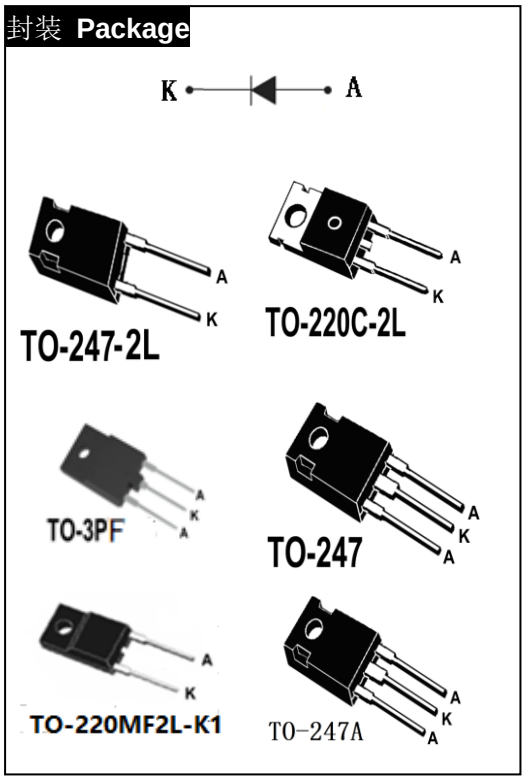
SC20J065BS

主要参数 MAIN CHARACTERISTICS

V_{RRM}	650V
I_F, T_C≤150℃	20A
Q_C Typ	63nC

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
- ●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
SC20J065BS-GL-BR	SC20J065BS	TO-247-2L
SC20J065BS-CL-BR	SC20J065BS	TO-220C-2L
SC20J065BS-GR-BR	SC20J065BS	TO-3PF
SC20J065BS-GE-BR	SC20J065BS	TO-247
SC20J065BS-GQ-BR	SC20J065BS	TO-247A
SC20J065BS-FK-BR	SC20J065BS	TO-220MF2L-K1

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}	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	59 27 20	A	Tc=25℃ Tc=135℃ Tc=149℃
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I_{FRM}	62	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}	125 100	A	T_C=25°C, t_P=10ms, Half Sine Wave T_C=150°C, t_P=10ms, Half Sine Wave
耗散功率 Power Dissipation	P_{tot}	187	W	T_C=25°C
I^2 t 值 I^2 t for fusing	$\int i^2 dt$	78	A^2 s	T_C=25°C, t_P=10ms, Half Sine Wave
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

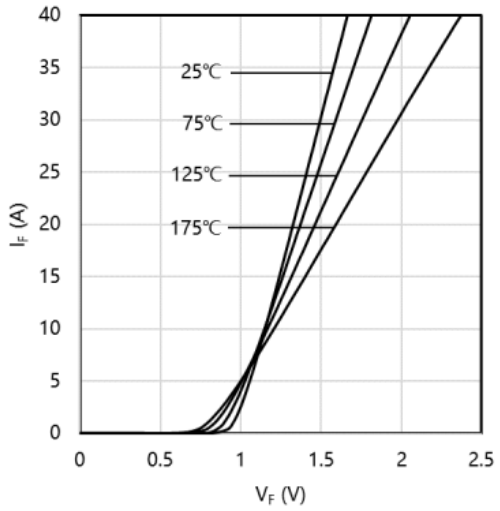
项　　目 Parameter	符　号 Symbol	测试条件 Tests conditions	最小 Min	典型 Typ	最大 Max	单位 Units
正向电压 Forward Voltage	V_F	I_F =20A T_J=25° C I_F =20A T_J=175° C	-	1.33 1.60	1.6 2.0	V
反向电流 Reverse Current	I_R	V_R = 650V T_J=25° C V_R = 650V T_J=175° C	-	2 12	20 200	μA
总储存电荷 Total Capacitive Charge	Q_C	V_R = 400V, T_J = 25° C, I_F=20A $Q_C=\int_0^{V_R} C(V)dV$	-	63	-	nC
总电容 Total Capacitance	C	V_R = 1 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	-	863 124 89	-	pF
电容储存能量 Capacitance Stored Energy	E_C	V_R =400 V	-	9.5	-	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}=12.5A	-	39	-	mJ

热特性 THERMAL CHARACTERISTICS

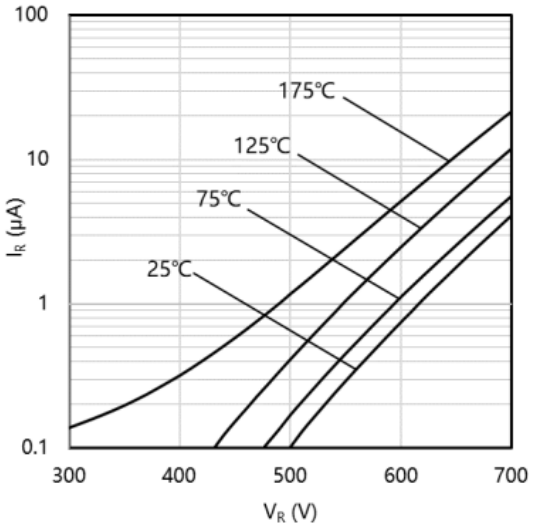
项　　目 Parameter	符　号 Symbol	典型值 Typ	单 位 Unit
		TO-247-2L	
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	0.8	℃/W

典型性能 Typical Performance

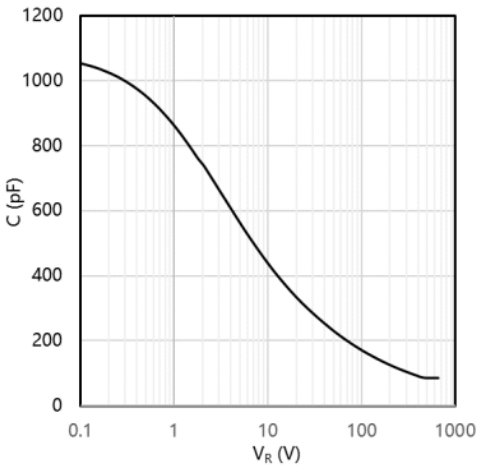
Forward Characteristics



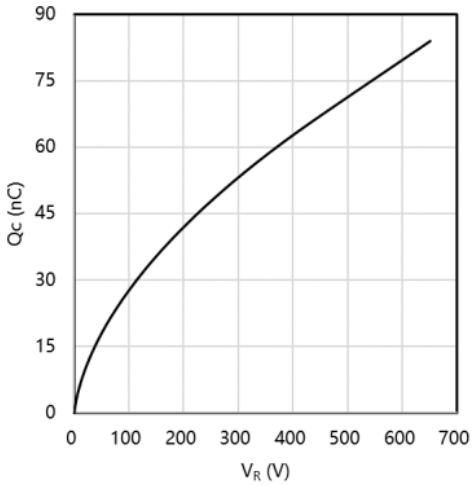
Reverse Characteristics



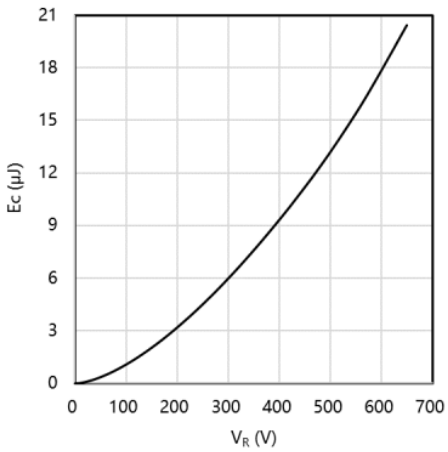
Capacitance vs. Reverse Voltage



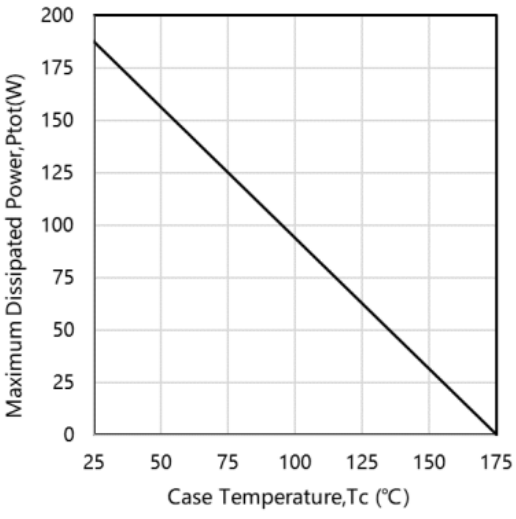
Capacitance Charge vs. Reverse Voltage

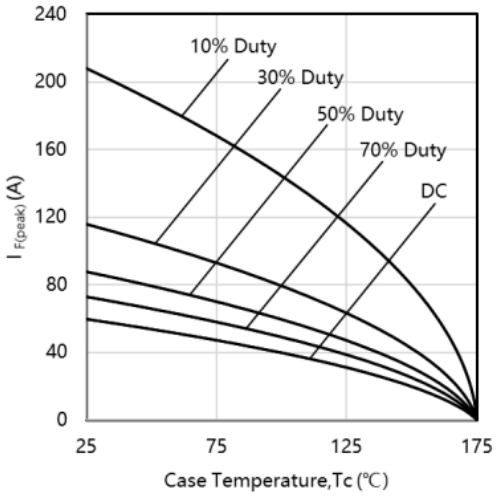
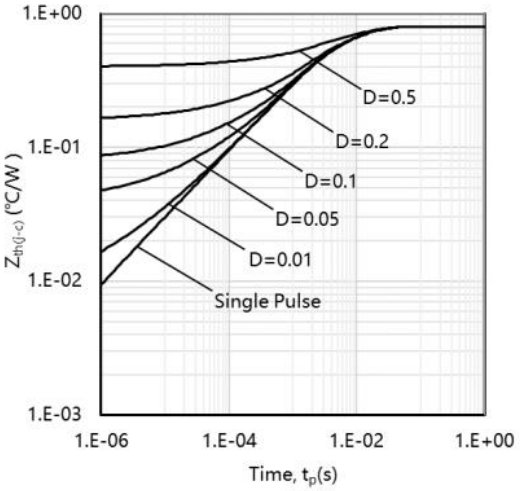


Capacitance Stored Energy



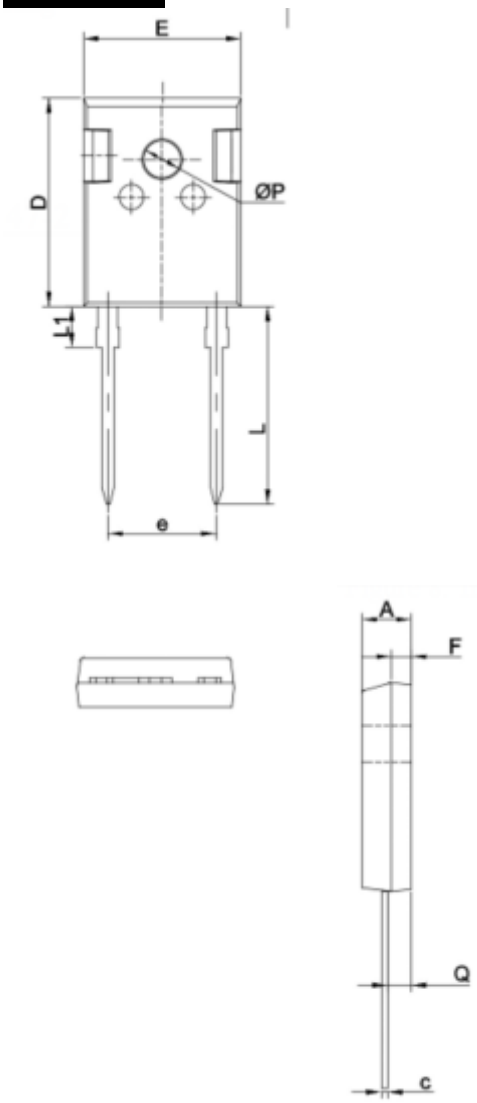
Power Derating (TO-247-2L)



Current Derating	Transient Thermal Impendance （TO-247-2L）
	

外形尺寸 PACKAGE MECHANICAL DATA

TO-247-2L



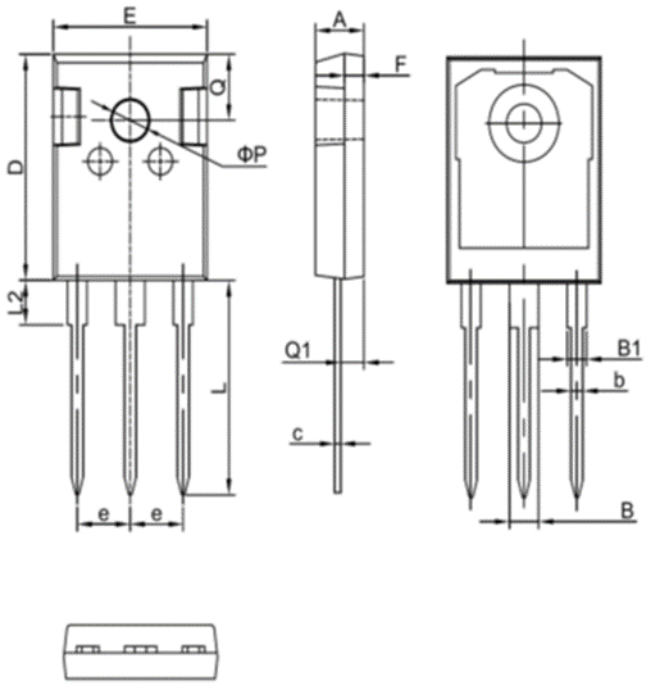
单位 Unit：mm

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

外形尺寸 PACKAGE MECHANICAL DATA

TO-247

单位 Unit：mm

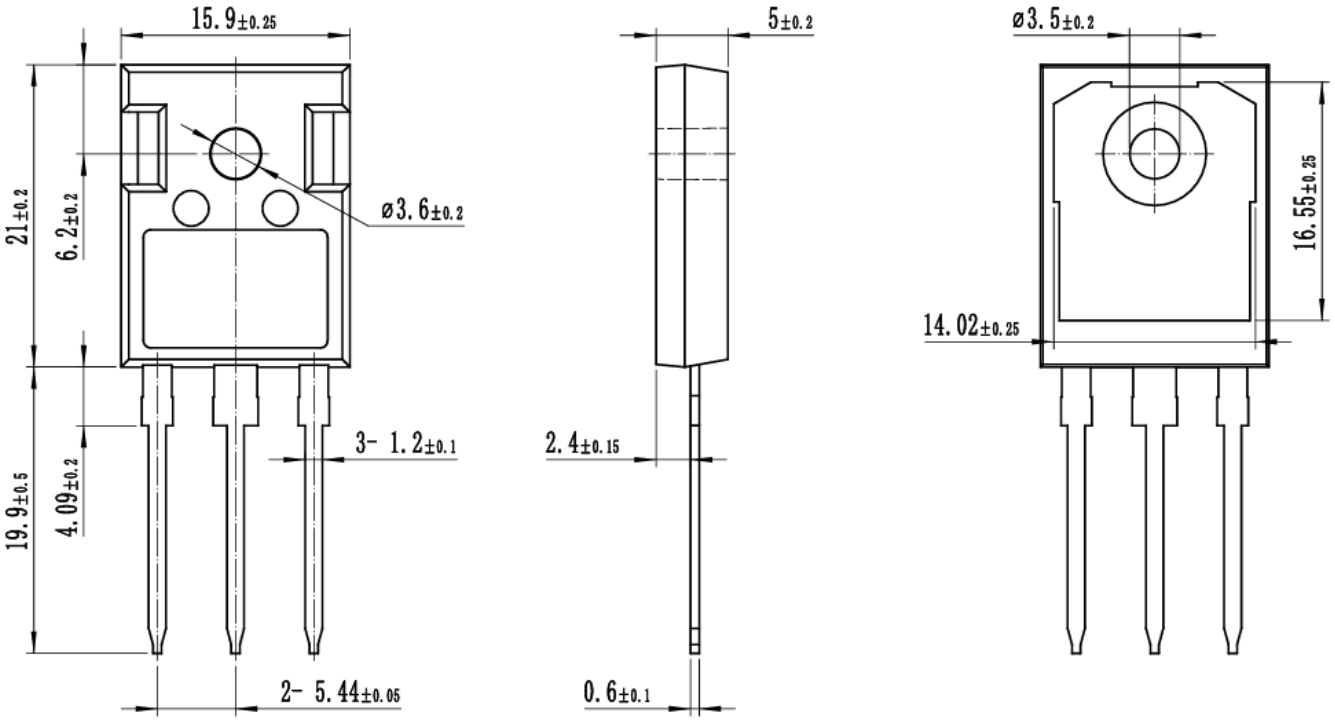


符号 symbol	MIN	MAX
A	4.90	5.10
B	2.95	3.35
B1	1.95	2.35
b	1.15	1.35
c	0.50	0.70
D	20.90	21.10
E	15.70	15.90
e	5.34	5.54
F	1.90	2.10
L	19.40	20.40
L2	4.03	4.23
Q	6.00	6.40
Q1	2.30	2.50
P	3.50	3.70

外形尺寸 PACKAGE MECHANICAL DATA

TO-247A

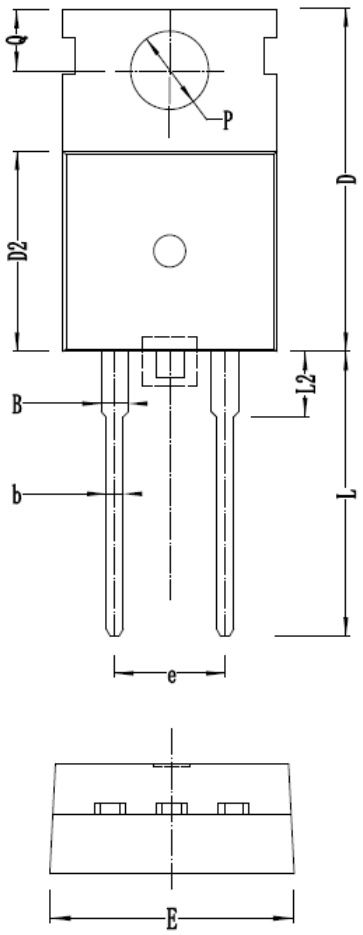
单位 Unit：mm

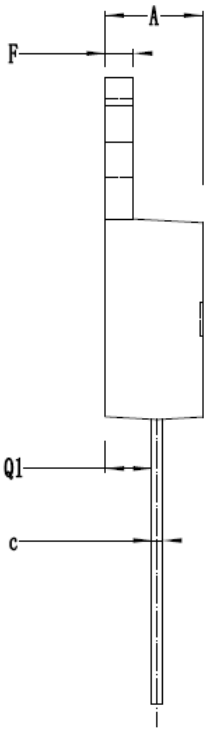


外形尺寸 PACKAGE MECHANICAL DATA

TO-220C-2L

单位 Unit：mm





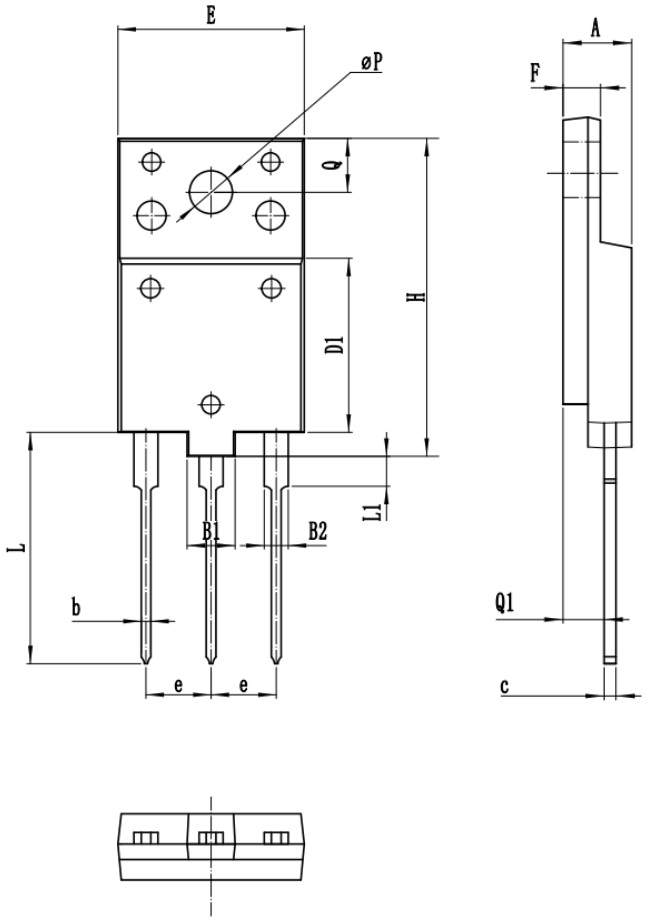
符号 symbol	单位：mm	
	MIN	MAX
A	4.30	4.70
B	1.22	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	4.78	5.38
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
ΦP	3.50	3.80
Q	2.60	3.00
Q1	2.20	2.60

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-3PF

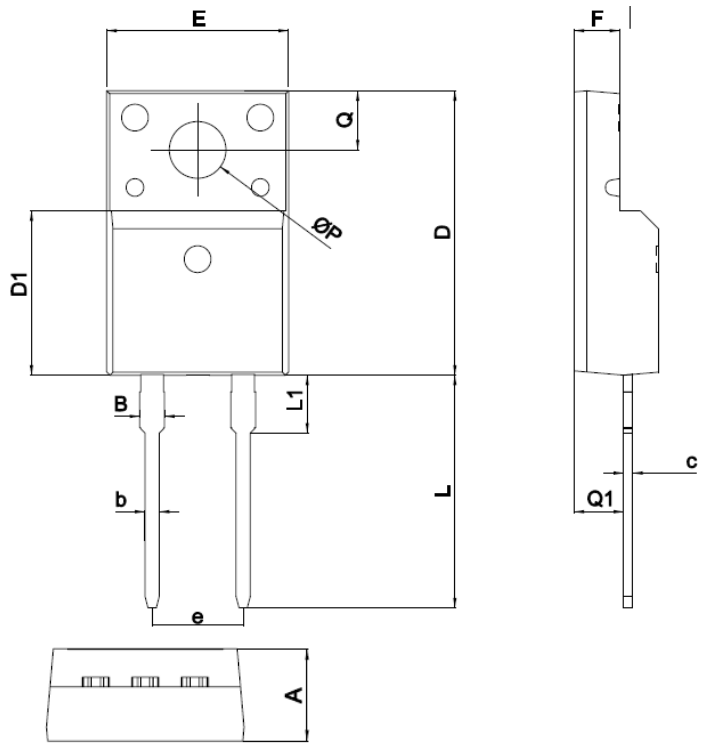


单位 Unit：mm

符号 Symbol	Min	Nom	Max
A	5.20	5.50	5.80
B1	3.70	4.00	4.30
B2	1.70	2.00	2.30
b	0.60	0.80	1.00
c	0.75	0.95	1.15
D1	14.20	14.50	14.80
E	15.20	15.50	15.80
e	5.15	5.45	5.75
F	2.70	3.00	3.30
H	26.20	26.50	26.80
L	19.00	19.30	19.60
L1	2.20	2.50	2.80
ϕP	3.30	3.60	3.90
Q	4.25	4.50	4.75
Q1	3.00	3.30	3.60

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

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