



# CS625N3A

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	6A
$V_{DRM}$	800V
$I_{GT}$	35mA

## 用途

- 交流开关
- 相位控制

## 产品特性

- 玻璃钝化芯片，高可靠性和一致性
- 三象限可控硅，触发电流的一致性
- 环保 RoHS 产品

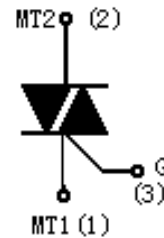
## APPLICATIONS

- AC switching
- Phase control

## FEATURES

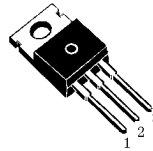
- Glass-passivated mesa chip for reliability and uniform
- Uniform gate trigger currents in three quadrants
- RoHS products

## 封装 Package

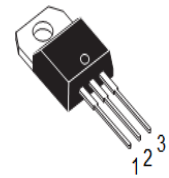


序号 Pin	引线名称 Description
1	主电极 1 MT1
2	主电极 2 MT2
3	门极 G

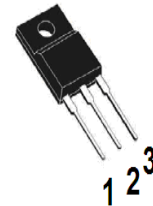
T0-220C



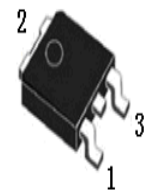
T0-220S



T0-220MF-K1



DPAK



IPAK





## 订货信息 ORDER MESSAGES

订货型号 Order codes				印 记 Marking	封 装 Package
有卤-编带	无卤-编带	N/A	N/A		
Halogen-Reel	Halogen-Free-Reel	N/A	N/A	CS625N3A	DPAK
CS625N3A-R-A	CS625N3A-R-AR	N/A	N/A		
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS625N3A	IPAK
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag		
CS625N3A-V-B	CS625N3A-V-BR	CS625N3A-V-C	CS625N3A-V-CR	CS625N3A	TO-220C
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装		
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag	CS625N3A	TO-220S
CS625N3A-C-B	CS625N3A-C-BR	CS625N3A-C-C	CS625N3A-C-CR		
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS625N3A	TO-220MF-K1
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag		
CS625N3A-CB-B	CS625N3A-CB-BR	CS625N3A-CB-C	CS625N3A-CB-CR	CS625N3A	TO-220MF-K1
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装		
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag	CS625N3A	TO-220MF-K1
CS625N3A-F1-B	CS625N3A-F1-BR	CS625N3A-F1-C	CS625N3A-F1-CR		

绝对最大额定值 ABSOLUTE RATINGS (T<sub>c</sub>=25℃)

项 目 Parameter	符 号 Symbol	试 验 条 件 Condition	数 值 Value	单 位 Unit
重复峰值断态电压 Repetitive peak off-state voltage	V <sub>DRM</sub>		±800	V
通态方均根电流 On-state RMS current	I <sub>T(RMS)</sub>	full sine wave	6	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I <sub>TSM</sub>	full sine wave ,t=20ms	65	A
		full sine wave ,t=16.7ms	71	A
	I <sup>2</sup> t	t=10ms	21	A <sup>2</sup> s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	I <sub>TM</sub> =6A, I <sub>G</sub> =0.2A, di <sub>G</sub> /dt=0.2A/μs	50	A/μs
峰值门极电流 Peak gate current	I <sub>GM</sub>		2	A
峰值门极电压 Peak gate voltage	V <sub>GM</sub>		5	V
峰值门极功率 Peak gate power	P <sub>GM</sub>		5	W
平均门极功率 Average gate power	P <sub>G(AV)</sub>	over any 20ms period	0.5	W
存储温度 Storage temperature	T <sub>stg</sub>		-40~150	℃
操作结温 Operation junction temperature	T <sub>VJ</sub>		125	℃



电特性 ELECTRICAL CHARACTERISTIC (T<sub>C</sub>=25°C)

项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单 位 Unit	
峰值重复断态电流 Peak Repetitive Blocking Current	I <sub>DRM</sub>	V <sub>DM</sub> =800V, T <sub>j</sub> =125°C, gate open	-	-	0.5	mA	
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =8A	-	1.35	1.65	V	
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	MT1(-),MT2(+),G(+)	-	-	35	mA
			MT1(-),MT2(+),G(-)	-	-	35	mA
			MT1(+),MT2(-),G(-)	-	-	35	mA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	MT1(-),MT2(+),G(+)	-	0.7	1.5	V
			MT1(-),MT2(+),G(-)	-	0.7	1.5	V
			MT1(+),MT2(-),G(-)	-	0.7	1.5	V
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	50	mA	
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	MT1(-),MT2(+),G(+)	-	-	80	mA
			MT1(-),MT2(+),G(-)	-	-	80	mA
			MT1(+),MT2(-),G(-)	-	-	80	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V <sub>DM</sub> =67% V <sub>DRM(MAX)</sub> , T <sub>j</sub> =125°C, gate open	10	-	-	V/μs	
门极开通时间 Gate controlled turn-on time	t <sub>gt</sub>	I <sub>TM</sub> =6A, V <sub>DM</sub> =V <sub>DRM(MAX)</sub> , I <sub>G</sub> =0.1A, di <sub>G</sub> /dt=5A/μs	-	2	-	μs	

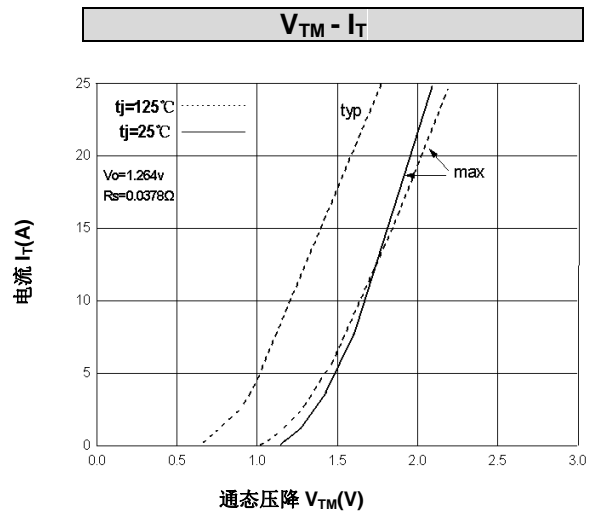
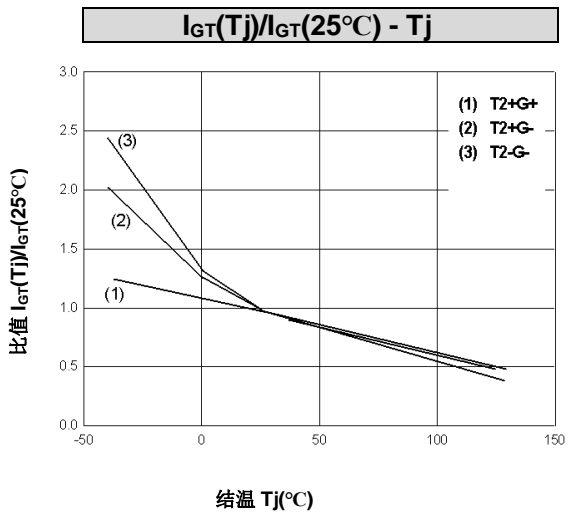
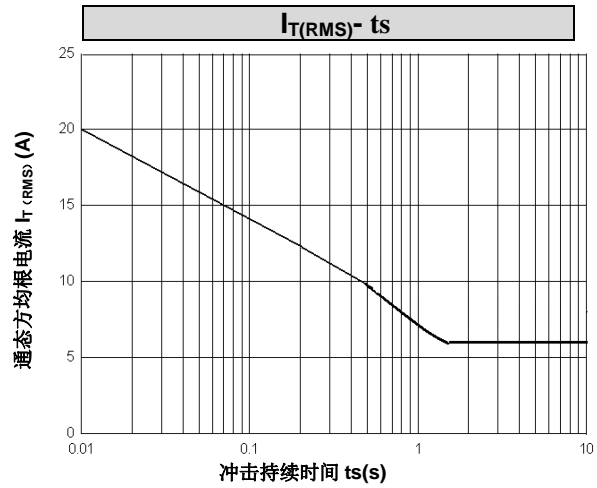
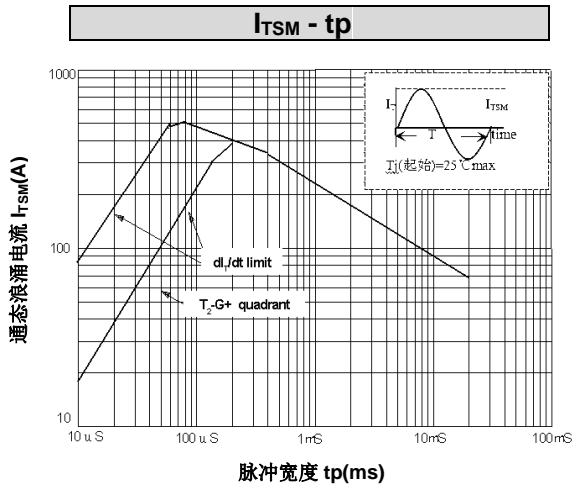
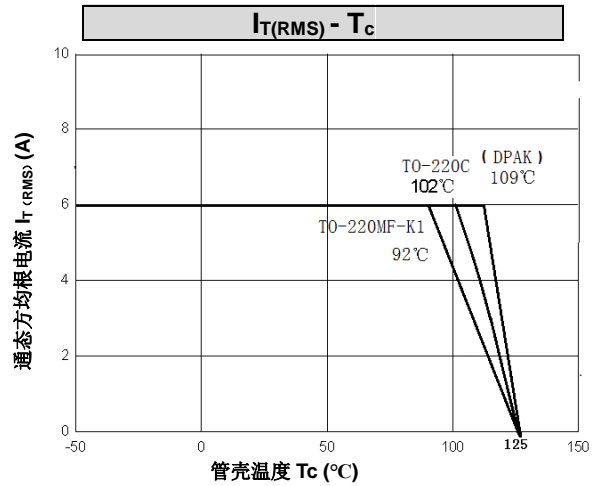
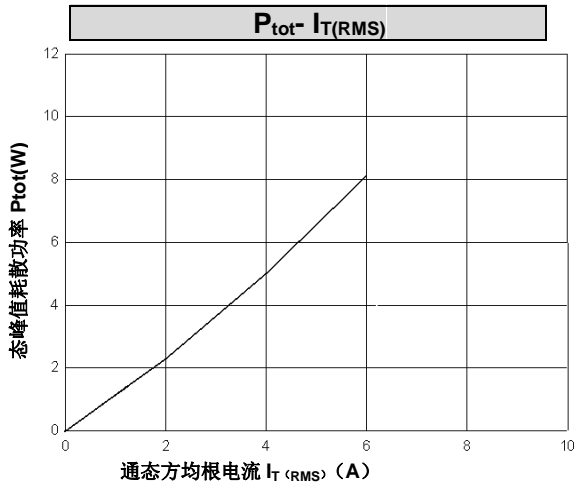
## 热特性 THERMAL CHARACTERISTIC

项 目 Parameter	符 号 Symbol	条 件 Condition	最小 Min	典型 Typ	最大 Max	单 位 Unit
结到管壳的热阻 Thermal resistance junction to case	R <sub>th(j-c)</sub>	full cycle(DPAK\IPAK)			2.0	°C/W
		full cycle(TO-220S\TO-220C)			2.8	°C/W
		full cycle(TO-220MF-K1)			4.1	°C/W





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

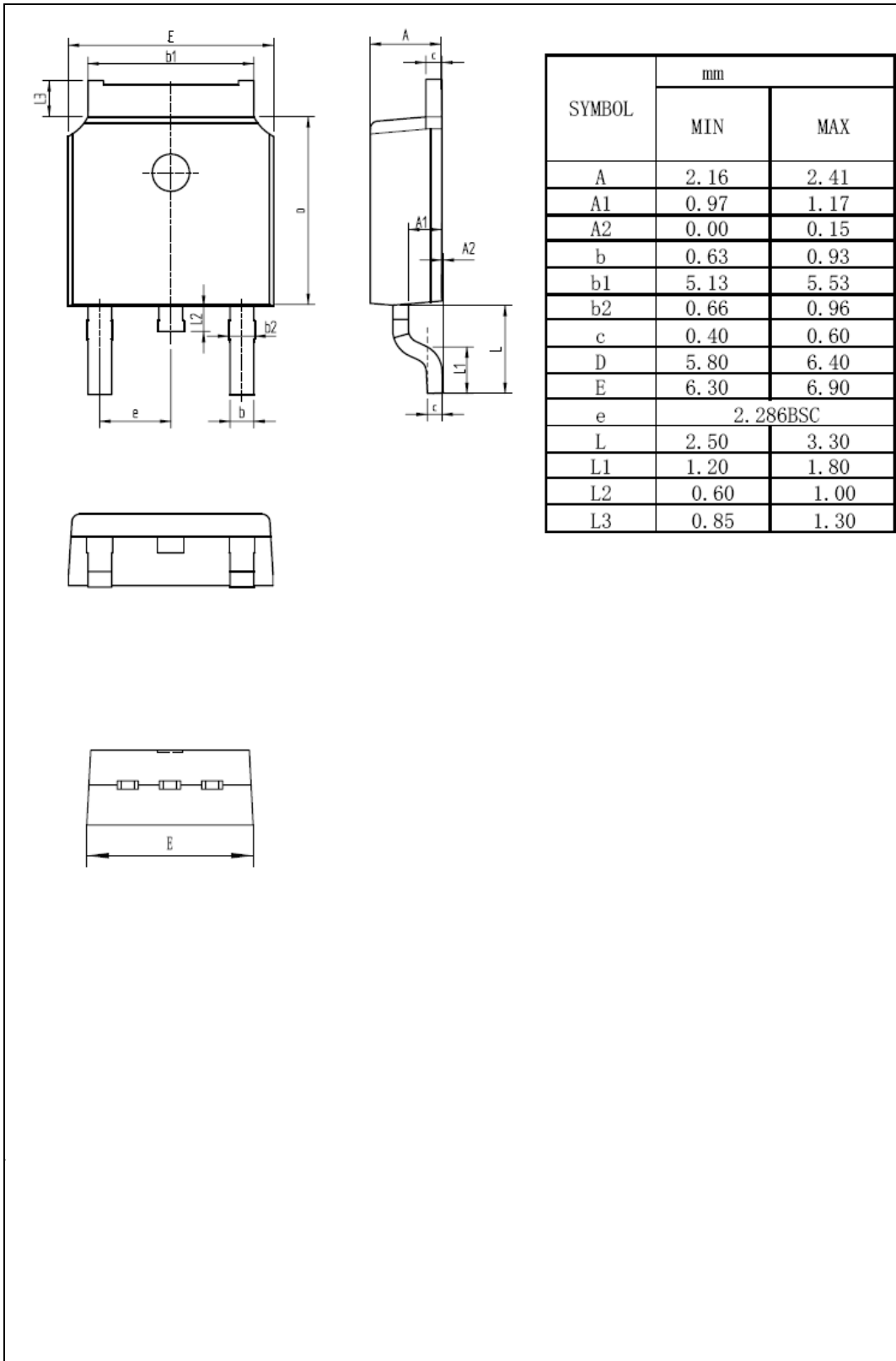


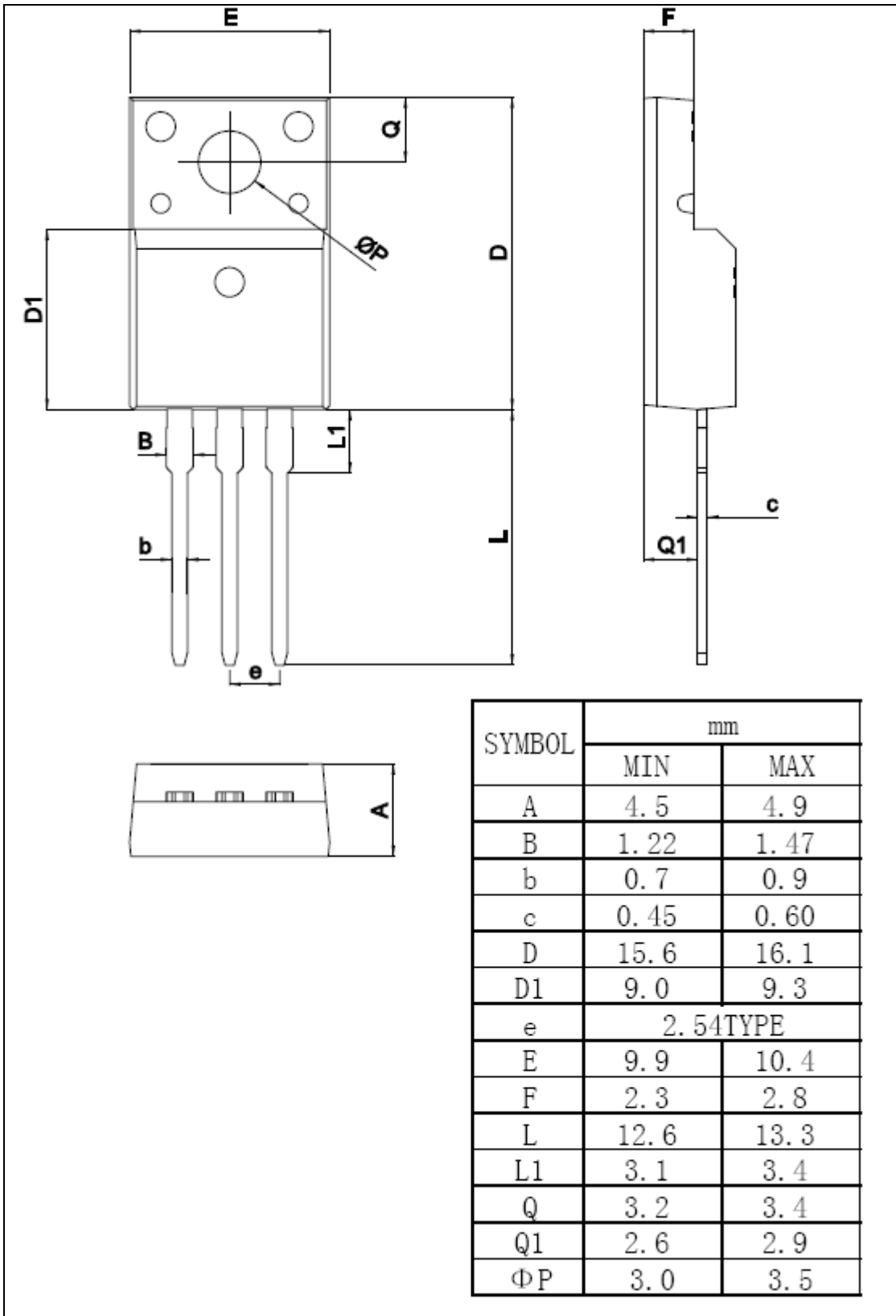


## 外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm



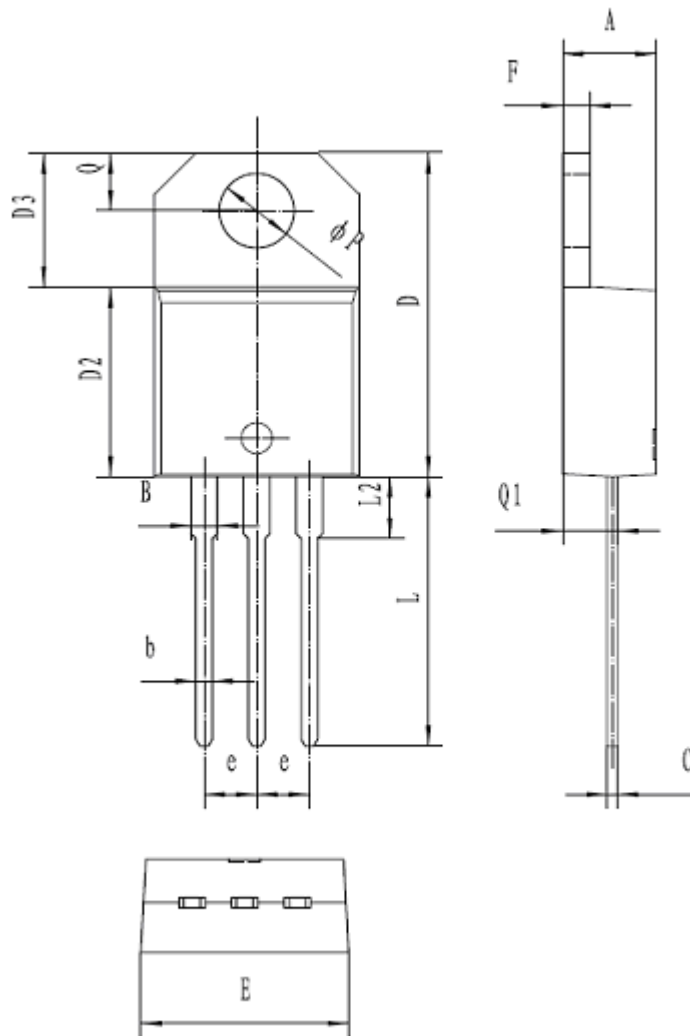




TO-220S

CS625N3A

单位 Unit : mm



符号 symbol	MIN	MAX
A	4.40	4.60
B	1.14	1.70
b	0.61	0.88
C	0.47	0.70
D	15.20	15.90
D2	8.60	9.70
D3	6.20	6.60
E	10.00	10.40
e	2.40	2.70
F	1.23	1.32
L	13.00	14.00
L2	typ. 3.75	
Q	2.65	2.95
Q1	2.89	3.42
P	3.72	3.85

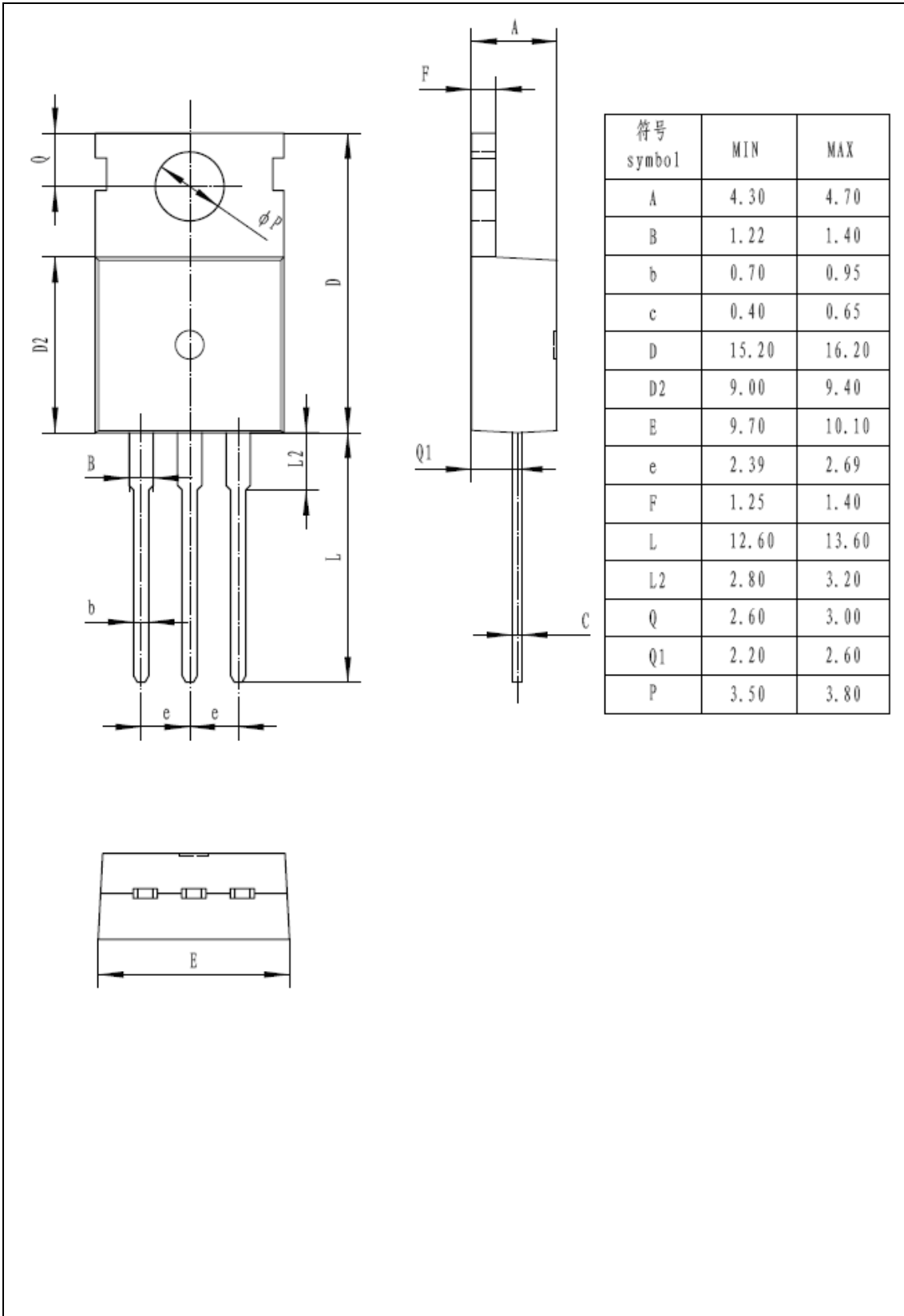




外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit : mm



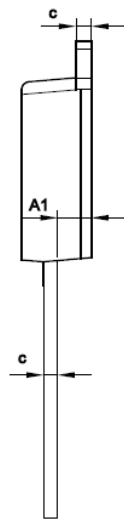
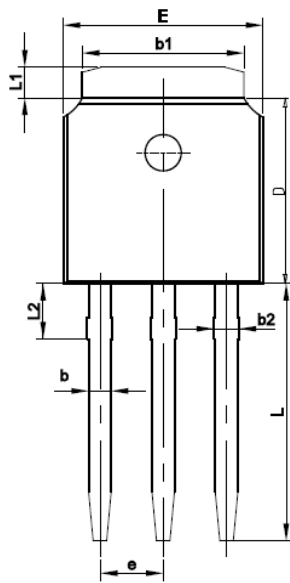




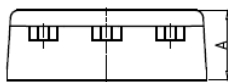
IPAK

CS625N3A

单位 Unit : mm



SYMBOL	MM	
	MIN	MAX
A	2.10	2.50
A1	0.87	1.27
b	0.63	0.93
b1	5.13	5.53
b2	0.67	1.00
c	0.40	0.60
D	5.80	6.40
E	6.30	6.90
L	9.10	9.70
e	2.286BSC	
L1	0.82	1.22
L2	0.90	1.20





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