



SC10J065BS

主要参数 MAIN CHARACTERISTICS

V_{RRM}	650V
$I_F, T_C \leq 150^{\circ}C$	10A
Q_C Typ	28nC

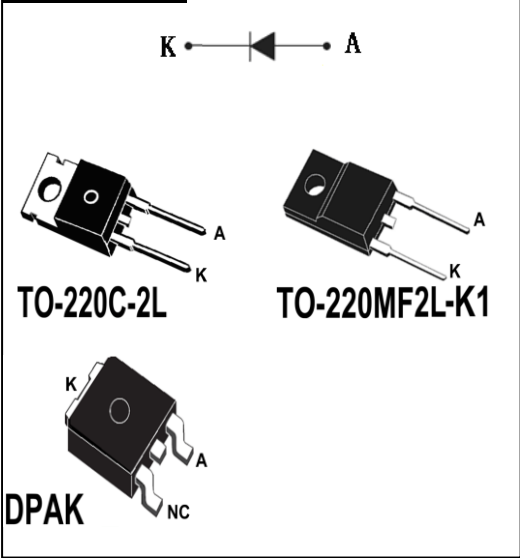
用途

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

APPLICATIONS

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

封装 Package



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
- 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

FEATURES

订货信息 ORDER MESSAGE

订 货 型 号 Order codes				印 记 Marking	封 装 Package
有卤-条管 Halogen-Tube	无卤-条管 Halogen-Free-Tube	有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel		
N/A	N/A	N/A	SC10J065BS-R-AR	SC10J065BS	DPAK
N/A	SC10J065BS-FK-BR	N/A	N/A	SC10J065BS	TO-220MF2L-K1
N/A	SC10J065BS-CA-BR	N/A	N/A	SC10J065BS	TO-220C-2L



绝对最大额定值 ABSOLUTE RATINGS ($T_c=25^{\circ}\text{C}$)

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}	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	$I_R = 100 \mu A$
正向平均电流 Continuous Forward Current	I_F	27 17 10	A	$T_c=25^{\circ}\text{C}$ $T_c=110^{\circ}\text{C}$ $T_c=147^{\circ}\text{C}$
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I_{FRM}	69 61	A	$T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave $T_c=110^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave
正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	I_{FSM}	75 66	A	$T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave $T_c=110^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave
耗散功率 Power Dissipation	P_{tot}	97 84 69	W	$T_c=25^{\circ}\text{C}$ TO-220C-2L $T_c=25^{\circ}\text{C}$ DPAK $T_c=25^{\circ}\text{C}$ TO-22MF2L-K1
单脉冲雪崩能量 Single Pulsed Avalanche Energy	E_{AS}	14	mJ	$T_c = 25^{\circ}\text{C}$, $V_D=50\text{V}$, $L=0.5\text{mH}$, $I_{AS}=7.5\text{A}$
最高结温及存储温度 Operating and Storage Temperature Range	T_J, T_{STG}	-55~ +175	$^{\circ}\text{C}$	
引线最高焊接温度 Maximum Lead Temperature for Soldering Purposes	T_L	260	$^{\circ}\text{C}$	





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	$I_F = 10A$ $T_J = 25^\circ C$ $I_F = 10A$ $T_J = 175^\circ C$	—	1.36 1.66	1.65 1.9	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 10	20 100	μA
总储存电荷 Total Capacitive Charge	Q_C	$V_R = 400V$, $T_J = 25^\circ C$, $I_F = 10A$ $Q_C = \int_0^{V_R} C(V) dV$	—	29	—	nC
总电容 Total Capacitance	C	$V_R = 0 V$, $T_J = 25^\circ C$, $f = 1 MHz$ $V_R = 200V$, $T_J = 25^\circ C$, $f = 1 MHz$ $V_R = 400V$, $T_J = 25^\circ C$, $f = 1 MHz$	—	390 56 41	—	pF
电容储存能量 Capacitance Stored Energy	E_C	$V_R = 400 V$	—	4.2	—	μJ

热特性 THERMAL CHARACTERISTICS

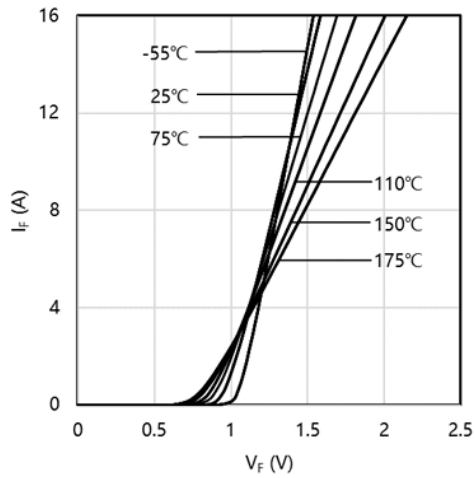
项 目 Parameter	符 号 Symbol	典型值 Typ			单 位 Unit
		T0-220C-2L	DPAK	T0-220MF2L-K1	
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	1.55	1.79	2.18	$^\circ C/W$



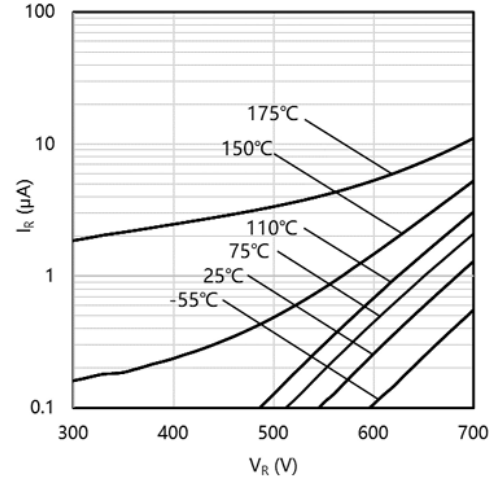


典型性能 Typical Performance

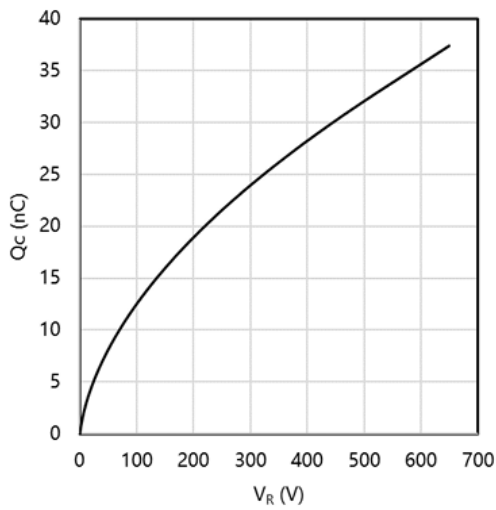
Forward Characteristics



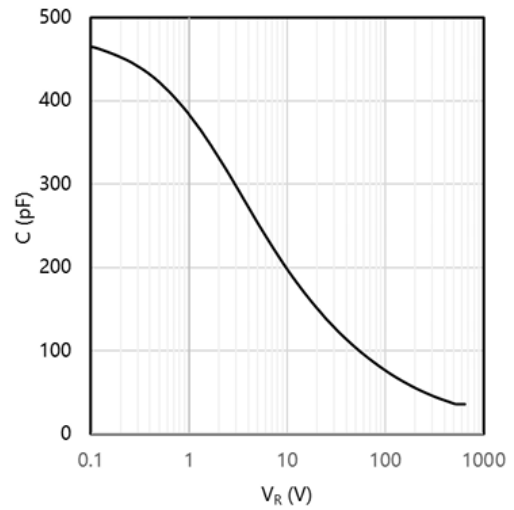
Reverse Characteristics



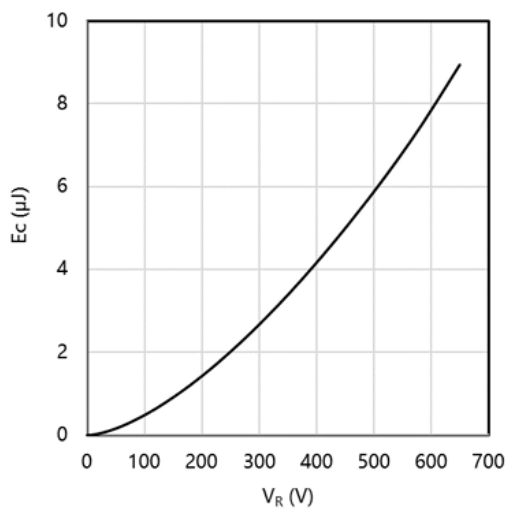
Capacitance Charge vs. Reverse Voltage



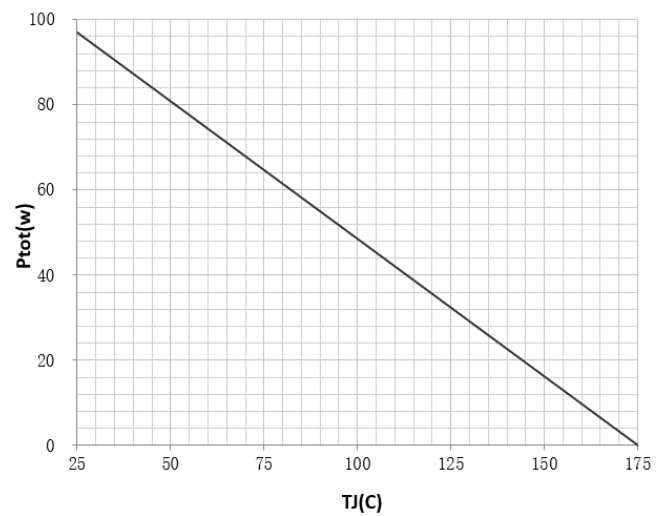
Capacitance vs. Reverse Voltage



Capacitance Stored Energy

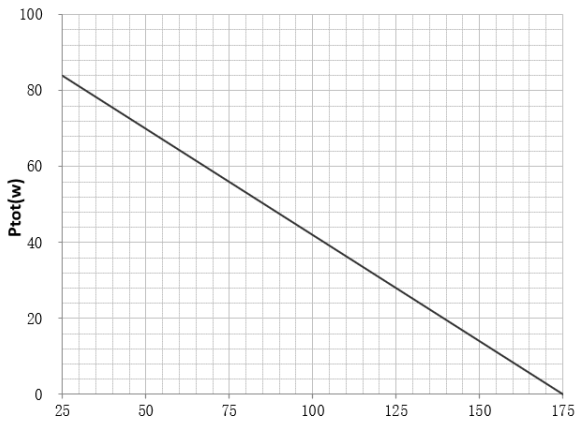


Power Derating (T0-220C-2L)

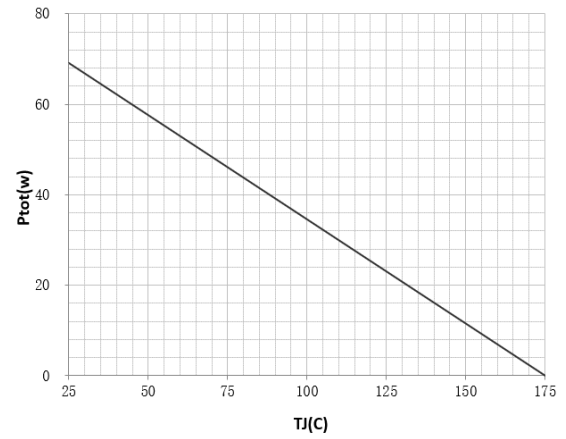




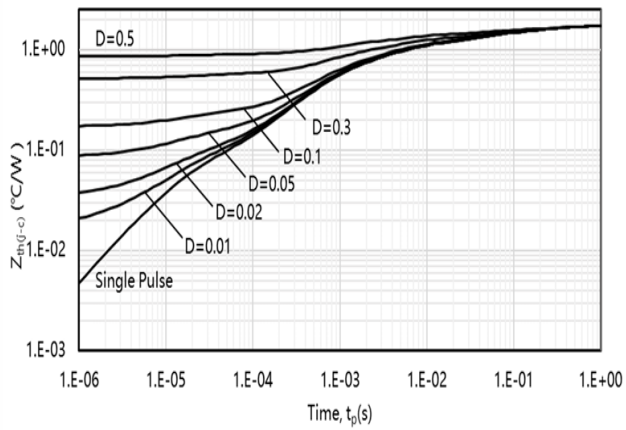
Power Derating (DPAK)



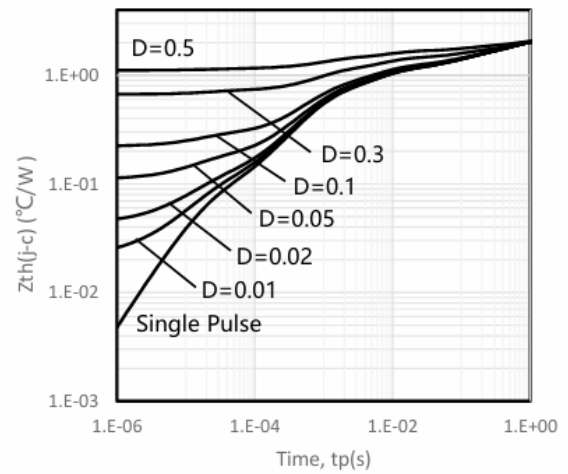
Power Derating (TO-220MF-2L)



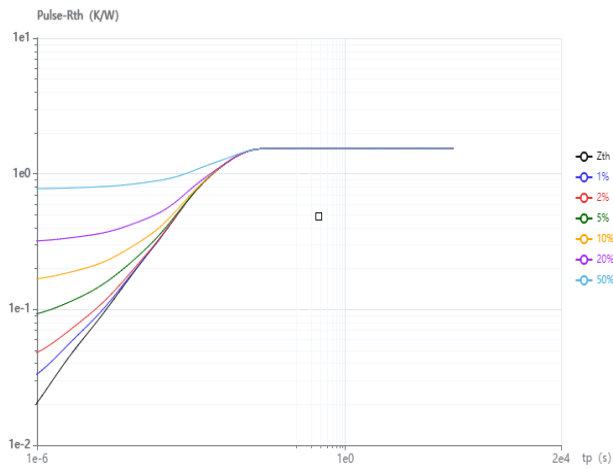
Transient Thermal Impendence (TO-220C-2L)



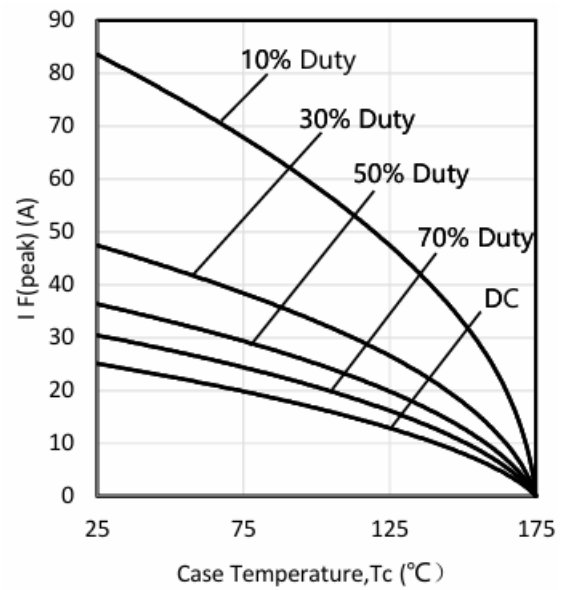
Transient Thermal Impendence (TO-220MF-2L)



Transient Thermal Impendence (DPAK)



Current Derating

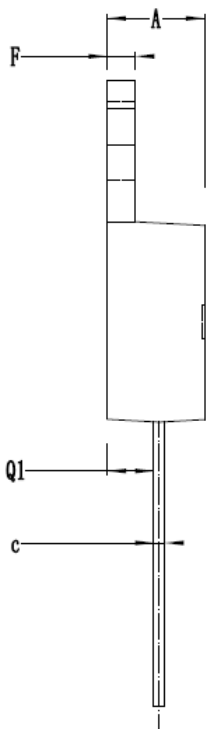
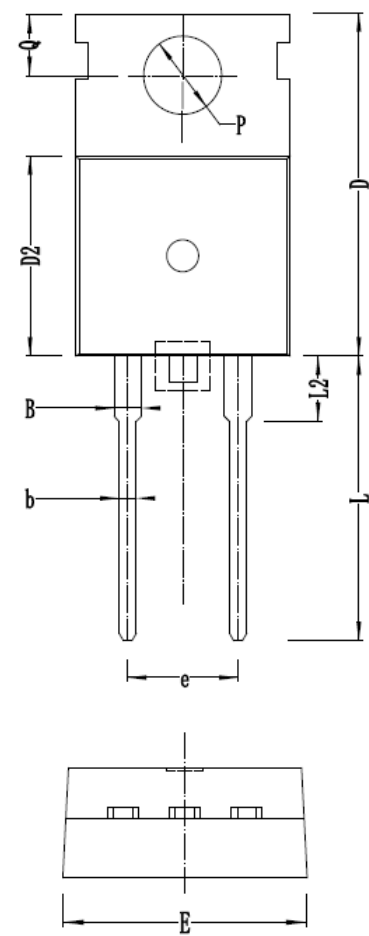




外形尺寸 PACKAGE MECHANICAL DATA

T0-220C-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;

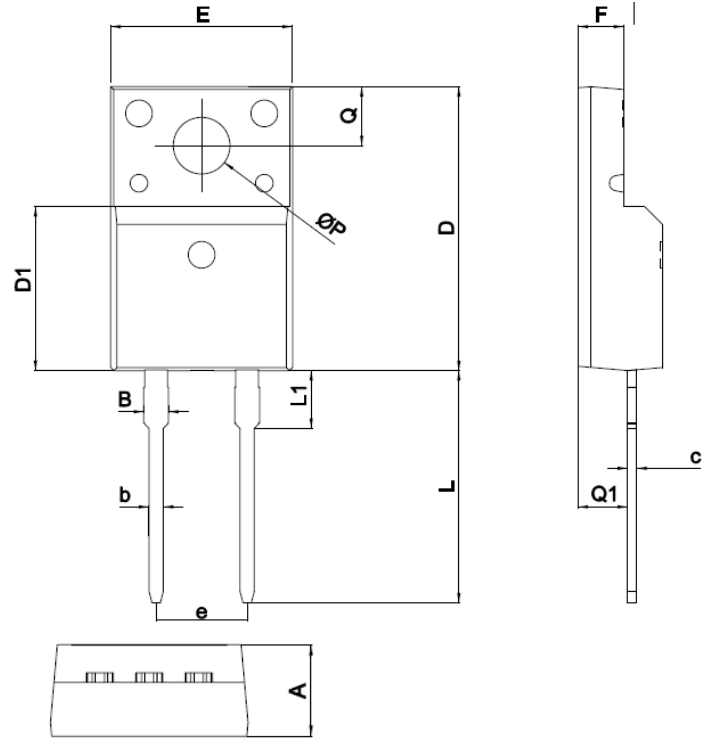




外形尺寸 PACKAGE MECHANICAL DATA

T0-220MF2L-K1

单位 Unit: mm



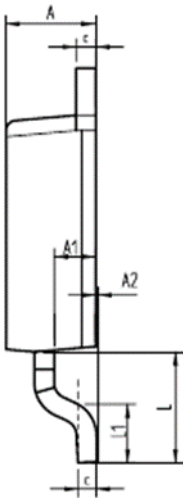
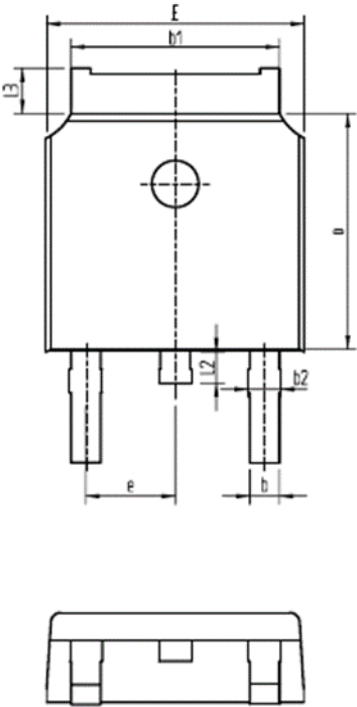
SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	5.08TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
ΦP	3.0	3.5



外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit: mm



SYMBOL	mm	
	MIN	MAX
A	2.16	2.41
A1	0.97	1.17
A2	0.00	0.15
b	0.63	0.93
b1	5.13	5.53
b2	0.66	0.96
c	0.40	0.60
D	5.80	6.40
E	6.30	6.90
e	2.286BSC	
L	2.50	3.30
L1	1.20	1.80
L2	0.60	1.00
L3	0.85	1.30





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