



# MBR3045C

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	30 (2×15) A
$V_{RRM}$	45V
$T_j$	150 °C
$V_{F(max)}$	0.56V (@ $T_j=125^{\circ}C$ )

### 用途

- 高频开关电源
- 低压续流电路和保护电路

### 产品特性

- 共阴结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保 (RoHS) 产品

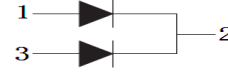
### APPLICATIONS

- High frequency switch power supply
- Free wheeling diodes, polarity protection applications

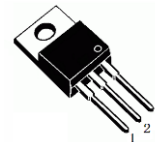
### FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

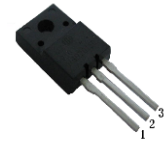
## 封装 Package



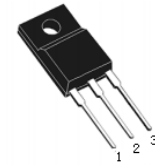
TO-220



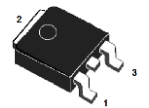
TO-220HF



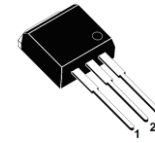
TO-220MF-K1



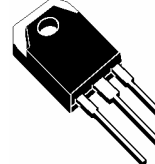
TO-263



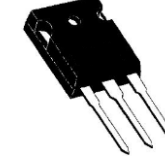
TO-262



TO-3PB



TO-247S



## 订货信息 ORDER MESSAGE

### 订货型号 Order codes

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		
MBR3045C-CA-B	MBR3045C-CA-BR	N/A	N/A	MBR3045C	TO-220
MBR3045C-FA-B	MBR3045C-FA-BR	N/A	N/A	MBR3045C	TO-220HF
MBR3045C-F1-B	MBR3045C-F1-BR	N/A	N/A	MBR3045C	TO-220MF-K1
MBR3045C-GD-B	MBR3045C-GD-BR	N/A	N/A	MBR3045C	TO-3PB
MBR3045C-S-B	MBR3045C-S-BR	MBR3045C-S-A	MBR3045C-S-AR	MBR3045C	TO-263
MBR3045C-B-B	MBR3045C-B-BR	N/A	N/A	MBR3045C	TO-262
MBR3045C-GP-B	MBR3045C-GP-BR	N/A	N/A	MBR3045C	TO-247S



**绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)**

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit
最大反向重复峰值电压 Repetitive peak reverse voltage	V <sub>RRM</sub>	45	V
最大直流阻断电压 Maximum DC blocking voltage	V <sub>DC</sub>	45	V
正向平均整流电流 Average forward current	I <sub>F(AV)</sub>	T <sub>C</sub> =125℃ (TO-220/TO-263/ TO-262/TO-3PB/ TO-247S) 30	A
		T <sub>C</sub> =100℃ (TO-220HF/220M F-K1) 15	
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method)	I <sub>FSM</sub>	200	A
最高结温 Maximum junction temperature	T <sub>j</sub>	150	℃
储存温度 Storage temperature range	T <sub>STG</sub>	-40~+150	℃

**电特性 ELECTRICAL CHARACTERISTICS**

项 目 Parameter	测试条件 Tests conditions		最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单位 Unit
I <sub>R</sub>	T <sub>j</sub> =25℃	V <sub>R</sub> =V <sub>RRM</sub>			50	μA
	T <sub>j</sub> =125℃				30	mA
V <sub>F</sub>	T <sub>j</sub> =25℃	I <sub>F</sub> =15A		0.58	0.62	V
	T <sub>j</sub> =125℃			0.52	0.56	V

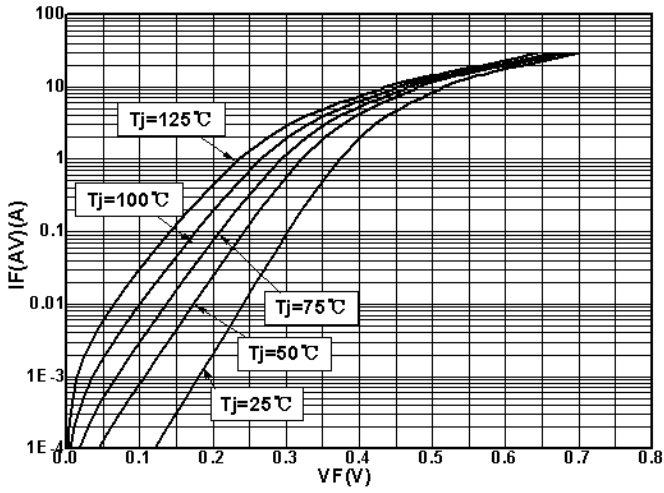
**热特性 THERMAL CHARACTERISTICS**

项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit	
结到管壳的热阻 Thermal resistance from junction to case	TO-220		1.6	℃/W	
	TO-263		1.6		
	TO-262		1.9		
	TO-3PB	R <sub>th(j-c)</sub>			1.8
	TO-220HF				3.5
	TO-220MF-K1				3.5
	TO-247S				2.0

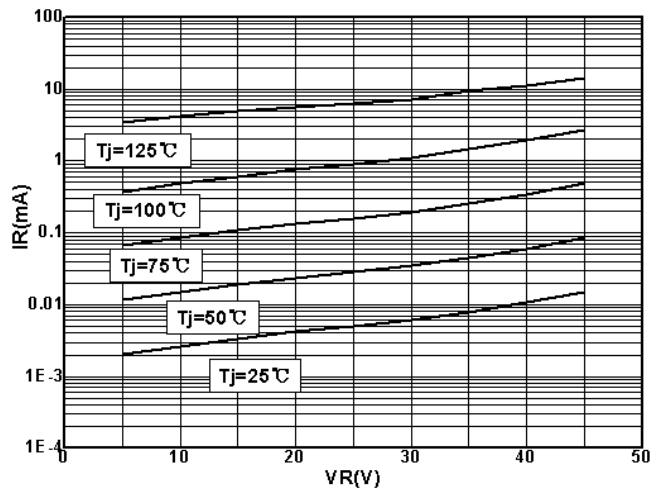


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

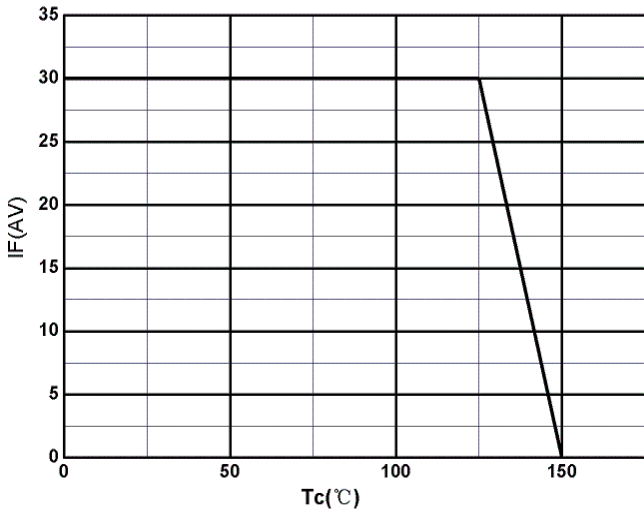
IF vs VF



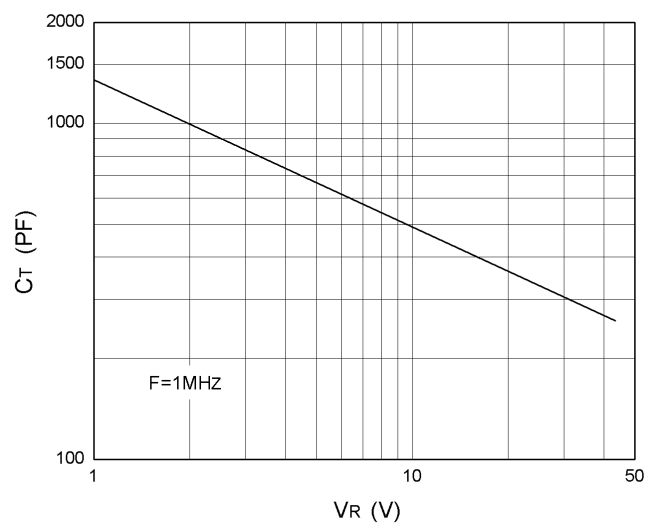
IR vs VR

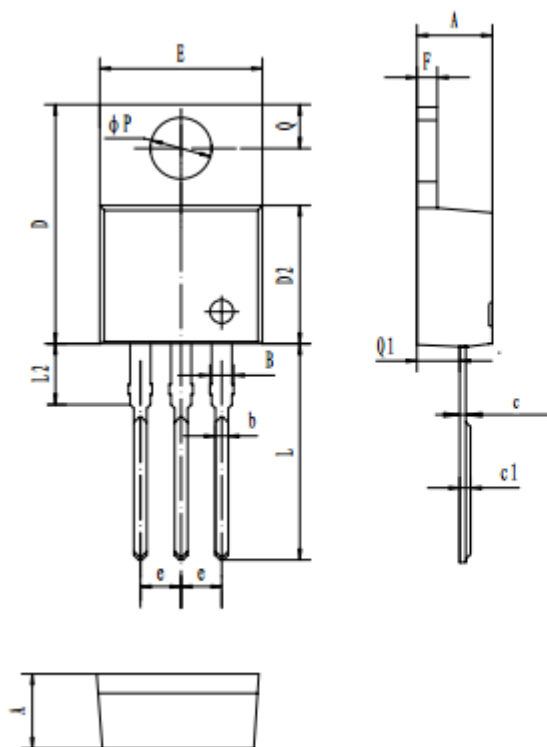


IF(AV) vs Tc

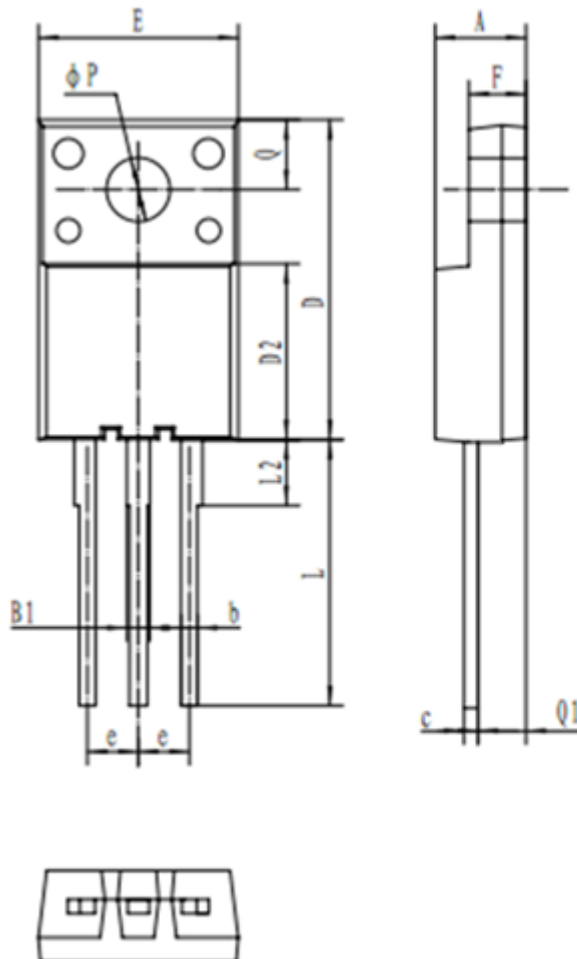


CT vs VR





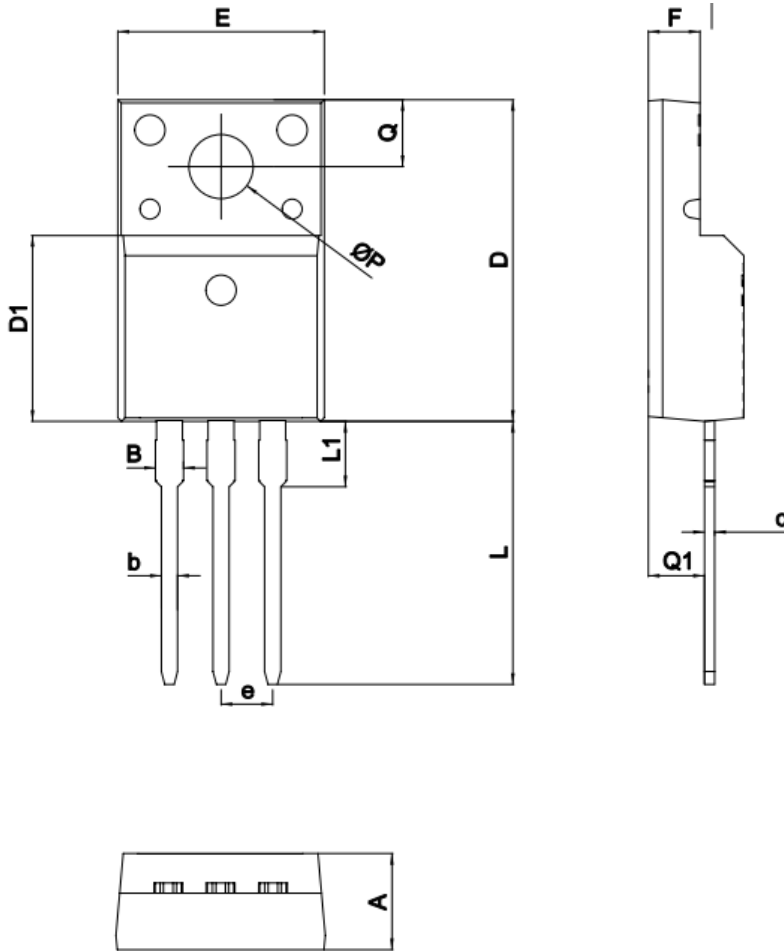
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00



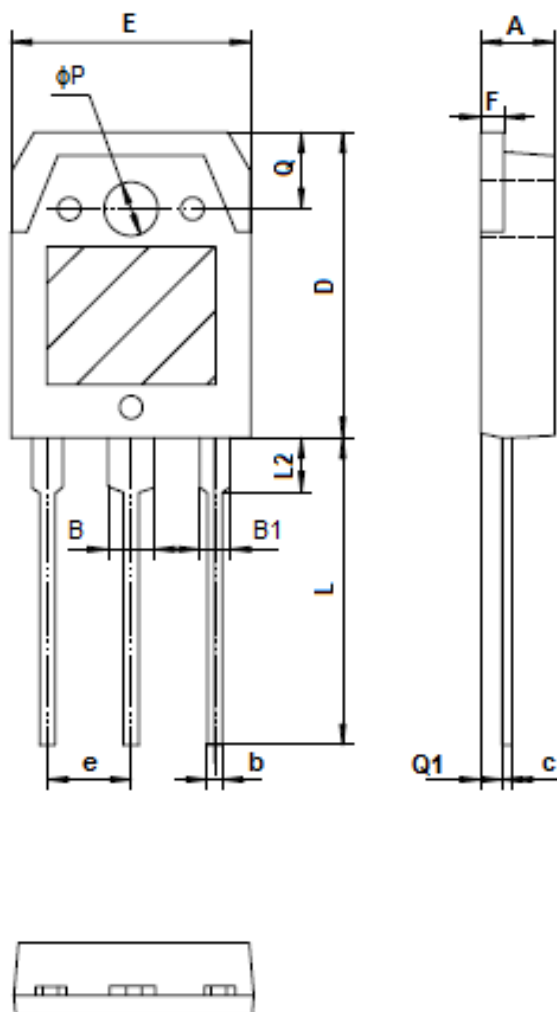
符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
$\phi p$	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5

外形尺寸 PACKAGE MECHANICAL DATA  
TO-220MF-K1

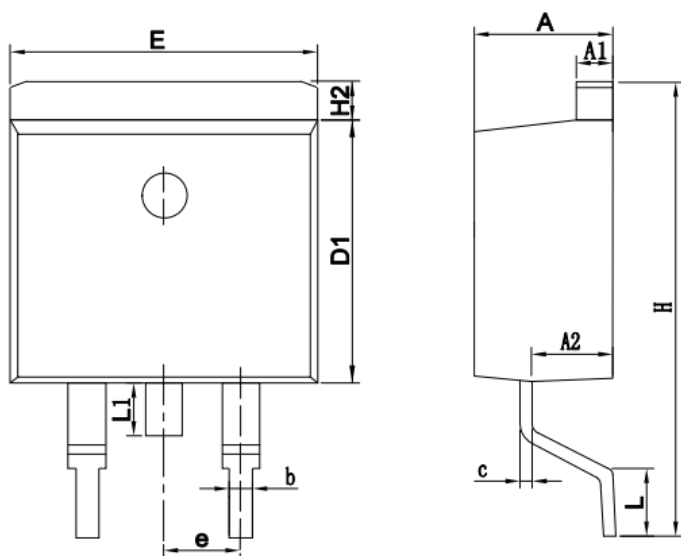
单位 Unit : mm



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	2.54TYPE	
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

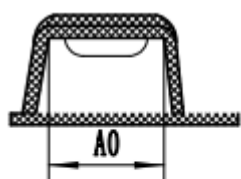
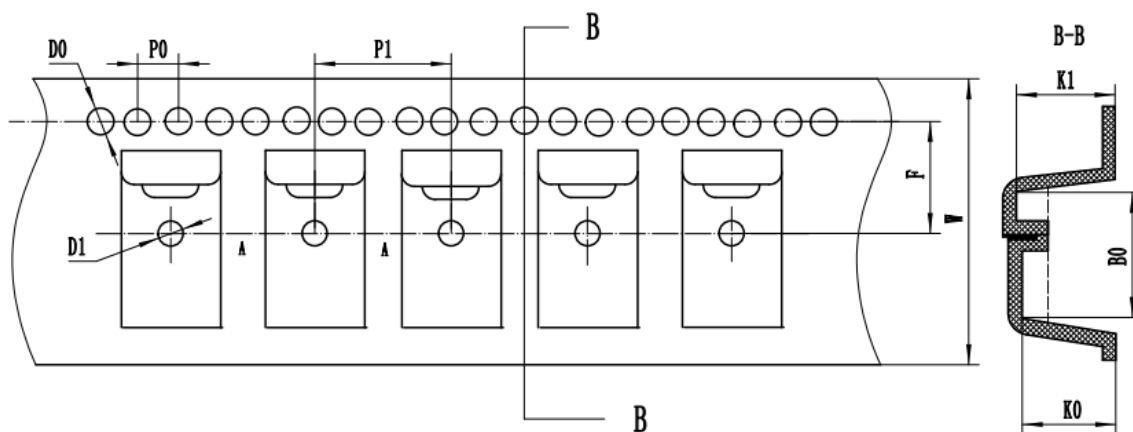


符号 Symbol	MIN	MAX
A	4.60	5.00
B	2.90	3.20
B1	1.90	2.20
b	0.90	1.10
c	0.50	0.70
D	19.40	20.40
E	15.40	15.80
e	5.45(TYP)	
F	1.40	1.60
L	19.50	20.50
L2	3.30	3.70
Q	4.90	5.10
Q1	1.30	1.50
P	3.10	3.50



SYMBOL	MM	
	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70

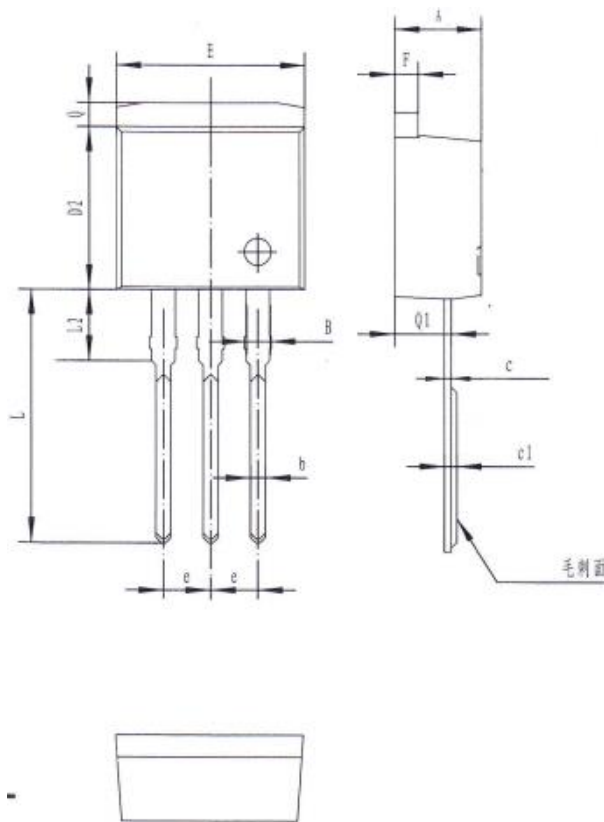
编带 REEL



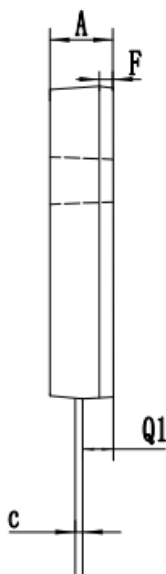
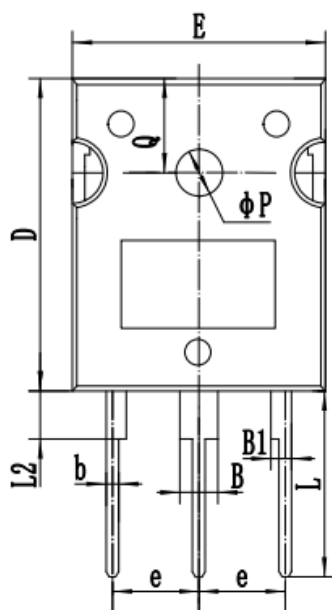
A-A

Symbol	标准范围 (mm)
A0	10.60 ± 0.20
B0	16.10 ± 0.20
D0	1.55 ± 0.10
D1	1.50 ± 0.15
F	11.50 ± 0.20
K0	4.85 ± 0.20
K1	5.26 ± 0.20
P0	4.00 ± 0.20
P1	16.00 ± 0.20
W	24.00 ± 0.40





符号 symbol	MIN	MAX
A	4.40	4.90
B	1.10	1.40
b	0.70	0.95
c	0.30	0.60
c1	0.33	0.63
D2	8.20	9.20
E	9.60	10.50
e	2.39	2.69
F	1.20	1.35
L	13.11	14.61
L2	3.55	4.05
Q	1.10	1.40
Q1	2.65	2.85



符号 SYMBOL	单位: mm	
	MIN	MAX
A	4.8	5.2
B	2.9	3.3
B1	1.9	2.3
b	1.05	1.35
c	0.35	0.65
D	18	22
E	14	17
e	5.44(TYP)	
F	1.1	1.4
L	13	16
L2	2.5	5.5
Q	5.3	5.7
Q1	2.3	2.7
ΦP	3.9	4.3





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