



CS410N4A

主要参数 MAIN CHARACTERISTICS

$I_T(RMS)$	4A
V_{DRM}	800V
I_{GT}	10mA

用途

交流开关
相位控制

APPLICATIONS

AC switching
Phase control

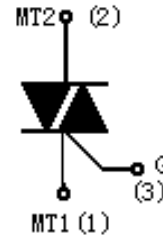
产品特性

玻璃钝化芯片，高可靠性和一致性
低通态电流和高浪涌电流能力
环保 RoHS 产品

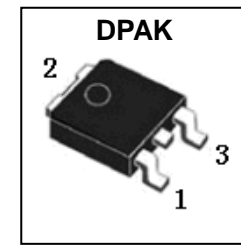
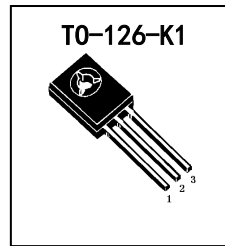
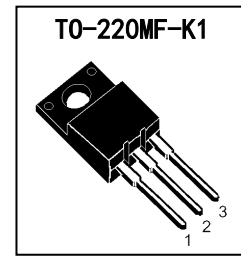
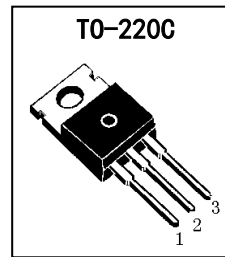
FEATURES

Glass-passivated mesa chip for reliability and uniform
Low on-state voltage and High I_{TSM}
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



订货信息 ORDER MESSAGES

订货型号 Order codes				印记 Marking	封装 Package
有卤-袋装 Halogen-Bag	无卤-袋装 Halogen-Free-Bag	有卤-条管 Halogen-Tube	无卤-条管 Halogen-Free-Tube	CS410N4A	TO-220C
CS410N4A-CA-C	CS410N4A-CA-CR	CS410N4A-CA-B	CS410N4A-CA-BR		
有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel	有卤-袋装 Halogen-Bag	无卤-袋装 Halogen-Free-Bag	CS410N4A	DPAK
CS410N4A-R-A	CS410N4A-R-AR	N/A	N/A		
有卤-袋装 Halogen-Bag	无卤-袋装 Halogen-Free	有卤-条管 Halogen-Tube	无卤-条管 Halogen-Free	CS410N4A	TO-220MF-K1





	e-Bag	e	e- Tube		
CS410N4A -F1-C	CS410N4A -F1-CR	CS410N4A -F1-B	CS410N4A -F1-BR		
有卤-袋装	无卤-袋装	有卤-条管	无卤-条管	CS410N4A	TO-126-K1
Halogen-Bag	Halogen-Fre e-Bag	Halogen-Tub e	Halogen-Fre e- Tube		
CS410N4A -M-C	CS410N4A -M-CR	CS410N4A -M-B	CS410N4A -M-BR		

概述 GENERAL DESCRIPTION

CS410N4A是玻璃钝化芯片结构的四象限双向晶闸管。器件封装形式有TO-220C、TO-126-K1、DPAK和TO-220MF-K1。

CS410N4A are Glass passivated four quadrant triacs. Available packages are TO-220C、TO-126-K1、DPAK and TO-220MF-K1.

绝对最大额定值 ABSOLUTE RATINGS (T_c=25°C)

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 _{DRM}		±600 ±800	V
通态方均根电流 On-state RMS current	I _{T(RMS)}	full sine wave	4	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I _{TSM}	full sine wave ,t=20ms	25	A
		full sine wave ,t=16.7ms	27	A
	I ² t	t=10ms	3.1	A ² s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	I _{TM} =6A, I _G =0.2A, di _G /dt=0.2A/μs	50	A/μs
峰值门极电流 Peak gate current	I _{GM}		2	A
峰值门极电压 Peak gate voltage	V _{GM}		5	V
峰值门极功率 Peak gate power	P _{GM}		5	W
平均门极功率 Average gate power	P _{G(AV)}	over any 20ms period	0.5	W
存储温度 Storage temperature	T _{stg}		-40~150	°C
操作结温 Operation junction temperature	T _{VJ}		125	°C



电特性 ELECTRICAL CHARACTERISTIC (T_c=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 _{DRM}	V _{DM} =V _{DRM} , T _j =25°C, gate open	-	-	10	μA	
		V _{DM} =V _{DRM} , T _j =125°C, gate open	-	-	0.5	mA	
峰值通态电压 Peak on-state voltage	V _{TM}	I _{TM} =5.6A	-	-	1.6	V	
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100 Ω	MT1(-),MT2(+),G(+)	-	-	10	mA
			MT1(-),MT2(+),G(-)	-	-	10	mA
			MT1(+),MT2(-),G(-)	-	-	10	mA
			MT1(+),MT2(-),G(+)	-	-	25	mA
门极触发电压 Gate trigger voltage	V _{GT}	V _{DM} =12V, R _L =100 Ω	MT1(-),MT2(+),G(+)	-	-	1.5	V
			MT1(-),MT2(+),G(-)	-	-	1.5	V
			MT1(+),MT2(-),G(-)	-	-	1.5	V
			MT1(+),MT2(-),G(+)	-	-	2.0	V
维持电流 Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A	-	-	20	mA	
擎住电流 Latching current	I _L	V _{DM} =12V, I _{GT} =0.1A	-	-	30	mA	
断态临界电压上升率 Rise of off- state voltage	dV/dt	V _{DM} =67% V _{DRM(MAX)} , T _j =125°C, gate open	150	-	-	V/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 _{th(j-c)}	full cycle(TO-220C/TO-126-K1/ DPAK)			3.0	°C/W
		full cycle(TO-220MF-K1)			5.5	°C/W

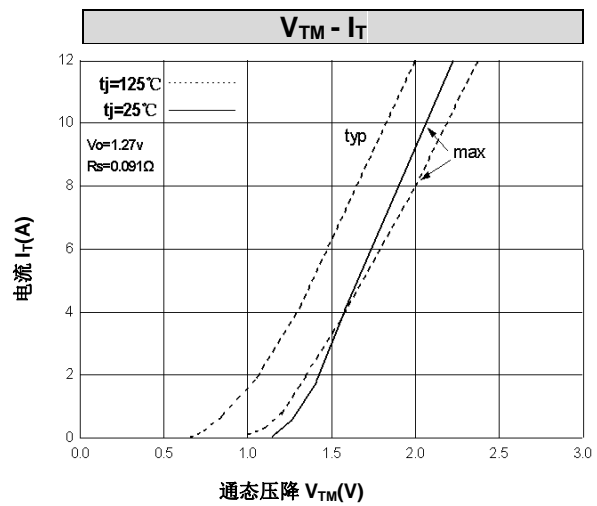
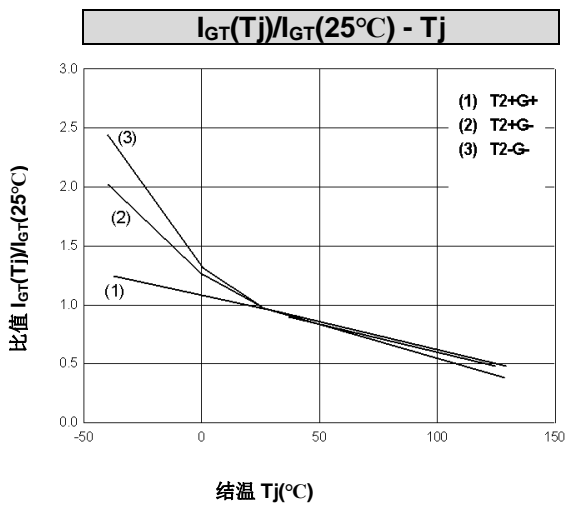
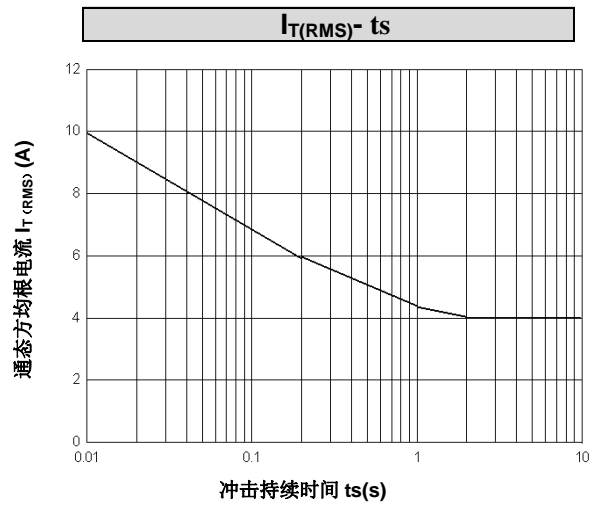
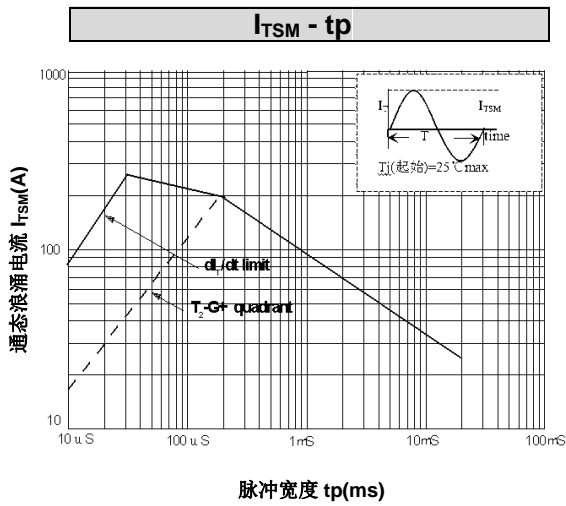
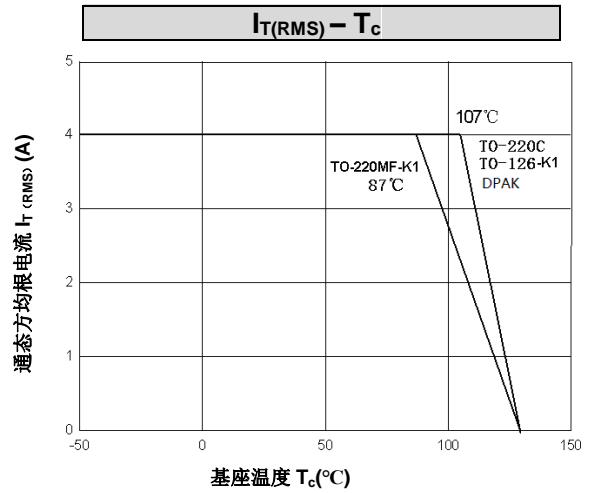
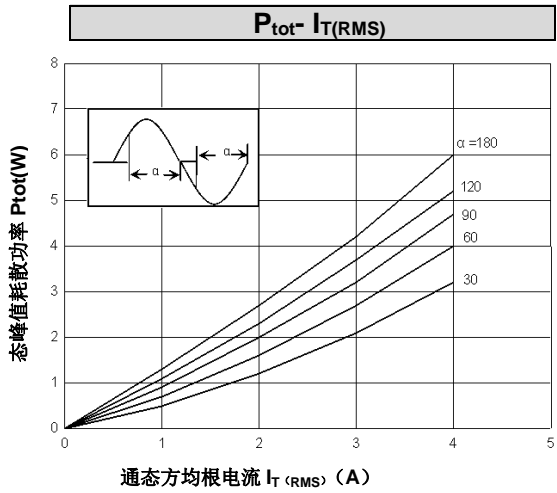
电绝缘特性 ELECTRICAL ISOLATION

项 目 Parameter	符 号 Symbol	条 件 Condition	数 值 Value	单 位 Unit
绝缘电压 Isolation voltage	V _{ISOL}	1 minute, leads to mounting tab TO-220MF-K1	2000	V





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

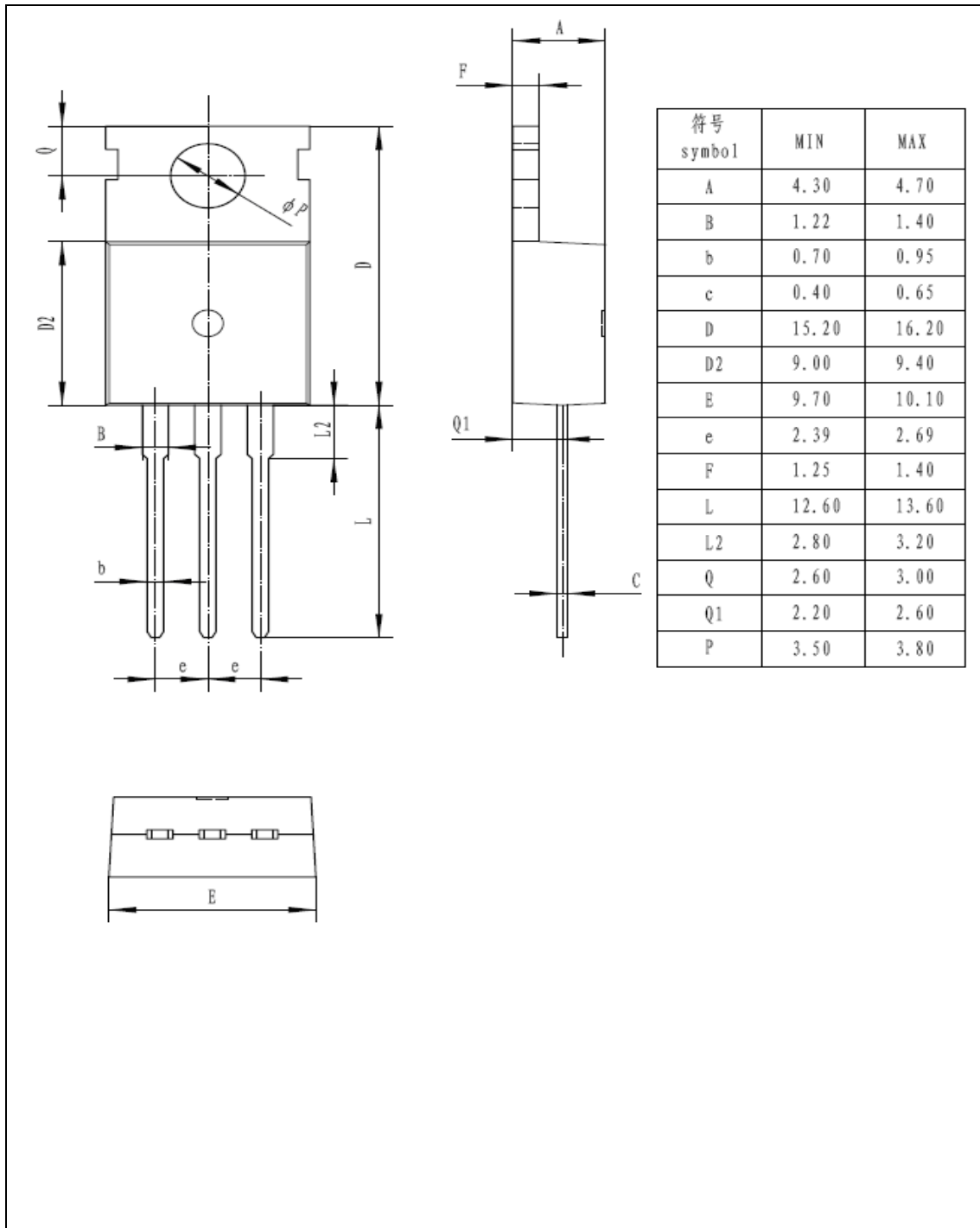




外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit : mm

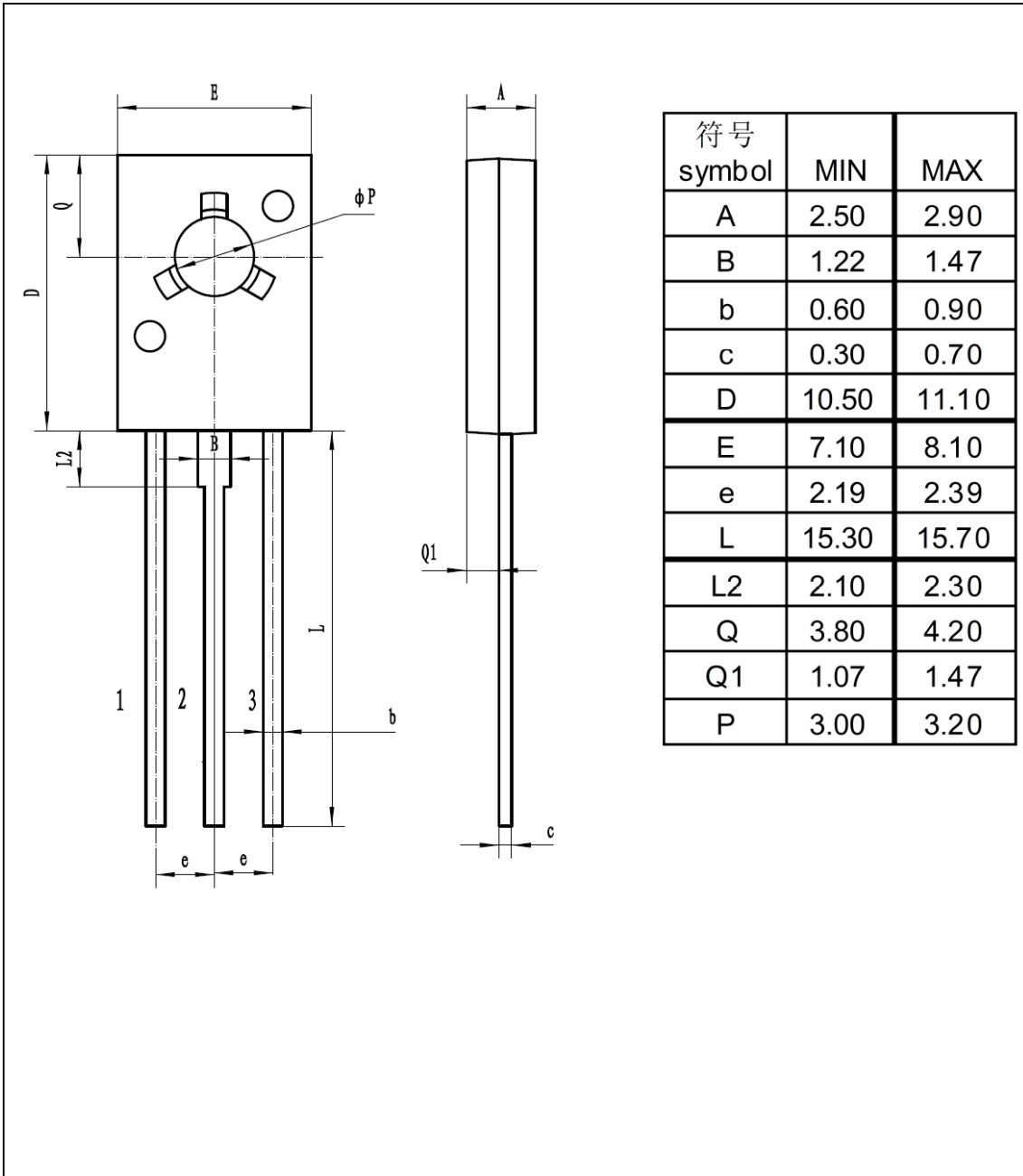




外形尺寸 PACKAGE MECHANICAL DATA

TO-126

单位 Unit : mm

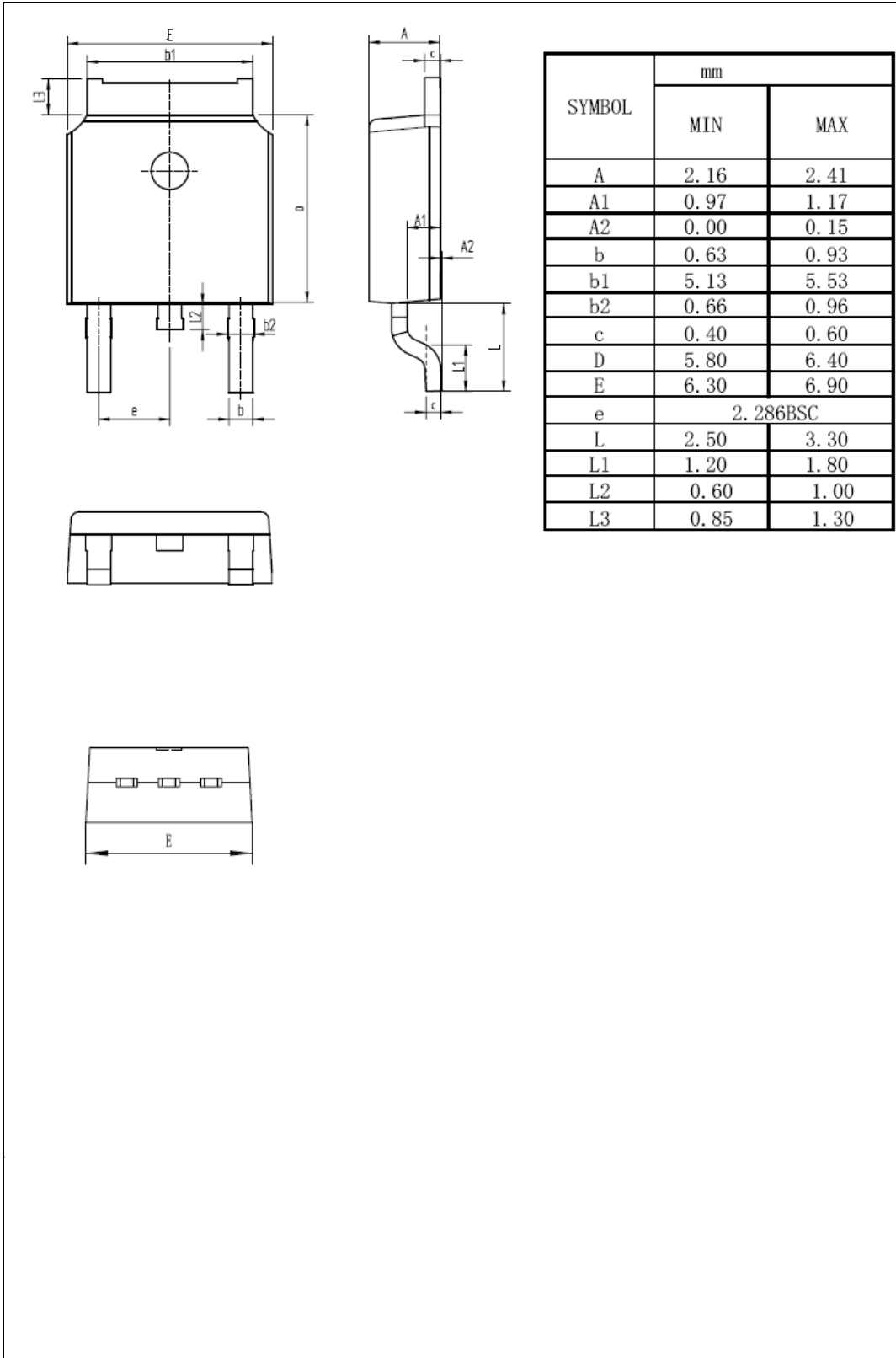




外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm

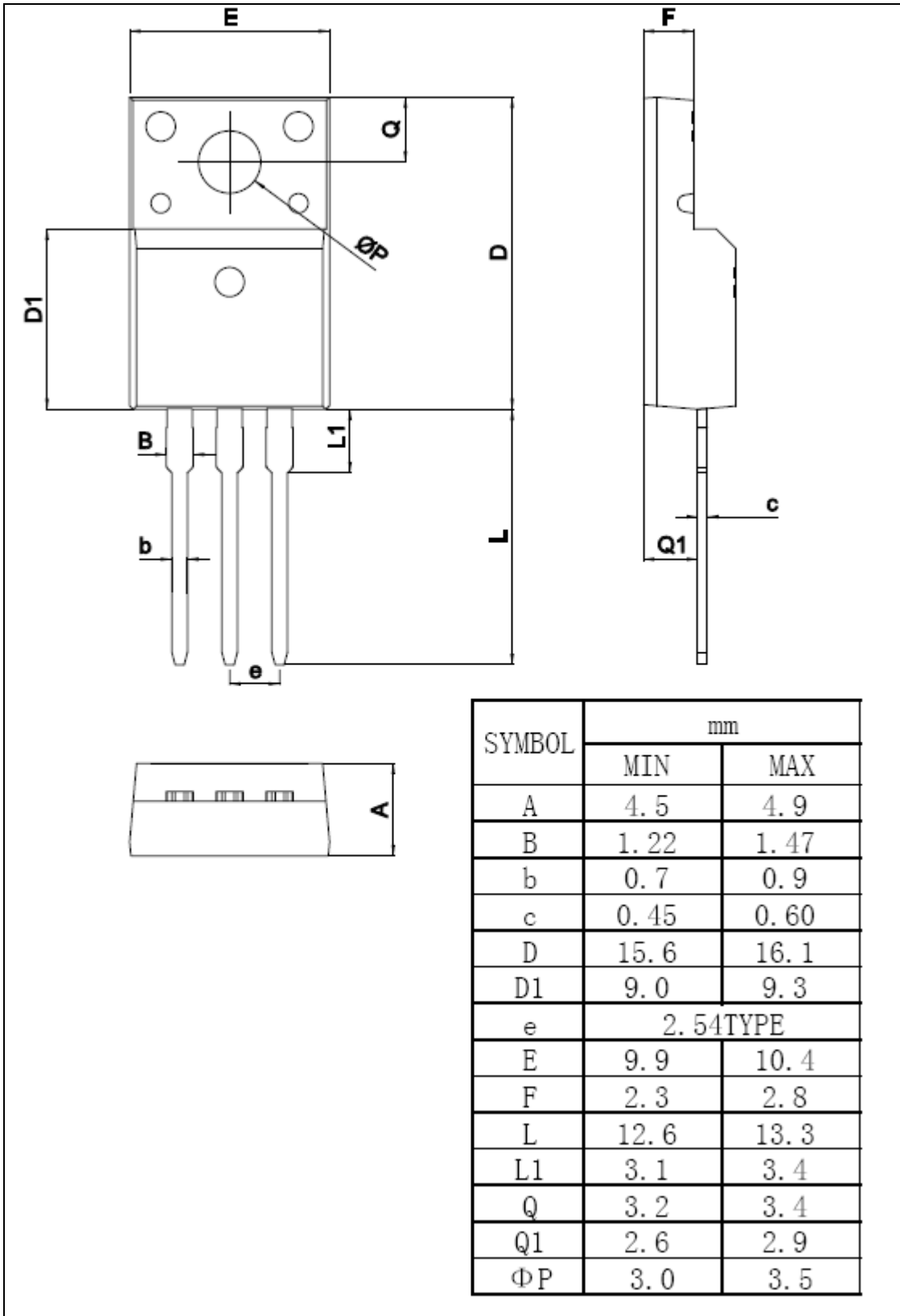




外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF-K1

单位 Unit : mm





注意事项

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4. 本说明书如有版本变更不另外告知。

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this. specification sheet and is subject to change without prior notice.

联系方式

吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：www.hwdz.com.cn

CONTACT

JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: www.hwdz.com.cn

