



# T0410H (U、Z)

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	4A
$V_{DRM}$	950V
$I_{GT}$	10mA

### 用途

- 交流开关
- 相位控制

### APPLICATIONS

- AC switching
- Phase control

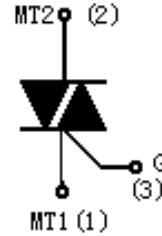
### 产品特性

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

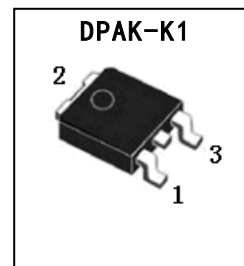
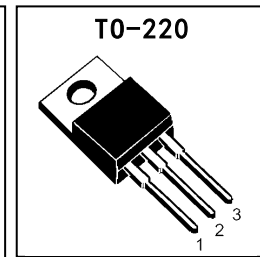
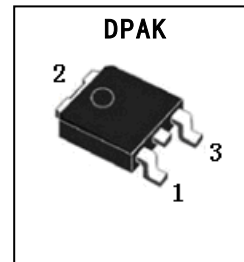
### FEATURES

- 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



## 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	T0410HZ	T0-220
T0410HZ-CA-B	T0410HZ-CA-BR	T0410HZ-C-C	T0410HZ-CA-CR		
有卤-编带	无卤-编带	N/A	N/A	印 记 Marking	封 装 Package
Halogen-Reel	Halogen-Free-Reel	N/A	N/A		
T0410HU-R-A	T0410HU-R-AR	N/A	N/A	T0410HU	DPAK
T0410HU-RA-A	T0410HU-RA-AR	N/A	N/A	T0410HU	DPAK-K1



**概述 GENERAL DESCRIPTION**

T0410H (U、Z) 是玻璃钝化芯片结构的三象限双向晶闸管，产品在第四象限不可触发，具有较高的使用可靠性。器件封装形式有DPAK、DPAK-K1、TO-220。

T0410H(U、Z) are Glass passivated three quadrant triacs. Available packages are DPAK、DPAK-K1、TO-220.

**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>		±950	V
通态方均根电流 On-state RMS current	I <sub>T(RMS)</sub>	full sine wave	4	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	35	A
		full sine wave ,t=16.7ms	38	A
	I <sup>2</sup> t	t=10ms	6.1	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 ( $T_c=25^\circ\text{C}$ )

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	$I_{\text{DRM}}$	$V_{\text{DM}}=950\text{V}$ , $T_j=125^\circ\text{C}$ , gate open		-	-	0.5	mA
峰值通态电压 Peak on-state voltage	$V_{\text{TM}}$	$I_{\text{TM}}=5\text{A}$		-	1.3	1.5	V
门极触发电流 Gate trigger current	$I_{\text{GT}}$	$V_{\text{DM}}=12\text{V}$ , $R_L=100\ \Omega$	MT1(-),MT2(+),G(+)	-	-	10	mA
			MT1(-),MT2(+),G(-)	-	-	10	mA
			MT1(+),MT2(-),G(-)	-	-	10	mA
门极触发电压 Gate trigger voltage	$V_{\text{GT}}$	$V_{\text{DM}}=12\text{V}$ , $R_L=100\ \Omega$	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	$I_{\text{H}}$	$V_{\text{DM}}=12\text{V}$ , $I_{\text{GT}}=0.1\text{A}$		-	-	15	mA
擎住电流 Latching current	$I_{\text{L}}$	$V_{\text{DM}}=12\text{V}$ , $I_{\text{GT}}=0.1\text{A}$	MT1(-),MT2(+),G(+)	-	-	20	mA
			MT1(-),MT2(+),G(-)	-	-	25	mA
			MT1(+),MT2(-),G(-)	-	-	20	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	$V_{\text{DM}}=67\% V_{\text{DRM(MAX)}}$ , $T_j=125^\circ\text{C}$ , gate open		100	-	-	V/ $\mu\text{s}$
门极开通时间 Gate controlled turn-on time	tgt	$I_{\text{TM}}=6\text{A}$ , $V_{\text{DM}}=V_{\text{DRM(MAX)}}$ , $I_{\text{G}}=0.1\text{A}$ , $dI_{\text{G}}/dt=5\text{A}/\mu\text{S}$		-	2	-	$\mu\text{s}$

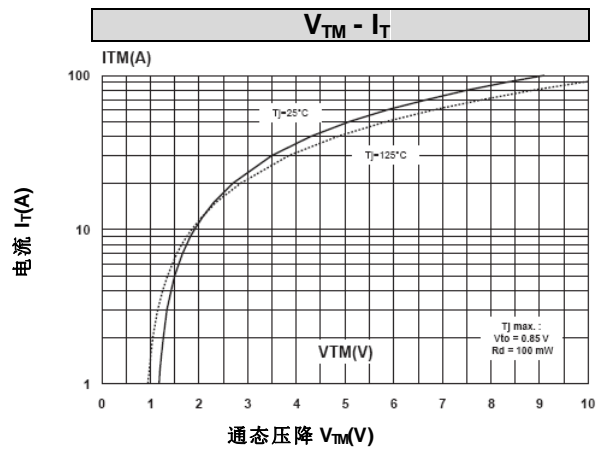
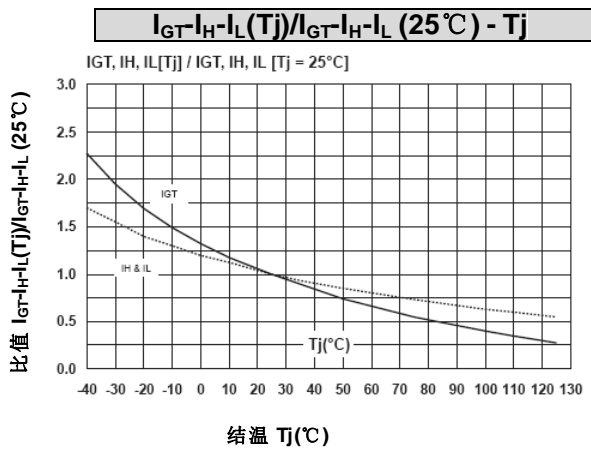
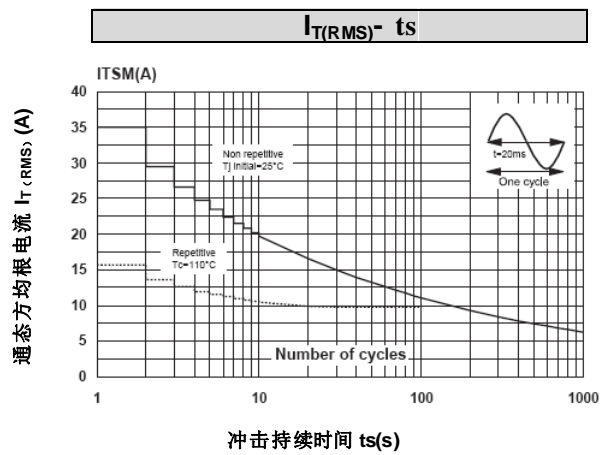
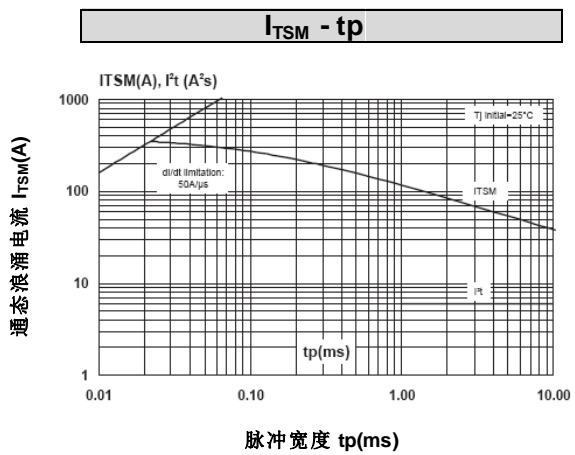
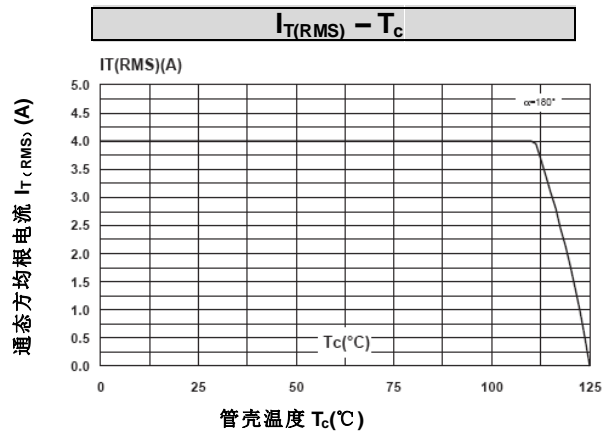
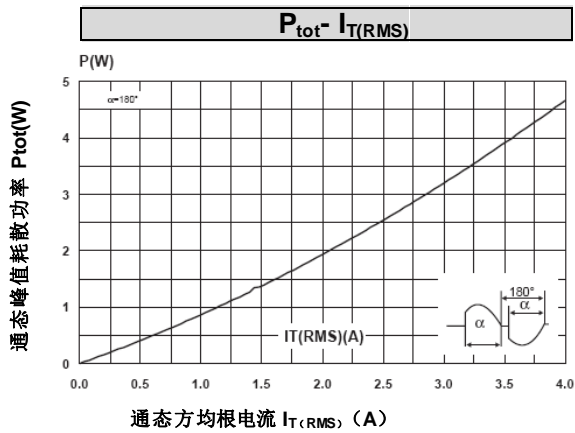
## 热特性 THERMAL CHARACTERISTIC

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	$R_{\text{th(j-c)}}$	full cycle(DPAK、DPAK-K1、 TO-220)			3.0	$^\circ\text{C}/\text{W}$





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

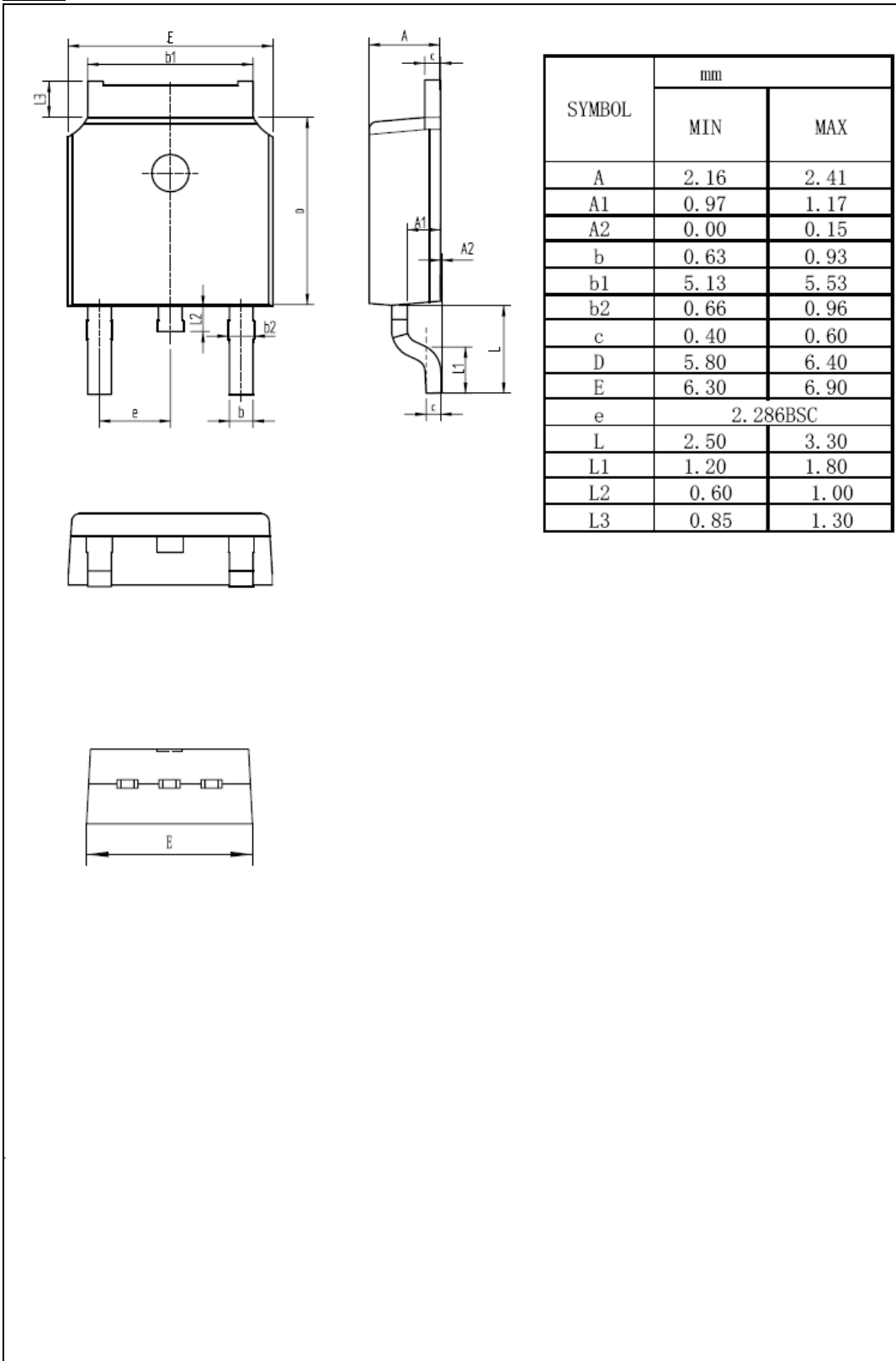




## 外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm

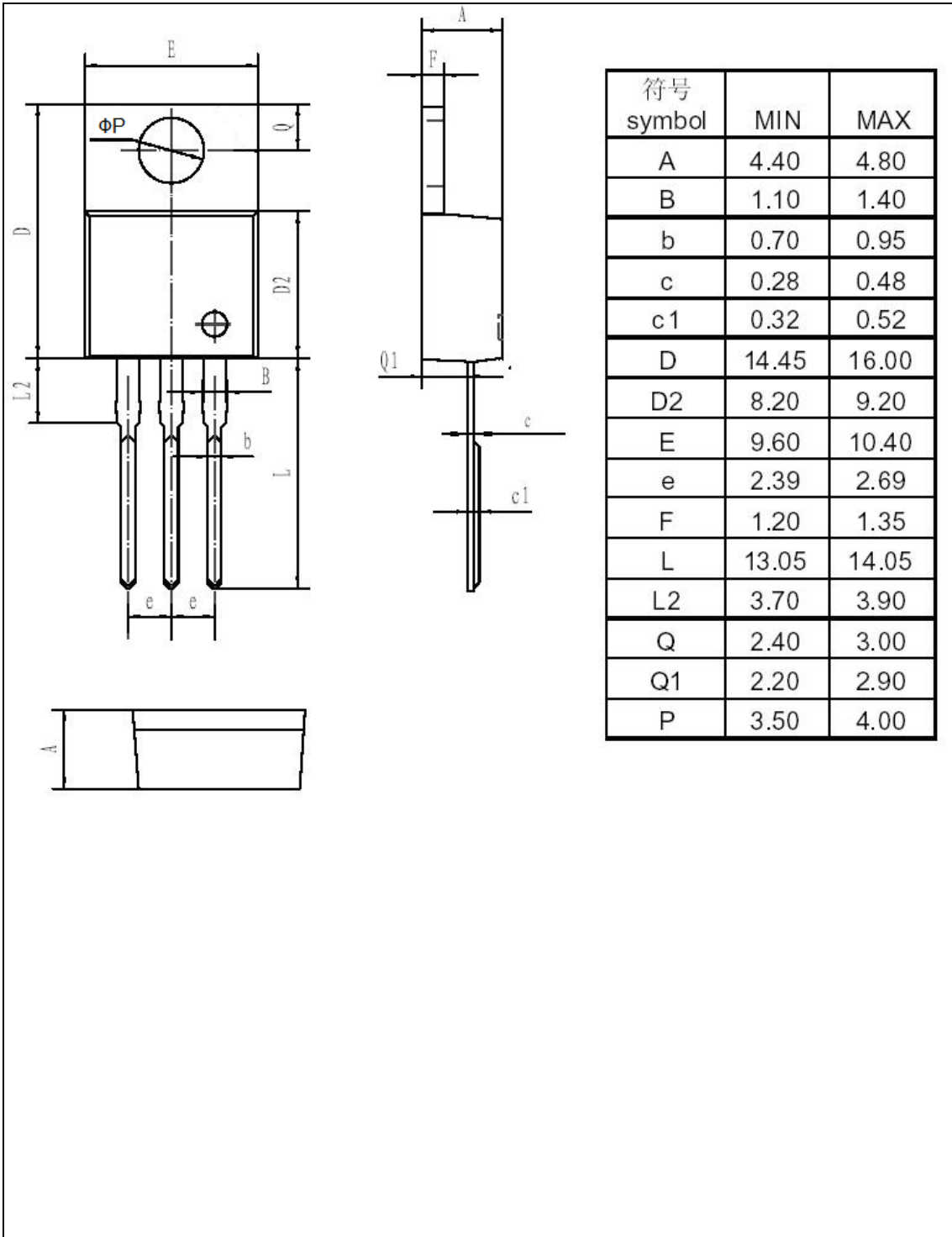




## 外形尺寸 PACKAGE MECHANICAL DATA

TO-220

单位 Unit : mm

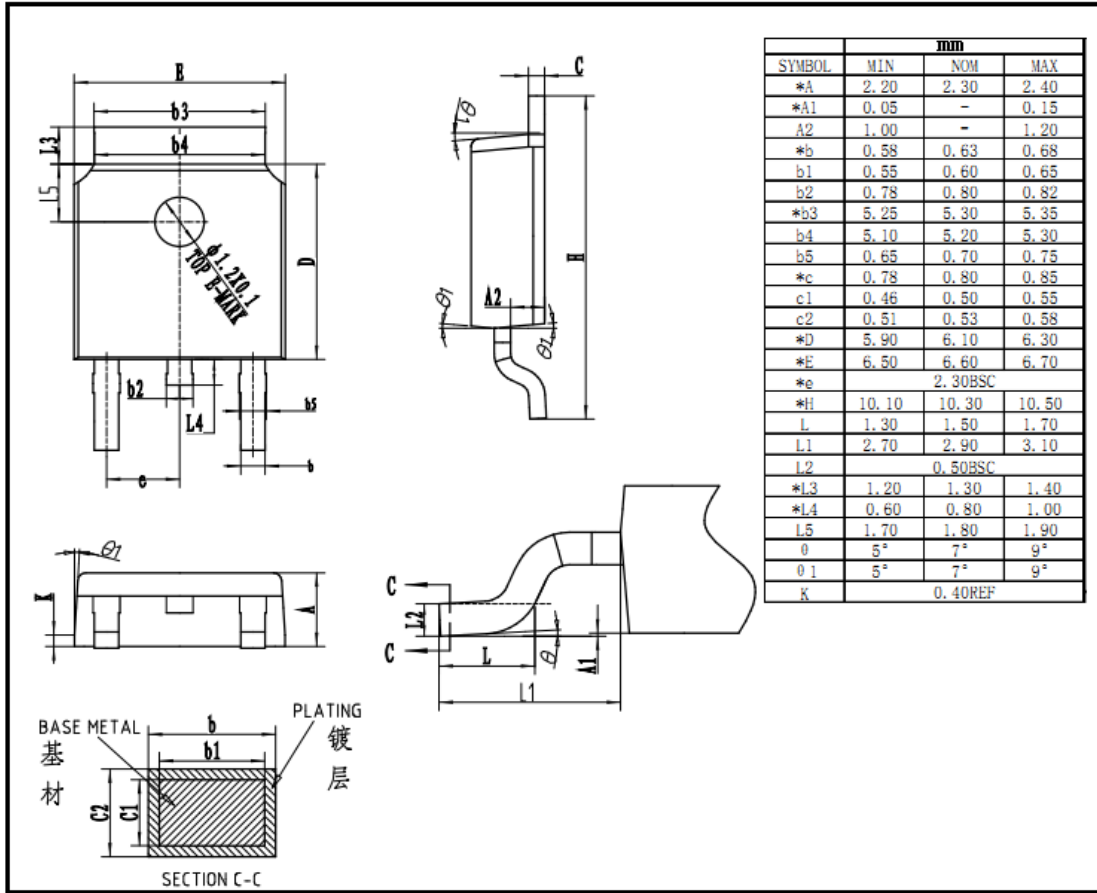




# T0410H (U, Z)

DPAK-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

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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.

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