



Z0405 (NM、NU、NC、NF1)

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	4A
V_{DRM}	800V
I_{GT}	5mA

用途

交流开关
相位控制

APPLICATIONS

AC switching
Phase control

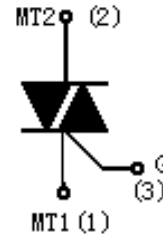
产品特性

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

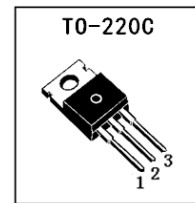
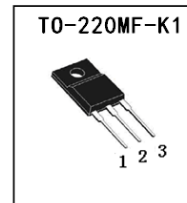
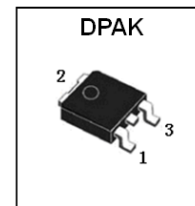
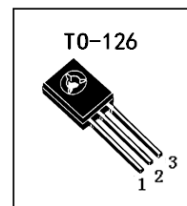
FEATURES

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-条管	无卤-条管	有卤-袋装	无卤-袋装		
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag		
Z0405NM-M-B	Z0405NM-M-BR	Z0405NM-M-C	Z0405NM-M-CR	Z0405NM	TO-126
Z0405NU-C-B	Z0405NU-C-BR	Z0405NU-C-C	Z0405NU-C-CR	Z0405NU	DPAK
Z0405NC-CA-B	Z0405NC-CA-BR	Z0405NC-CA-C	Z0405NC-CA-CR	Z0405NC	TO-220C
Z0405NF1-F1-B	Z0405NC-F1-BR	N/A	N/A	Z0405NF1	TO-220MF-K1





Z0405NM/Z0405NU/Z0405NC/ Z0405NF1

概述 GENERAL DESCRIPTION

Z0405NM/Z0405NU/Z0405NC/ Z0405NF1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-126、DPAK、TO-220C、TO-220MF-K1。

Z0405NM/Z0405NU/Z0405NC/ Z0405NF1 are Glass passivated four quadrant triacs.

Available package are TO-126、DPAK、TO-220C、TO-220MF-K1.

绝对最大额定值 ABSOLUTE RATINGS (T_c=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 _{DRM}		±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	℃
操作结温 Operation junction temperature	T _{VJ}		125	℃



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	μ A	
		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} =5A	-	-	1.7	V	
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100 Ω	MT1(-),MT2(+),G(+)	-	-	5	mA
			MT1(-),MT2(+),G(-)	-	-	5	mA
			MT1(+),MT2(-),G(-)	-	-	5	mA
			MT1(+),MT2(-),G(+)	-	-	10	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(+)	-	-	1.5	V
维持电流 Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A	-	-	10	mA	
擎住电流 Latching current	I _L	I, III	-	-	15	mA	
		II, IV	-	-	20	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	-	5	-	V/ μ s	
门极开通时间 Gate controlled turn-on time	t _{gt}	I _{TM} =6A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/ μ S	-	2	-	μ s	

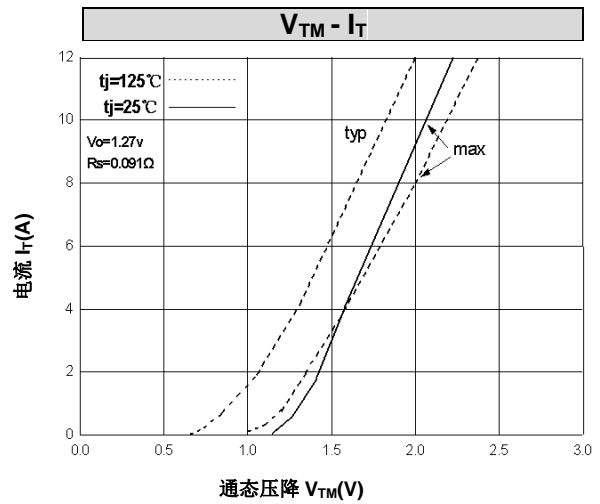
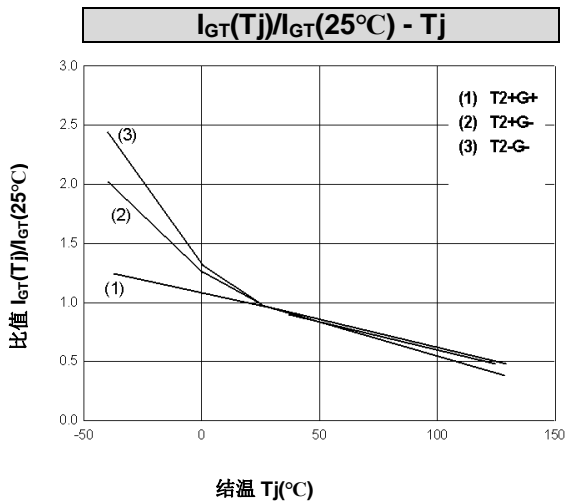
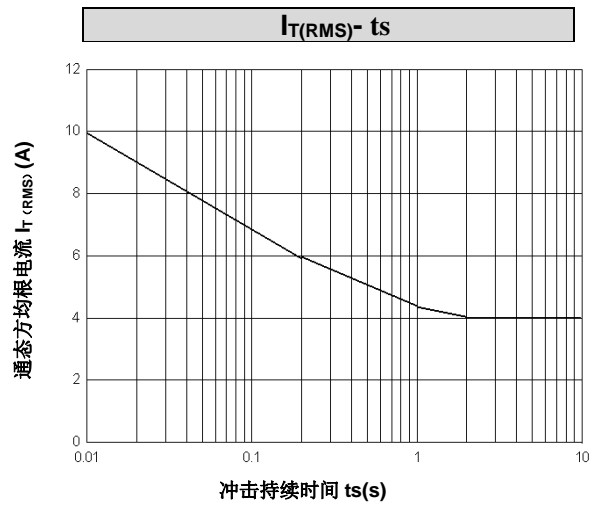
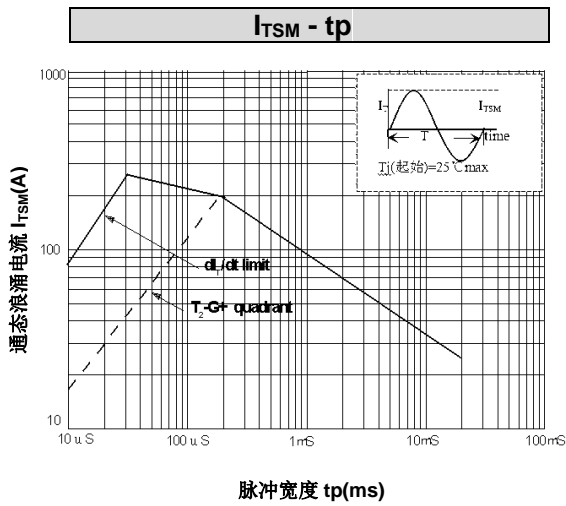
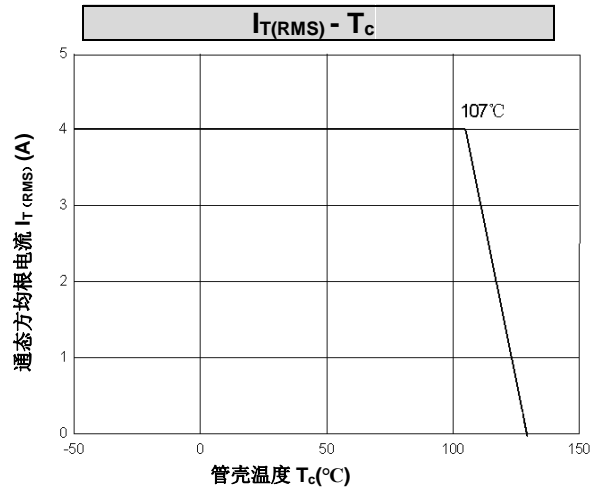
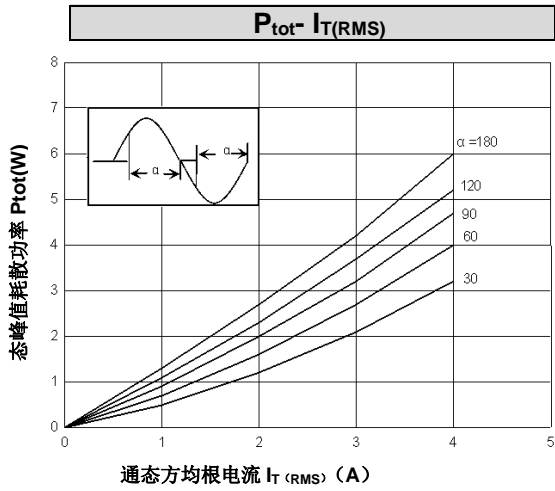
热特性 THERMAL CHARACTERISTIC

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-126/DPAK/TO-220C)			3.0	°C/W
结到管壳的热阻 Thermal resistance junction to case	R _{th(j-c)}	full cycle (TO-220MF-K1)			5.5	°C/W





特征曲线 ELECTRICAL CHARACTERISTICS (curves)



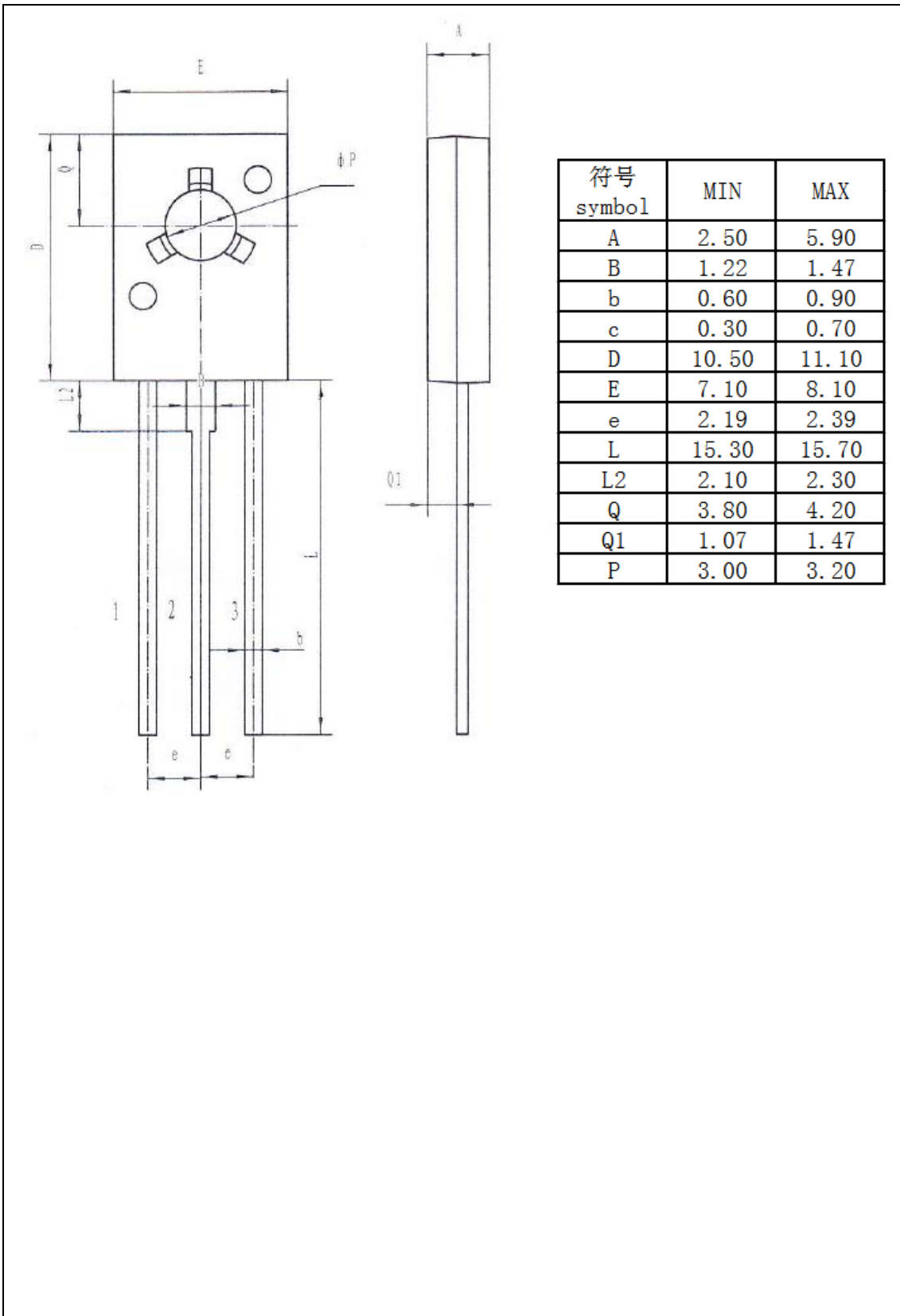


Z0405NM/Z0405NU/Z0405NC/ Z0405NF1

外形尺寸 PACKAGE MECHANICAL DATA

TO-126

单位 Unit : mm



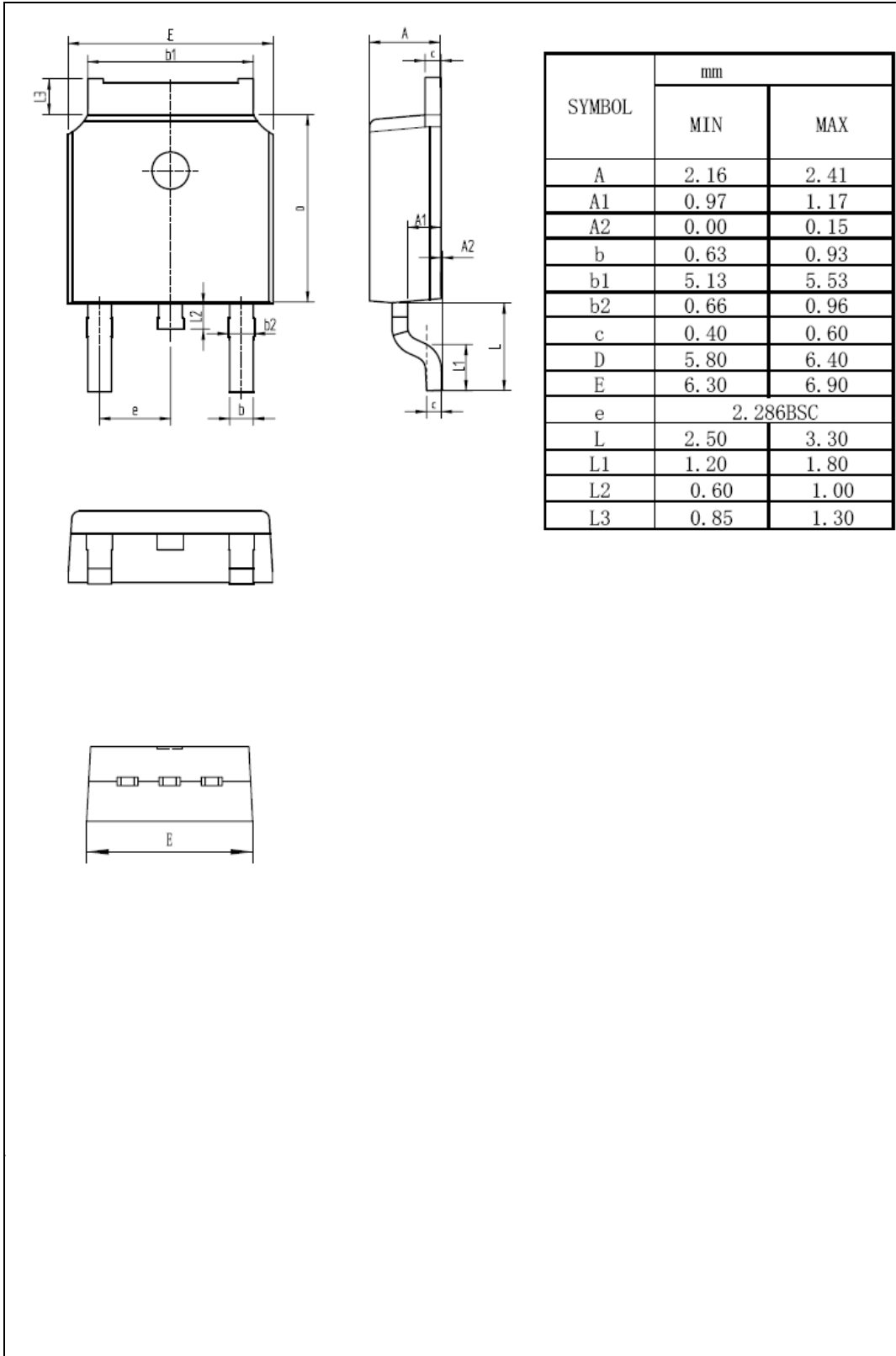


Z0405NM/Z0405NU/Z0405NC/ Z0405NF1

外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm



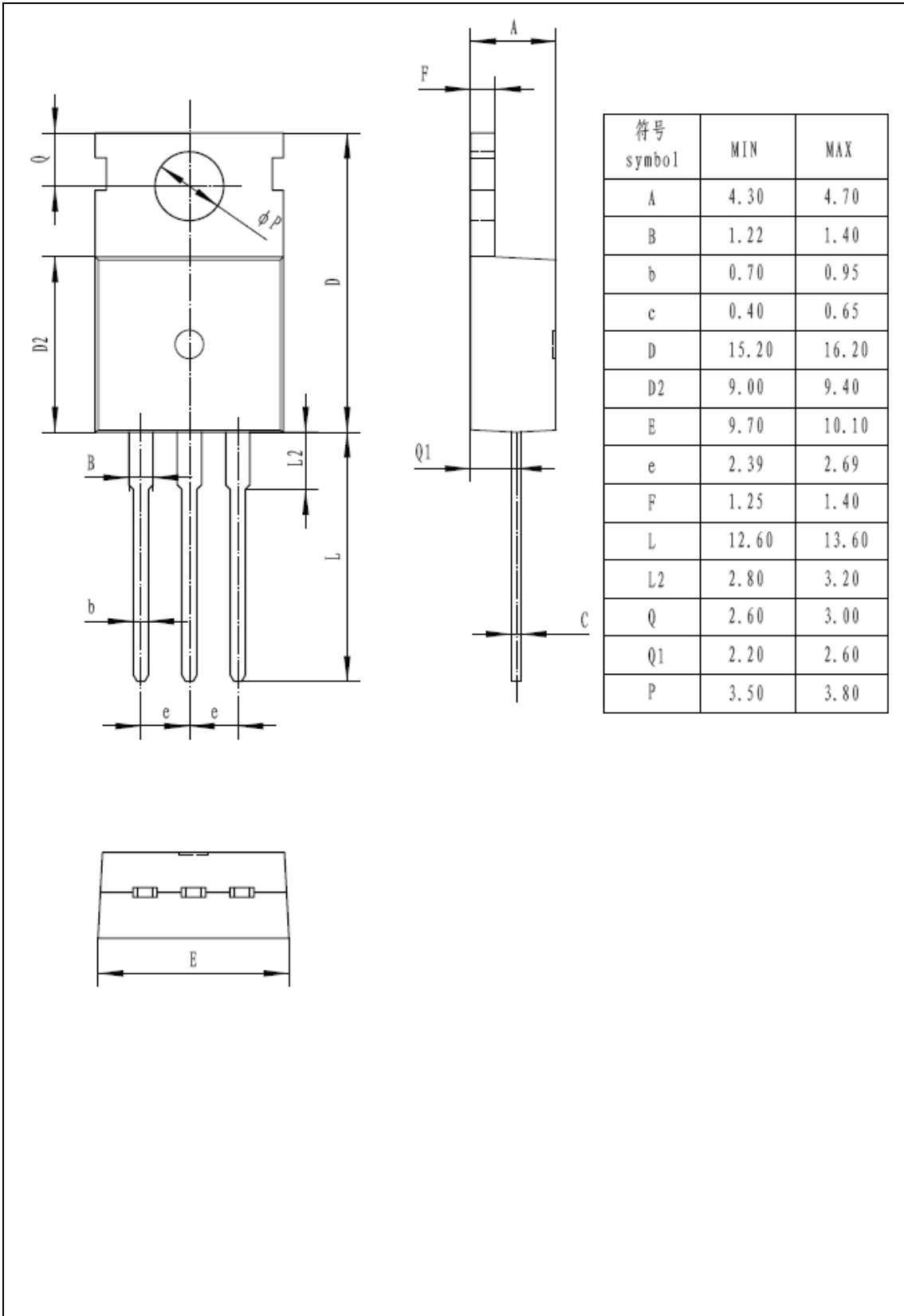


Z0405NM/Z0405NU/Z0405NC/ Z0405NF1

外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit : mm



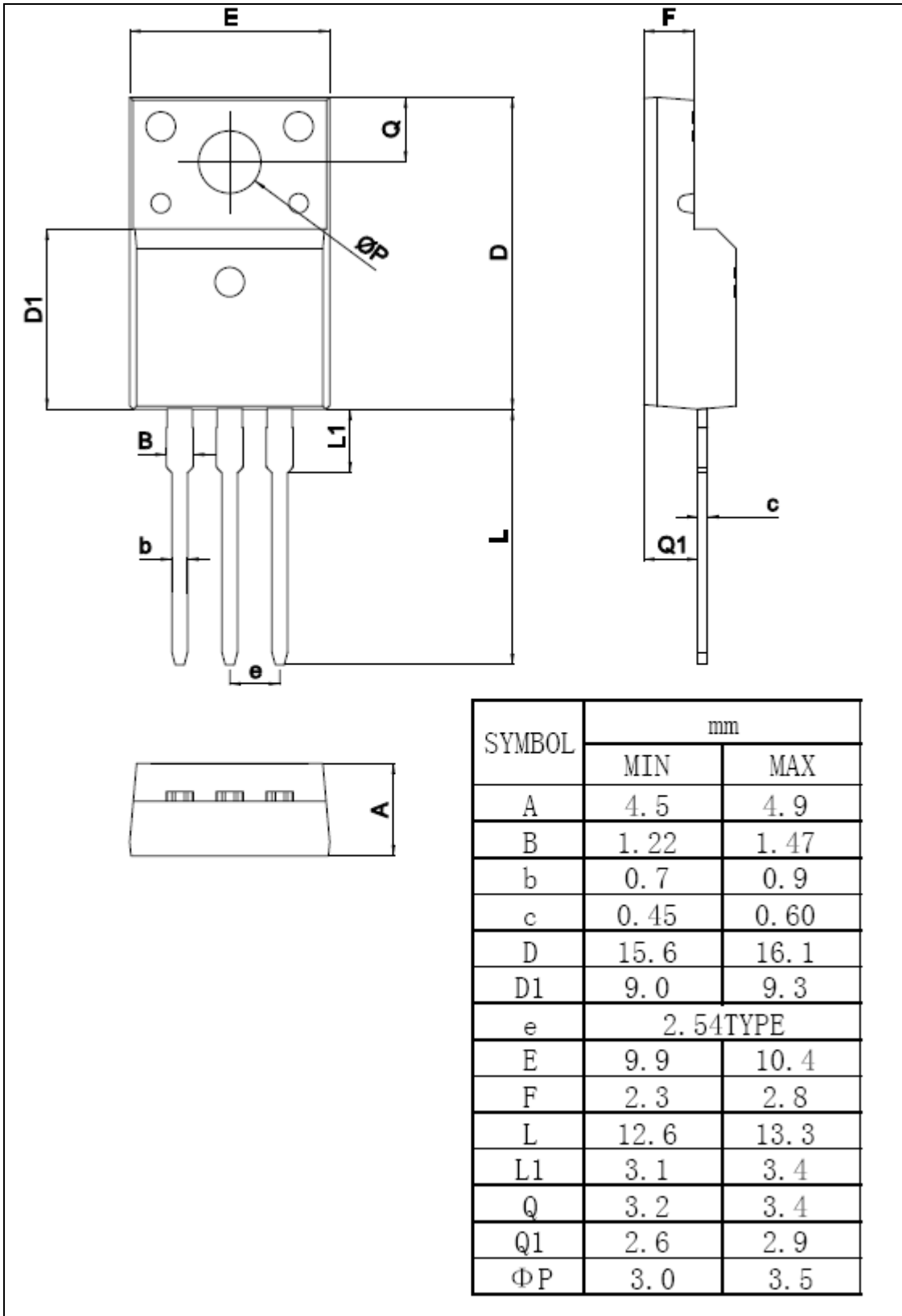


Z0405NM/Z0405NU/Z0405NC/ Z0405NF1

外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF-K1

单位 Unit : mm





注意事项

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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知

NOTE

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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
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.

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