery Chargers
- ●电动驱动 ●Motor Drives
- ●不间断电源 ●Uninterruptable power supplies

产品特性 FEATURES

- ●高阻断电压 ●High Blocking Voltage
- ●零反向恢复电流 ●Zero Reverse Recovery Current
- ●零正向恢复电压 ●Zero Forward Recovery Voltage
- ●高频率应用 ●High-Frequency Operation
- ●不受温度影响的开关特性 ●Temperature-Independent Switching Behavior
- ●快速开关 ●Extremely Fast Switching
- ●正温度系数 ●Positive Temperature Coefficient on V_F
- ●RoHS 产品 ●RoHS product

订货信息 ORDER MESSAGE

订 货 型 号 Order codes	印 记 Marking	封 装 Package
无卤-条管 Halogen-Free-Tube		
SC40M120BS-GL-BR	SC40M120BS	TO-247-2L

绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)

项 目 Parameter	符 号 Symbol	数 值 Value	单位 Unit	测试条件 Test Conditions
反向重复峰值电压 Repetitive Peak Reverse Voltage	V_{RRM}	1200	V	
反向浪涌峰值电压 Surge Peak Reverse Voltage	V_{RSM}	1200	V	
反向直流电压 DC Blocking Voltage	V_{DC}	1200	V	
正向平均电流 Continuous Forward Current	I_F	106 50 40	A	Tc=25℃ Tc=135℃ Tc=148℃
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I_{FRM}	225	A	T_C=25°C, t_P=10ms, Half Sine Wave
正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	I_{FSM}	420 350	A	T_C=25°C, t_P=10ms, Half Sine Wave T_C=150°C, t_P=10ms, Half Sine Wave
I^2t 值 I^2t for fusing	$\int i^2 dt$	882	A^2s	T_C=25°C, t_P=10ms, Half Sine Wave
耗散功率 Power Dissipation	P_{tot}	437	W	T_C=25°C
最高结温及存储温度 Operating and Storage Temperature Range	T_J, T_{STG}	-55～ +175	℃	
引线最高焊接温度 Maximum Lead Temperature for Soldering Purposes	T_L	260	℃	

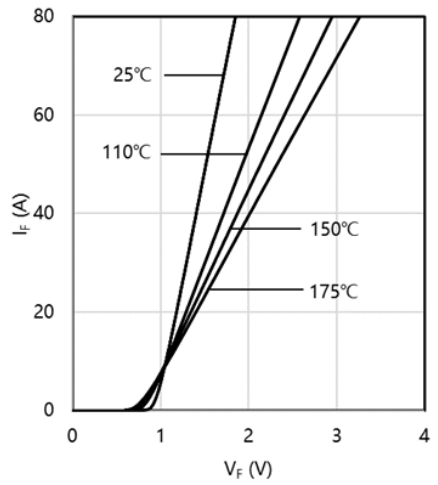
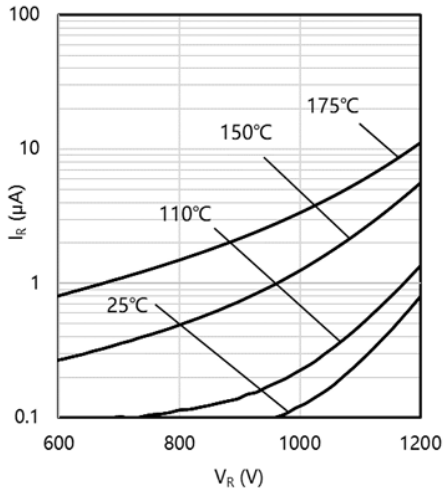
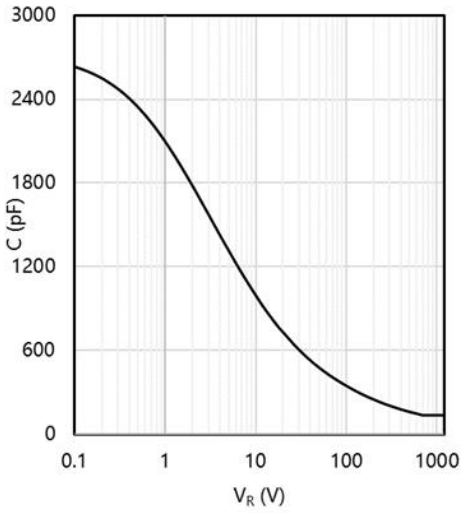
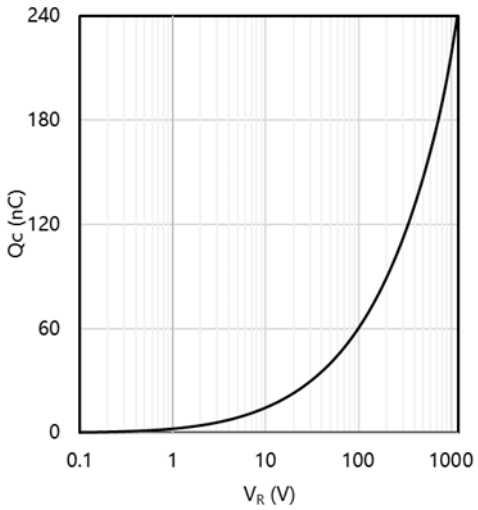
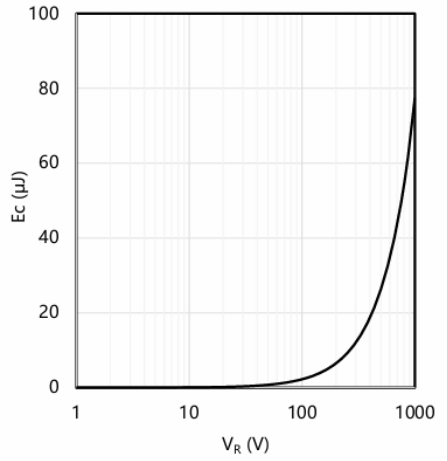
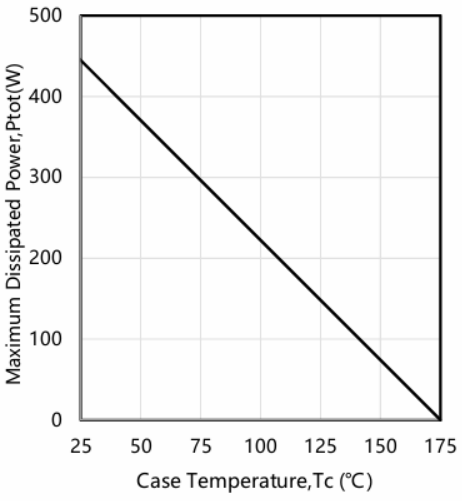
电特性 ELECTRICAL CHARACTERISTICS

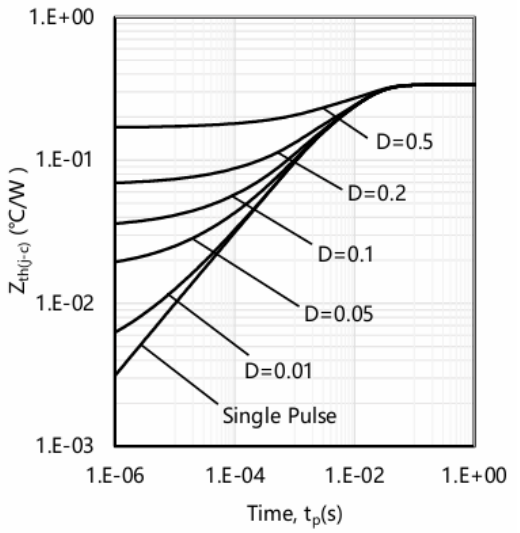
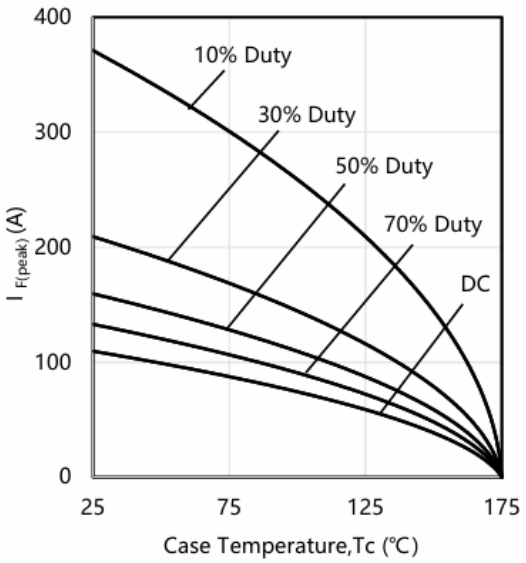
项　　目 Parameter	符　号 Symbol	测试条件 Tests conditions	最小 Min	典型 Typ	最大 Max	单位 Units
正向电压 Forward Voltage	V_F	I_F=40A T_J=25 °C I_F=40A T_J=175 °C	-	1.40 1.98	1.6 2.5	V
反向电流 Reverse Current	I_R	V_R=1200V T_J=25 °C V_R=1200V T_J=175 °C	-	5 15	50 200	μA
总储存电荷 Total Capacitive Charge	Q_C	V_R=800V, T_J = 25 °C $Q_C=\int_0^{V_R} C(V)dV$	-	190	-	nC
总电容 Total Capacitance	C	V_R =0V, T_J=25°C, f= 1MHz V_R =400V, T_J=25°C, f= 1MHz V_R =800V, T_J=25°C, f= 1MHz	-	2084 178 131	-	pF
电容储存能量 Capacitance Stored Energy	E_C	V_R =800V	-	54	-	μJ
单脉冲雪崩能量 Single Pulsed Avalanche Energy	E_{AS}	T_C = 25℃, V_D=50V, L=0.5mH, I_{AS}=42.5A	-	456	-	mJ

热特性 THERMAL CHARACTERISTICS

项　　目 Parameter	符　号 Symbol	典型值 Typ	单 位 Unit
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	0.343	℃/W

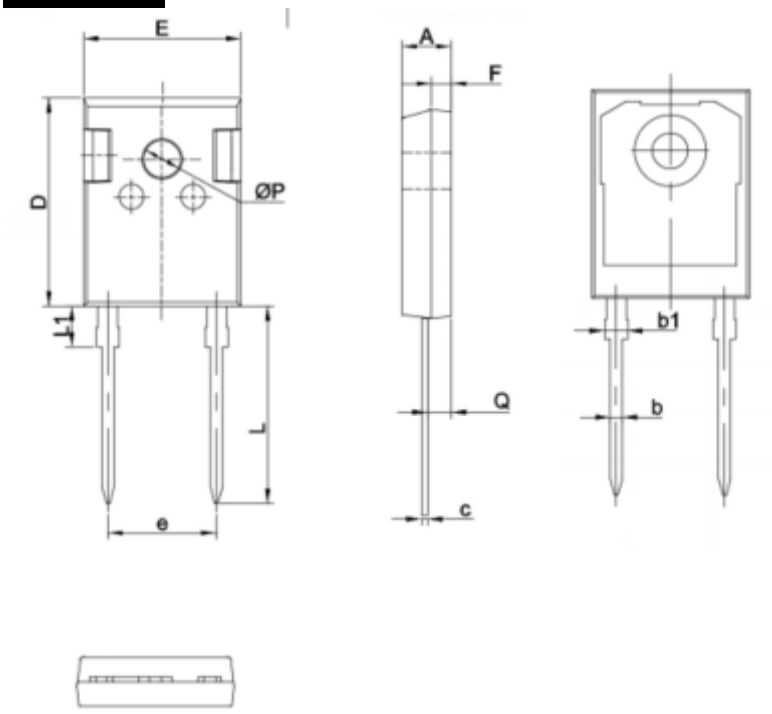
典型性能 Typical Performance

Forward Characteristics	Reverse Characteristics
	
Capacitance vs. Reverse Voltage	**Capacitance Charge vs. Reverse Voltage**
	
Capacitance Stored Energy	**Power Derating (TO-247-2L)**
	

Transient Thermal Impendance （TO-247-2L）	Diode forward current as function of temperature
	

外形尺寸 PACKAGE MECHANICAL DATA

TO-247-2L



单位 Unit：mm

SYMBOL	MM	
	MIN	MAX
A	4.80	5.20
b	1.10	1.30
b1	1.95	2.25
c	0.50	0.70
D	20.80	21.20
E	15.60	16.00
F	1.85	2.15
e	10.73	11.03
L	19.62	20.22
L1	3.93	4.33
ΦP	3.40	3.80
Q	2.26	2.56
Q1	6.00	6.40

注意事项

1. 吉林华微电子股份有限公司的产品销售分为直销和销售代理，无论哪种方式，订货时请与公司核实。
2. 购买时请认清公司商标，如有疑问请与公司本部联系。
3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知。

NOTE

1. Jilin Sino-microelectronics co., Ltd sales its product either through direct sales or sales agent , thus, for customers, when ordering , please check with our company.
2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don’t be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this. specification sheet and is subject to change without prior notice.

联系方式

吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：www.hwdz.com.cn

CONTACT

JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel： 86-432-64678411

Fax：86-432-64665812

Web Site：www.hwdz.com.cn