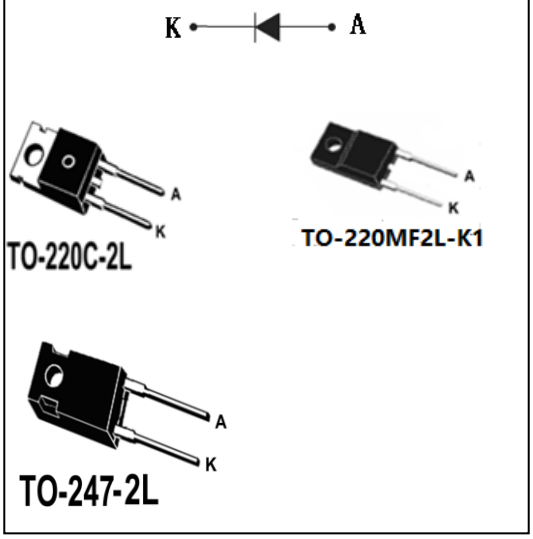
SC16J065A

主要参数 MAIN CHARACTERISTICS

V_{RRM}	650V
I_F, T_C≤150℃	16A
Q_C Typ	41nC

封装 Package



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 无卤-条管 Halogen-Free-Tube	印 记 Marking	封 装 Package
SC16J065A-CL-BR	SC16J065A	TO-220C-2L
SC16J065A-FK-BR	SC16J065A	TO-220MF2L-K1
SC16J065A-GL-BR	SC16J065A	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
		TO220C-2L	TO220MF-K1	TO247-2L	
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℃	16			A
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I_{FRM}	105			A
正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	I_{FSM}	135			A
非重复正向峰值电流 Non-Repetitive Peak Forward Current	$I_{F,Max}$	1200			A
耗散功率 Power Dissipation	P_{tot}	205	56	258	W
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	300			℃

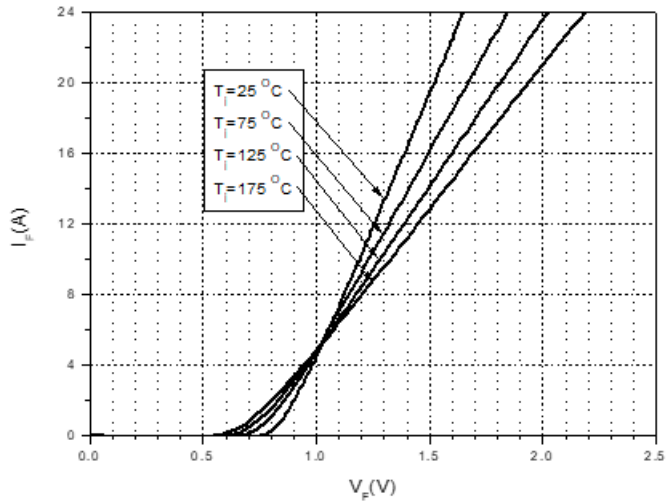
电特性 ELECTRICAL CHARACTERISTICS

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 =16A T_J=25°C I_F =16A T_J=175°C	-	1.45 1.75	1.8 2.0	V
反向电流 Reverse Current	I_R	V_R = 650V T_J=25°C V_R = 650V T_J=175°C		4 40	20 200	μA
总储存电荷 Total Capacitive Charge	Q_C	V_R = 400V, T_J = 25°C，I_F=10A $Q_C = \int_0^{V_R} C(V)dV$		41		nC
总电容 Total Capacitance	C	V_R = 0 V, T_J = 25°C, f = 1 MHz V_R = 200V, T_J = 25°C, f = 1 MHz V_R = 400V, T_J = 25°C, f = 1 MHz		860 85 60		pF
电容储存能量 Capacitance Stored Energy	E_C	V_R =400 V		8.2		μJ

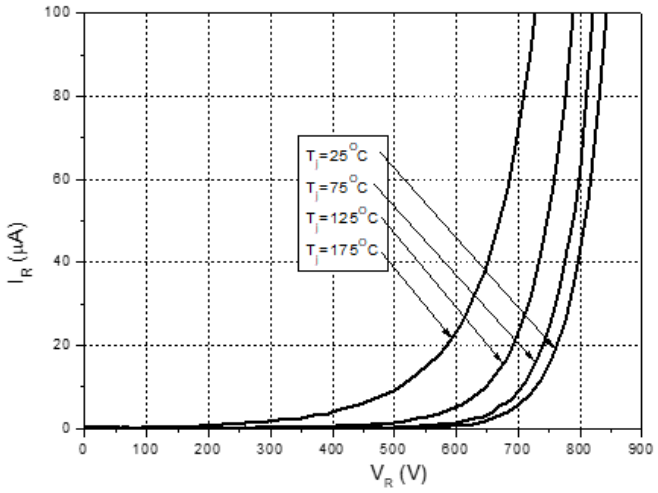
热特性 THERMAL CHARACTERISTICS

项　目 Parameter	符　号 Symbol	典型值 Typ			单 位 Unit
		TO-220C-2L	TO-247-2L	TO-220MF2L-K1	
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	0.73	0.58	2.7	℃/W

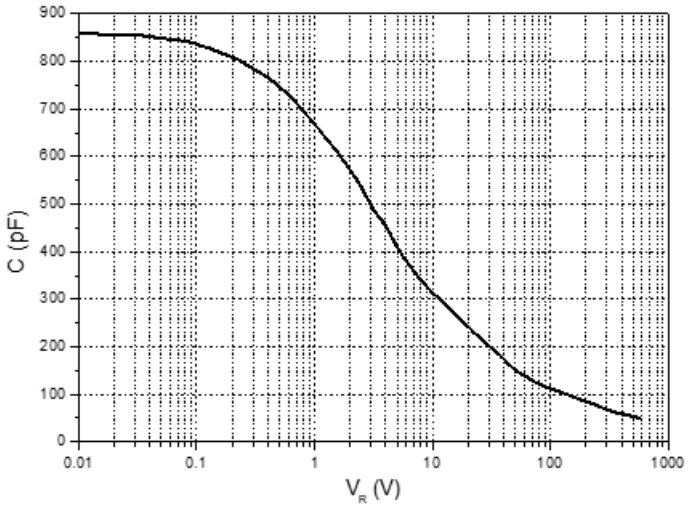
典型性能 Typical Performance



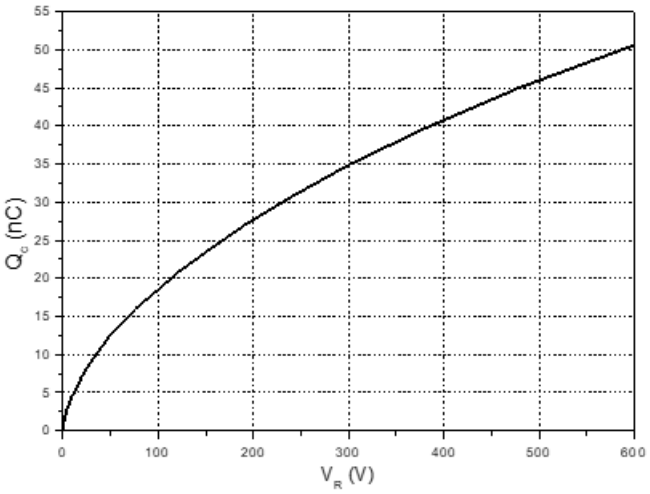
Forward Characteristics



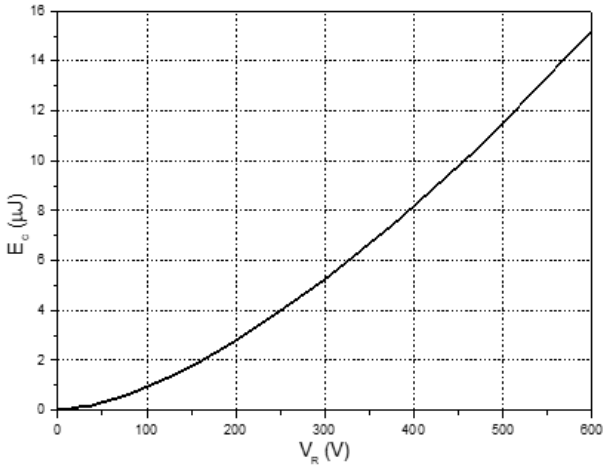
Reverse Characteristics



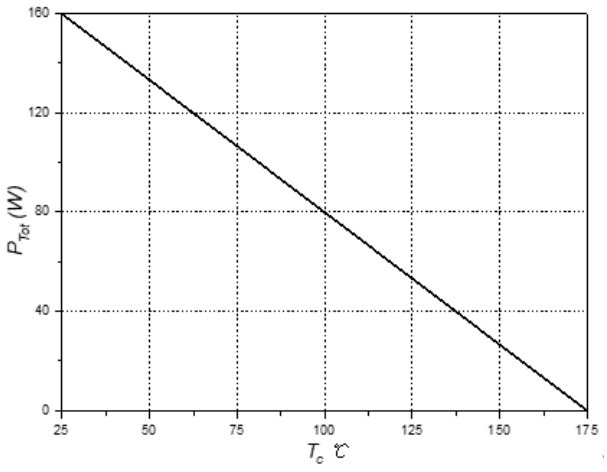
Capacitance vs. Reverse Voltage



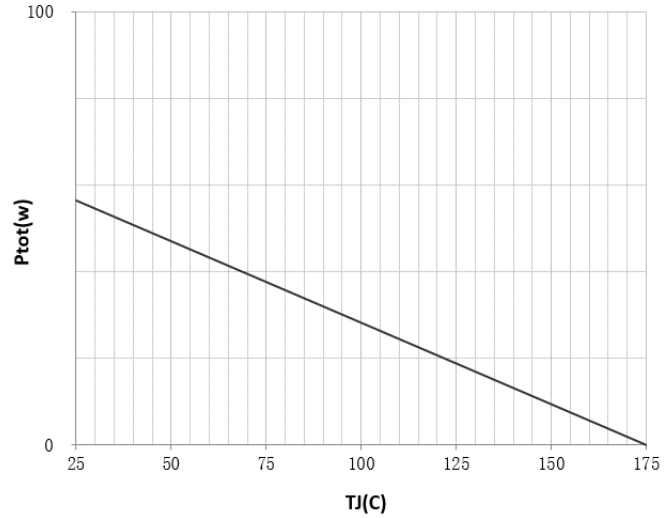
Capacitance Charge vs. Reverse Voltage



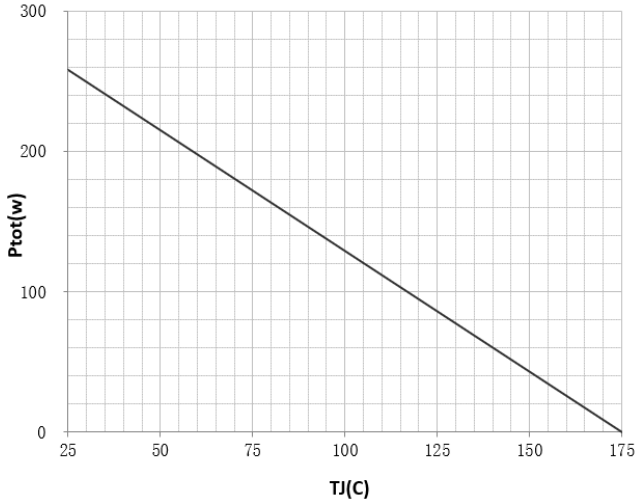
Capacitance Stored Energy



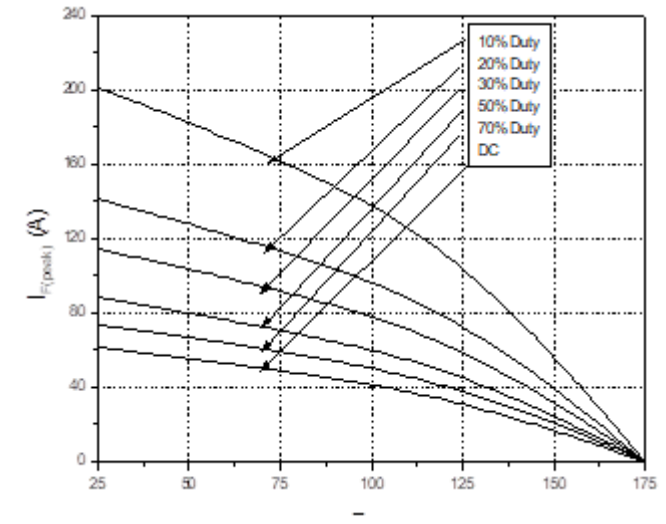
Power Derating（TO-220C-2L）



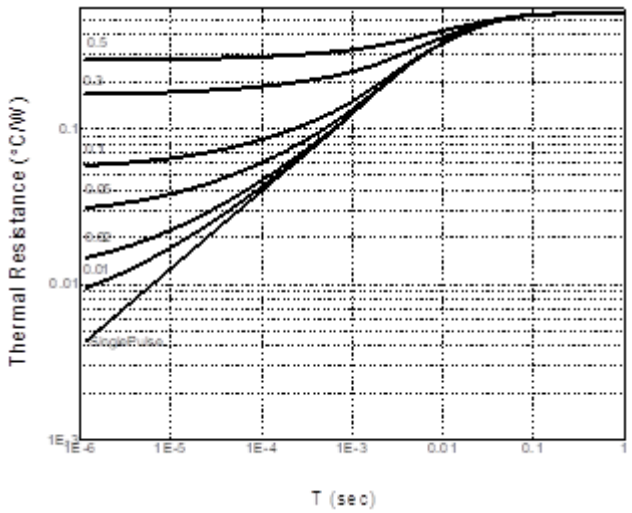
Power Derating（TO-220MF2L-K1）



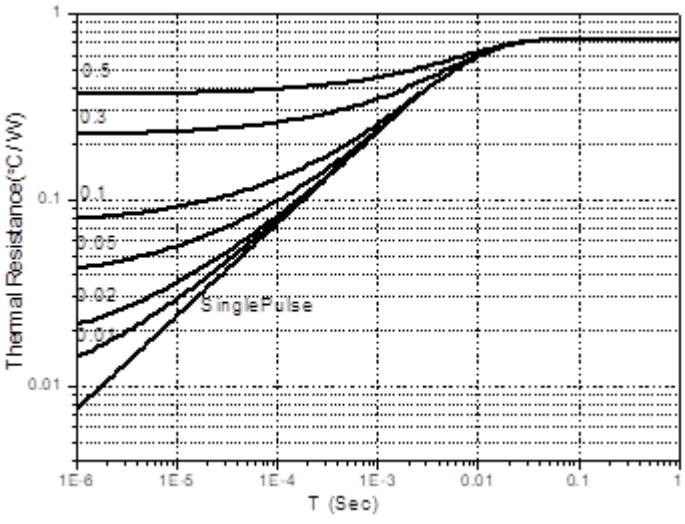
Power Derating（TO-247-2L）



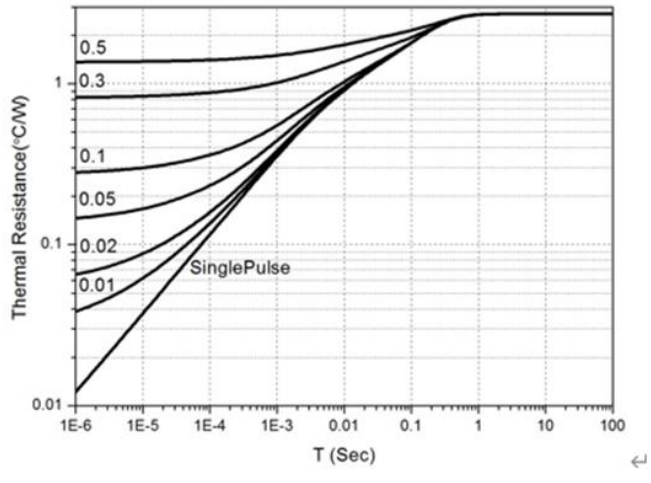
Current Derating（TO-220C-2L）



Transient Thermal Impendance （TO-247-2L）



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

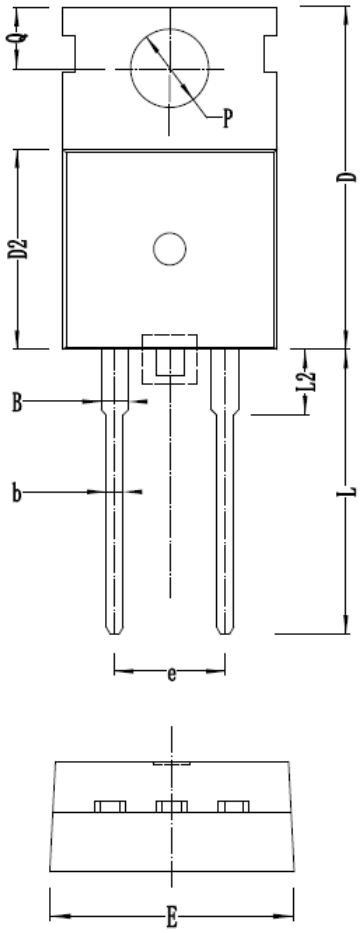


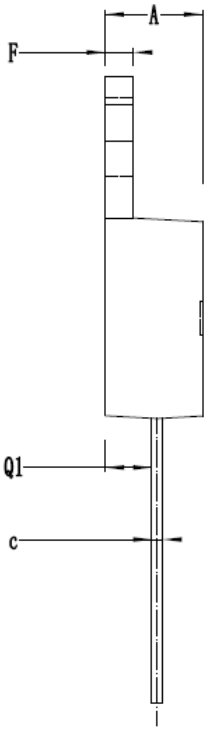
Transient Thermal Impendance（TO-220MF2L-K1）

外形尺寸 PACKAGE MECHANICAL DATA

TO-220C-2L

单位 Unit：mm





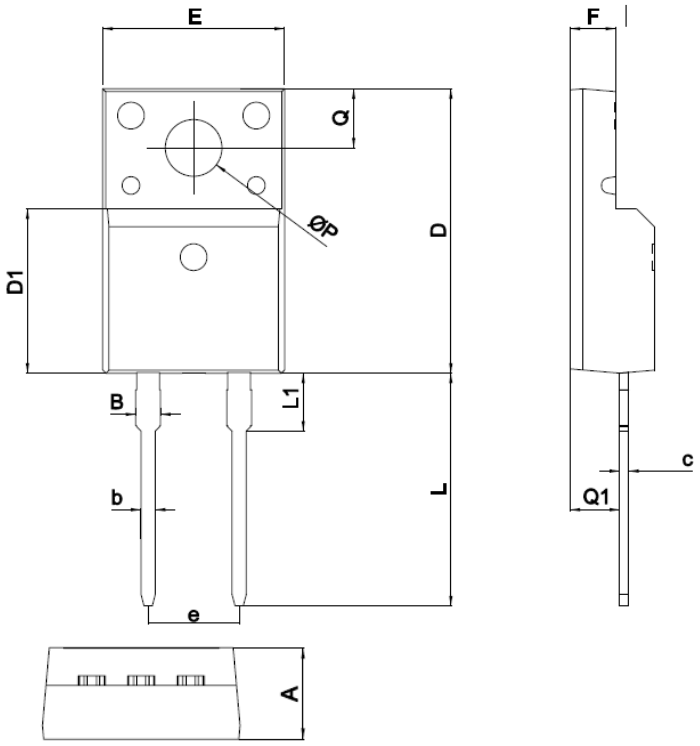
符号 symbol	单位：mm	
	MIN	MAX
A	4.30	4.70
B	1.22	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	4.78	5.38
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
ΦP	3.50	3.80
Q	2.60	3.00
Q1	2.20	2.60

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-220MF2L-K1

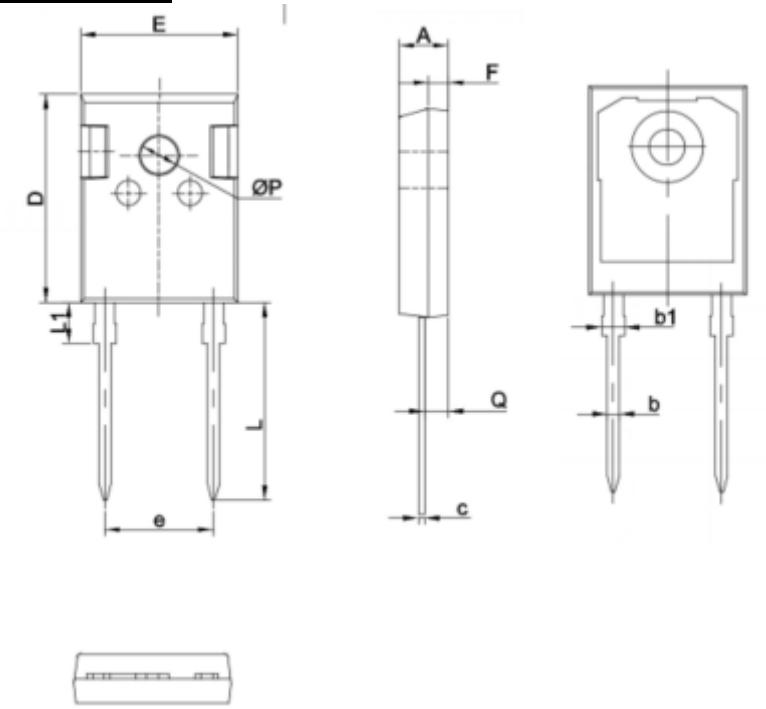


单位 Unit：mm

SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	5.08TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
ΦP	3.0	3.5

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

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