

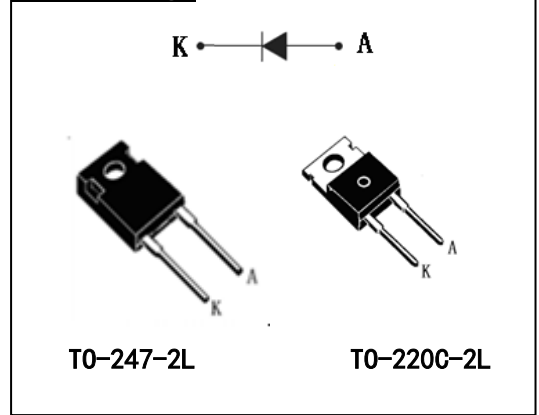


SC20J065A

主要参数 MAIN CHARACTERISTICS

V_{RRM}	650V
$I_F, T_C \leq 150^\circ\text{C}$	20A
$Q_C \text{ Typ}$	65nC

封装 Package



用途

- 光伏逆变器
- 开关模式电源
- 高压 DC/DC 转换器
- 电池充电器
- 电动驱动
- 不间断电源

APPLICATIONS

- Solar Inverters
- Switch Mode Power Supplies
- High Voltage DC/DC Converters
- Battery Chargers
- Motor Drives
- Uninterruptable power supplies

产品特性

- 高阻断电压
- 零反向恢复电流
- 零正向恢复电压
- 高频率应用
- 不受温度影响的开关特性
- 快速开关
- 正温度系数
- RoHS 产品

FEATURES

- High Blocking Voltage
- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on V_F
- 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		
SC20J065A-CL-BR	SC20J065A	TO-220C-2L
SC20J065A-GL-BR	SC20J065A	TO-247-2L



绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)

项 目 Parameter	符 号 Symbol	数 值 Value		单 位 Unit
		TO-220C-2L	TO-247-2L	
反向重复峰值电压 Repetitive Peak Reverse Voltage	V _{RRM}	650		V
反向浪涌峰值电压 Surge Peak Reverse Voltage	V _{RSM}	650		V
反向直流电压 DC Blocking Voltage	V _{DC}	650		V
正向平均电流 Continuous Forward Current	I _F Tc=150°C	20		A
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I _{FRM}	140		A
正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	I _{FSM}	160		A
非重复正向峰值电流 Non-Repetitive Peak Forward Current	I _{F,Max}	1360		A
耗散功率 Power Dissipation	P _{tot} Tc=25°C Tc=110°C	283 123	300 130	W
最高结温及存储温度 Operating and Storage Temperature Range	T _J , T _{STG}	-55~+175		°C
引线最高焊接温度 Maximum Lead Temperature for Soldering Purposes	T _L	300		°C



**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	$I_F = 20A$ $T_J = 25^\circ C$ $I_F = 20A$ $T_J = 175^\circ C$	-	1.40 1.70	1.8 2.0	V
反向电流 Reverse Current	I_R	$V_R = 650V$ $T_J = 25^\circ C$ $V_R = 650V$ $T_J = 175^\circ C$		2 20	20 200	μA
总储存电荷 Total Capacitive Charge	Q_C	$V_R = 400V$, $T_J = 25^\circ C$, $I_F = 20A$ $Q_C = \int_0^{V_R} C(V)dV$		65		nC
总电容 Total Capacitance	C	$V_R = 0V$, $T_J = 25^\circ C$, $f = 1MHz$ $V_R = 200V$, $T_J = 25^\circ C$, $f = 1MHz$ $V_R = 400V$, $T_J = 25^\circ C$, $f = 1MHz$		1340 120 109		pF
电容储存能量 Capacitance Stored Energy	E_C	$V_R = 400V$		16		μJ

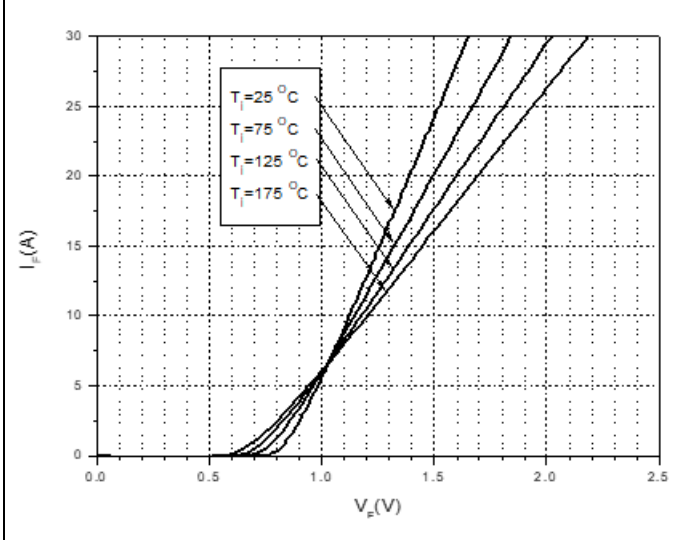
热特性 THERMAL CHARACTERISTICS

项 目 Parameter	符 号 Symbol	典型值 Typ		单 位 Unit
		TO-220C-2L	TO-247-2L	
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	0.53	0.50	$^\circ C/W$

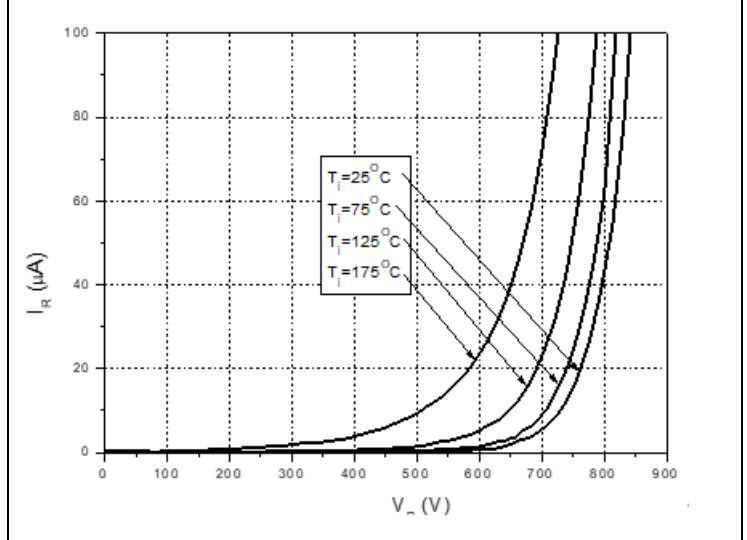




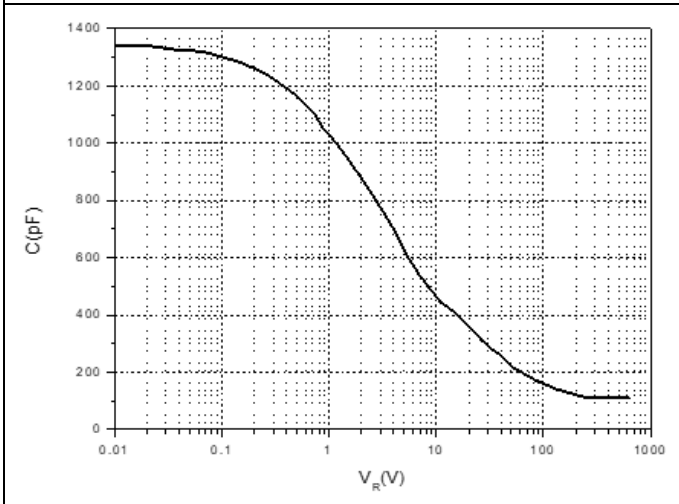
典型性能 Typical Performance



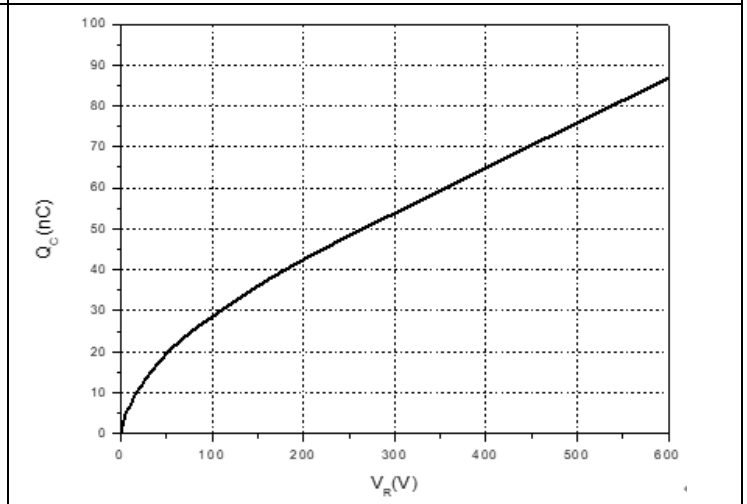
Forward Characteristics



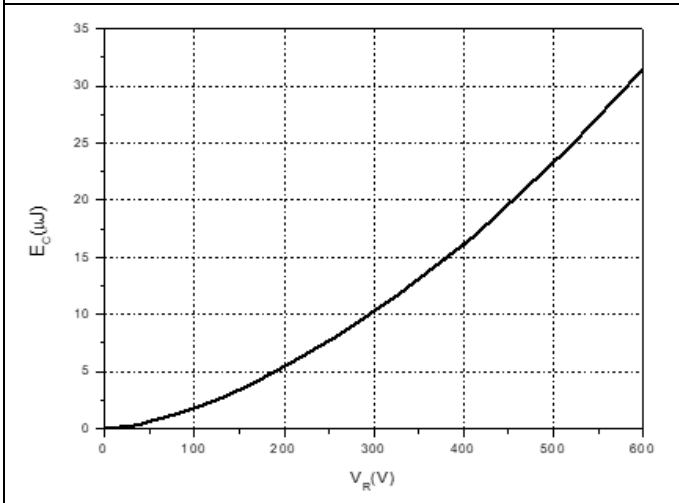
Reverse Characteristics



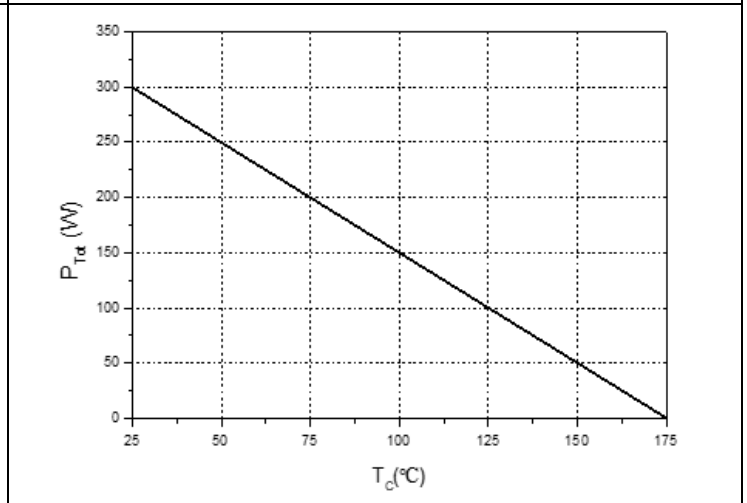
Capacitance vs. Reverse Voltage



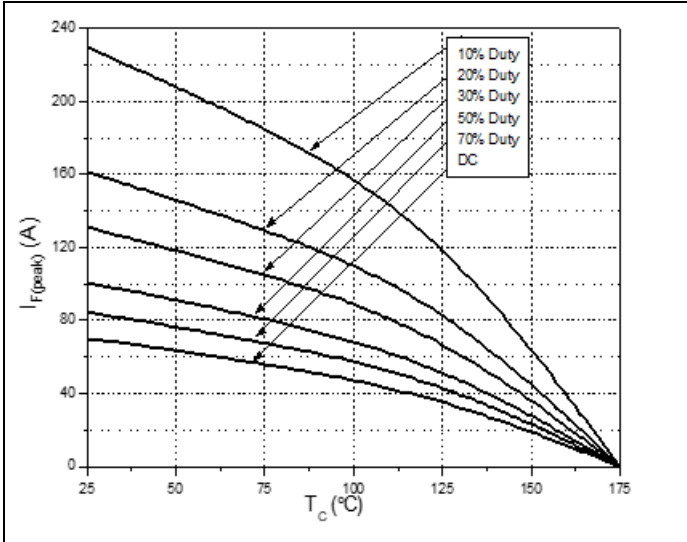
Capacitance Charge vs. Reverse Voltage



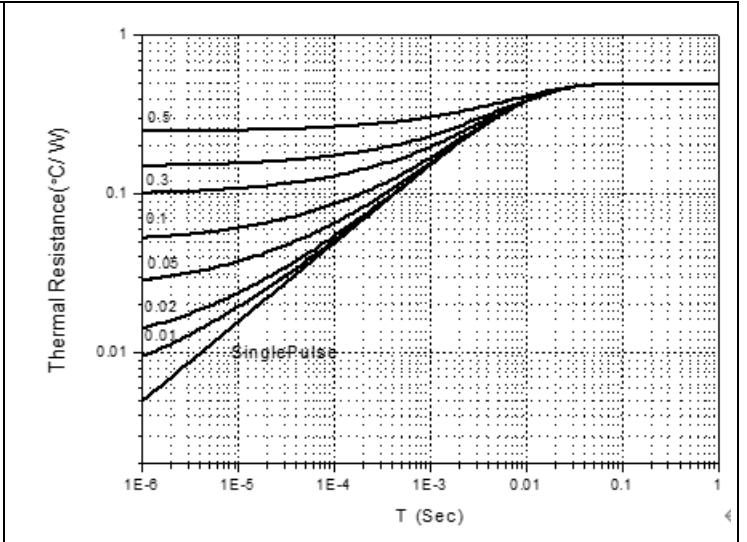
Capacitance Stored Energy



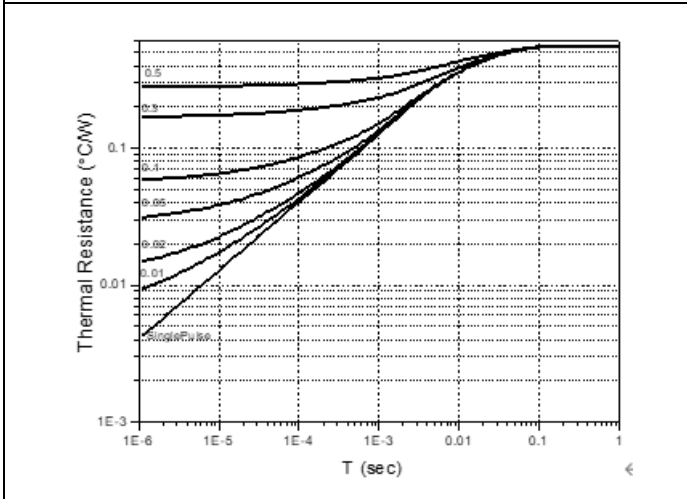
Power Derating (TO-220C-2L)



Current Derating (TO-220C-2L)



Transient Thermal Impedance (TO-247-2L)

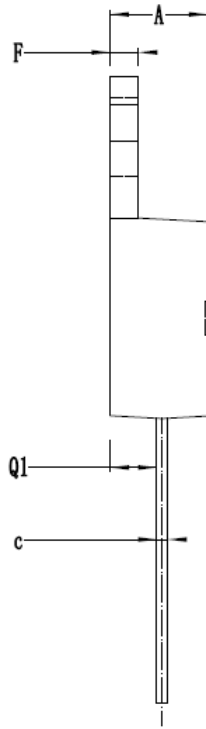
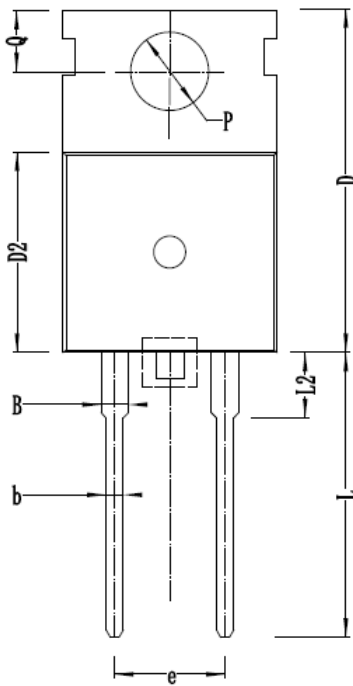


Transient Thermal Impedance (TO-220C-2L)

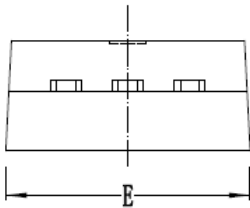


TO-220C-2L

单位 Unit: mm



符号 symbol	单位: mm	
	MIN	MAX
A	4.30	4.70
B	1.22	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	4.78	5.38
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
ΦP	3.50	3.80
Q	2.60	3.00
Q1	2.20	2.60



注:

1. 虚线区域代表, 此位置有、无余留, 均为我司受控外形;

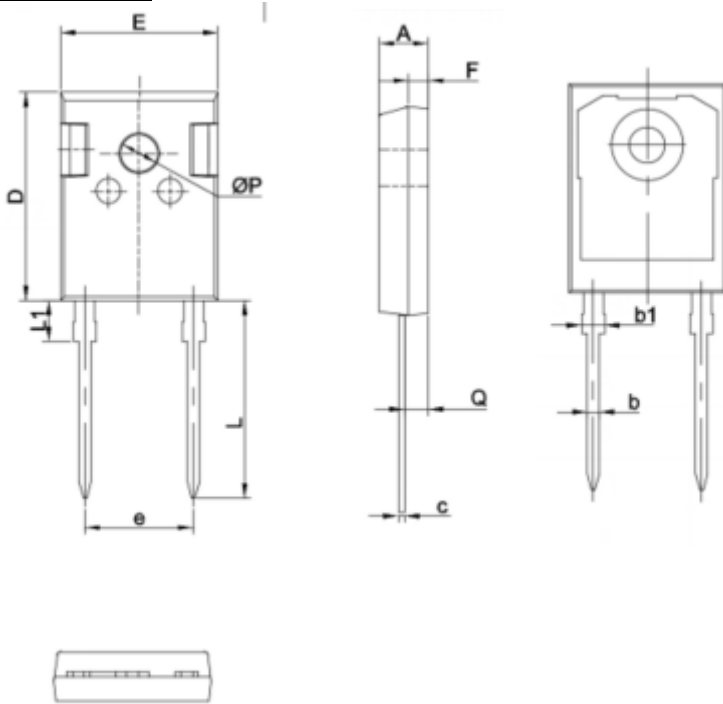




外形尺寸 PACKAGE MECHANICAL DATA

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
ØP	3.40	3.80
Q	2.26	2.56





注意事项

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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

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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.

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