

CS810N3A

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	8A
V_{DRM}	800V
I_{GT}	10mA

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
- 低通态电流和高浪涌电流能力
- 环保 RoHS 产品

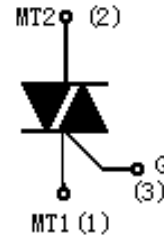
APPLICATIONS

- AC switching
- Phase control

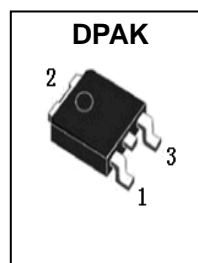
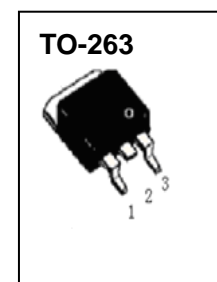
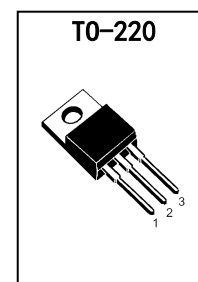
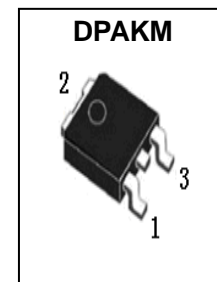
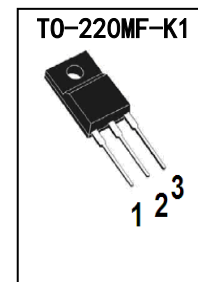
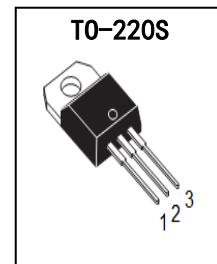
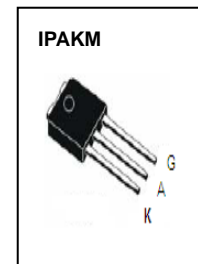
FEATURES

- Glass-passivated mesa chip for high 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-编带	无卤-编带	N/A	N/A	CS810N3A	DPAK
Halogen-Reel	Halogen-Free-Reel	N/A	N/A		
CS810N3A-R-A	CS810N3A-R-AR	N/A	N/A		
CS810N3A-RM-A	CS810N3A-RM-AR	N/A	N/A	CS810N3A	DPAKM
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS810N3A	IPKAM
Halogen-Tube	halogen-Free-Tube	Halogen- Bag	Halogen-Free-Bag		
CS810N3A-VM-B	CS810N3A-VM-BR	CS810N3A-VM-C	CS810N3A-VM-CR		
CS810N3A-VP-B	CS810N3A-VP-BR	N/A	N/A	CS810N3A	IPAK-W
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS810N3A	TO-220S
Halogen-Tube	halogen-Free-Tube	Halogen- Bag	Halogen-Free-Bag		
CS810N3A-CB-B	CS810N3A-CB-BR	CS810N3A-CB-C	CS810N3A-CB-CR		
CS810N3A-S-B	CS810N3A-S-BR	CS810N3A-S-C	CS810N3A-S-CR	CS810N3A	TO-263
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS810N3A	TO-220MF-K1
Halogen-Tube	halogen-Free-Tube	Halogen- Bag	Halogen-Free-Bag		
CS810N3A-F1-B	CS810N3A-F1-BR	CS810N3A-F1-C	CS810N3A-F1-CR		
有卤-条管	无卤-条管	有卤-袋装	有卤-袋装	CS810N3A	TO-220
Halogen-Tube	halogen-Free-Tube	Halogen- Bag	Halogen-Free-Bag		
CS810N3A-CA-B	CS810N3A-CA-BR	CS810N3A-CA-C	CS810N3A-CA-CR		

绝对最大额定值 ABSOLUTE RATINGS ($T_c=25^\circ\text{C}$)

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}		± 800	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave	8	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	65	A
		full sine wave ,t=16.7ms	71	A
	I^2t	t=10ms	21	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	$I_{\text{TM}}=12\text{A}$, $I_{\text{G}}=0.2\text{A}$, $di_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
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	$P_{\text{G(AV)}}$	over any 20ms period	0.5	W
存储温度 Storage temperature	T_{stg}		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	T_{VJ}		125	$^\circ\text{C}$

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 =125°C, gate open	-	0.1	0.5	mA
峰值通态电压 Peak on-state voltage	V _{TM}	I _{TM} =10A	-	1.35	1.65	V
门极触发电压 Gate trigger voltage	V _{GT}	V _{DM} =12V, R _L =100Ω	-	-	1.5	V
门极开通时间 Gate controlled turn-on time	t _{gt}	I _{TM} =12A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/μS	-	2	-	μs
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100Ω	≤10			mA
		MT1(-),MT2(+),G(+)				mA
		MT1(-),MT2(+),G(-)				mA
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	≤35			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	10	-	-	V/μs

热特性 THERMAL CHARACTERISTIC

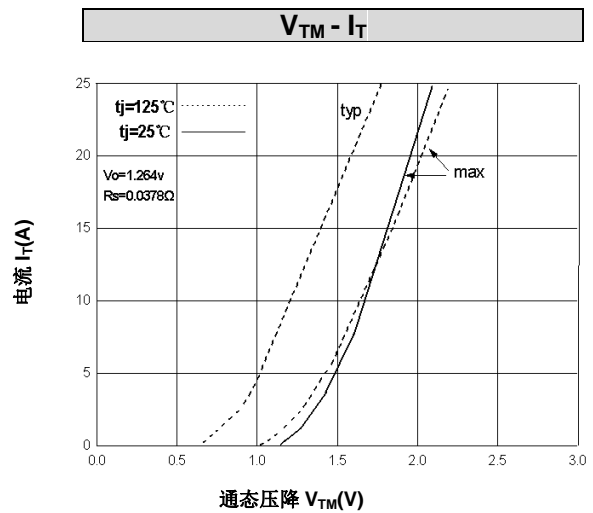
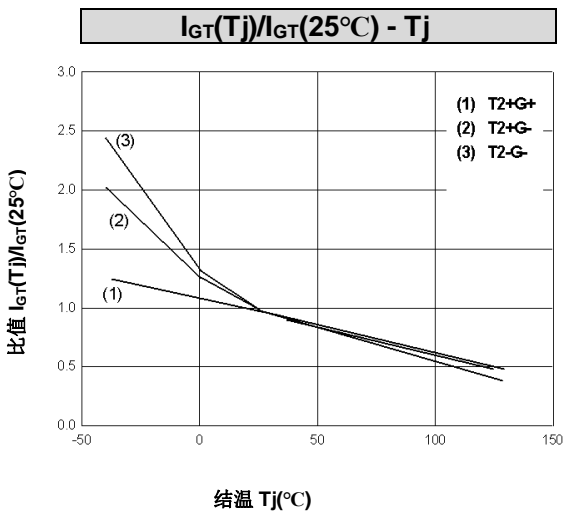
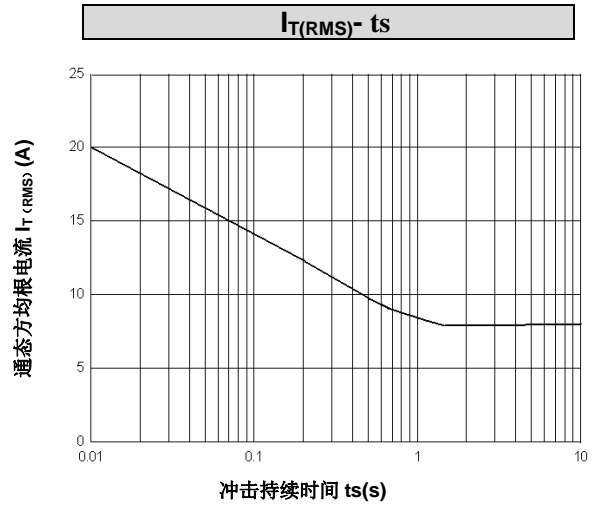
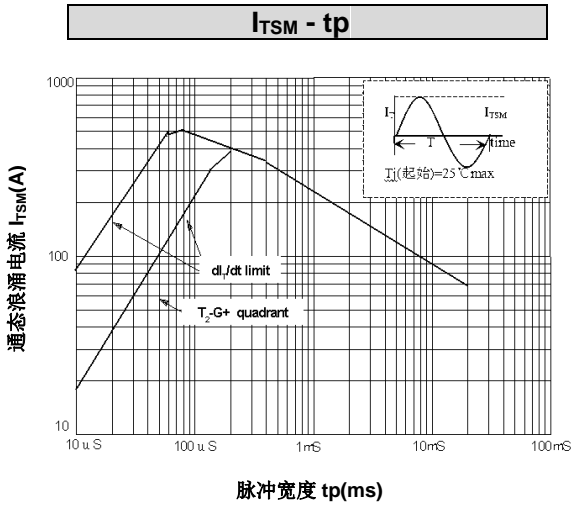
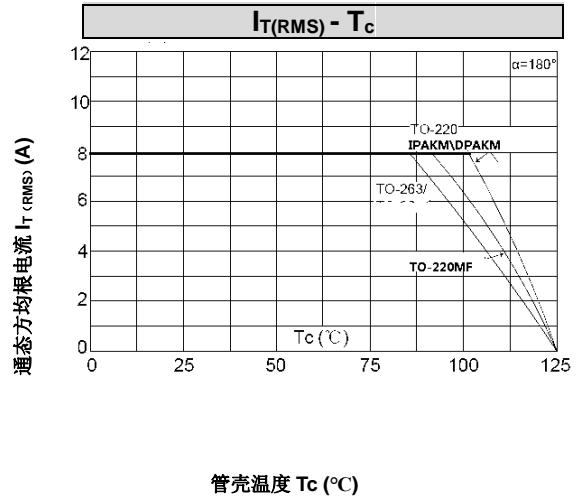
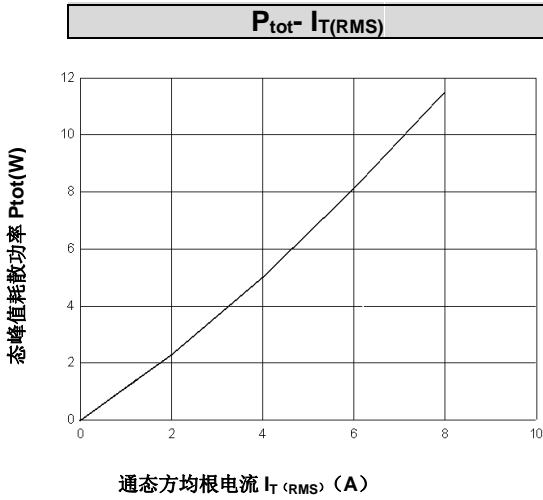
项 目 Parameter	符 号 Symbol	条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到管壳的热阻 Thermal resistance junction to case	R _{th(j-c)}	full cycle(TO-220MF-K1)			4.5	°C/W
		full cycle(DPAK\IPAK)			2.0	°C/W
		full cycle(TO-220)			1.5	°C/W

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



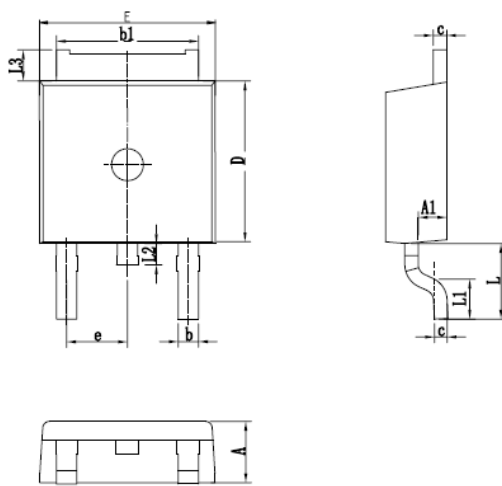
特征曲线 ELECTRICAL CHARACTERISTICS (curves)





外形尺寸 PACKAGE MECHANICAL DATA

DPAKM

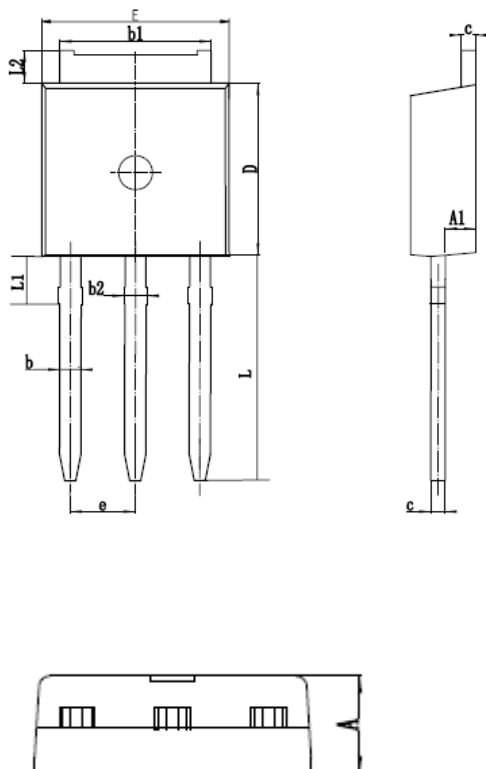


SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	2.40	3.00
L1	0.85	1.45
L2	0.60	1.10
L3	0.67	1.07

单位: mm

外形尺寸 PACKAGE MECHANICAL DATA

IPAKM



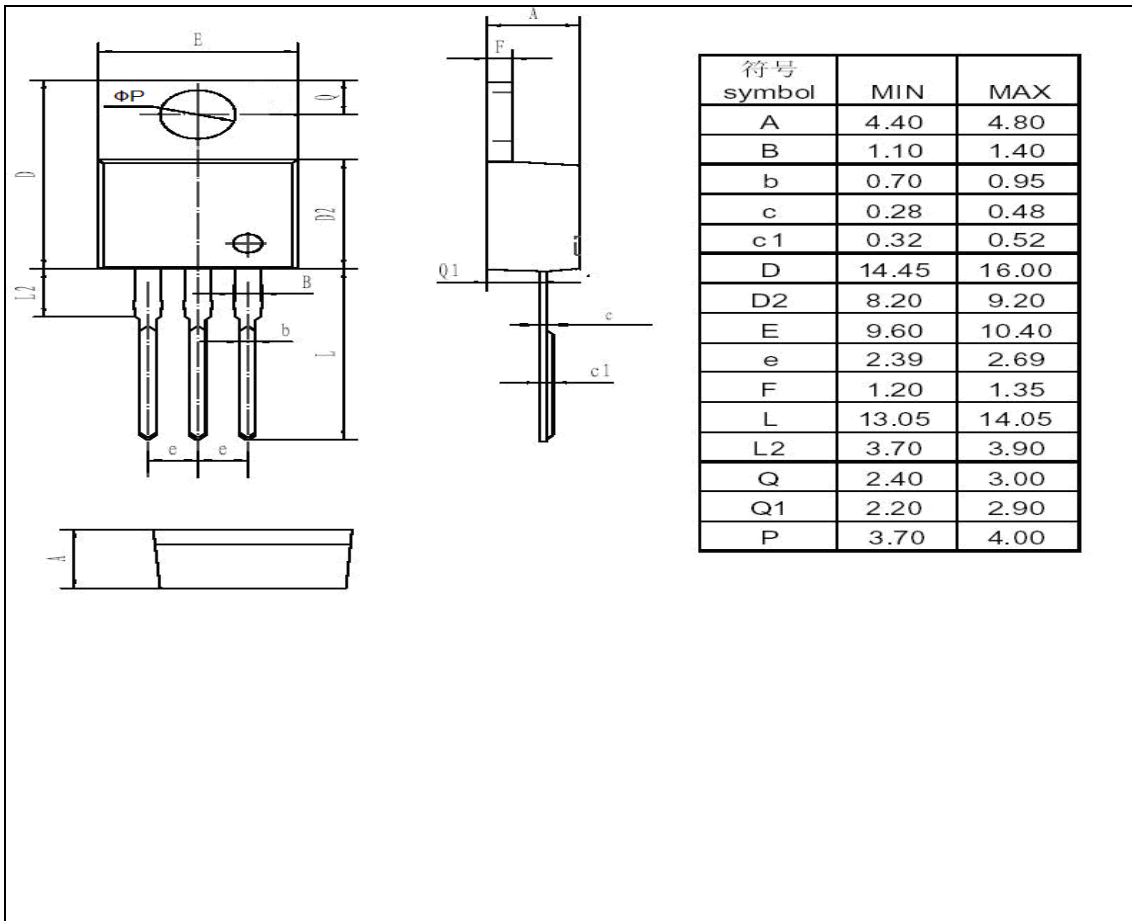
SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
b2	0.85	1.25
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	9.00	9.60
L1	0.80	2.20
L2	0.67	1.07



外形尺寸 PACKAGE MECHANICAL DATA

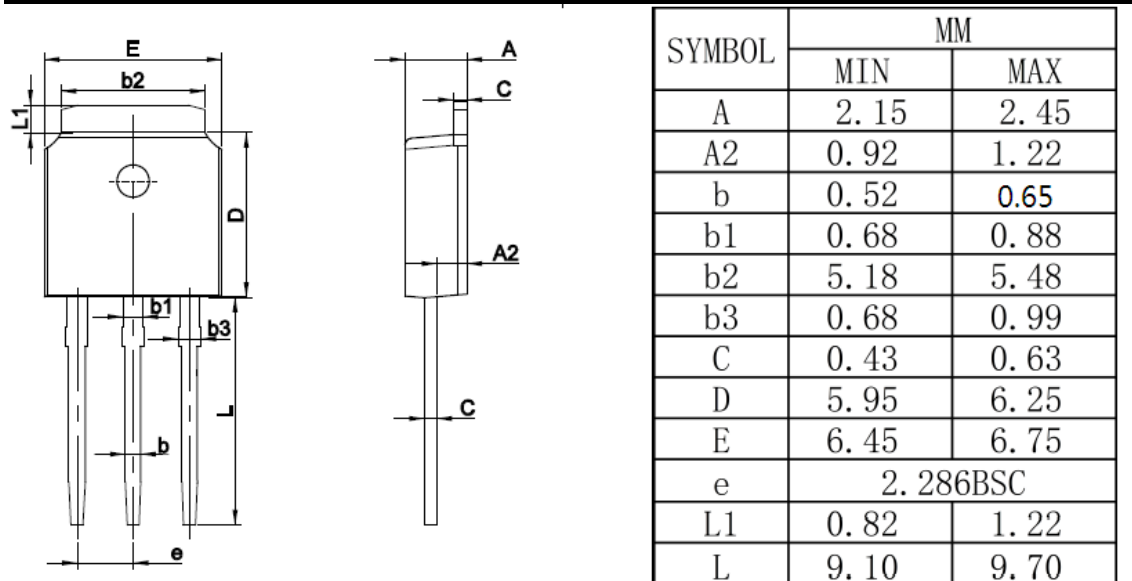
TO-220

单位 Unit : mm



外形尺寸 PACKAGE MECHANICAL DATA

IPAK-W

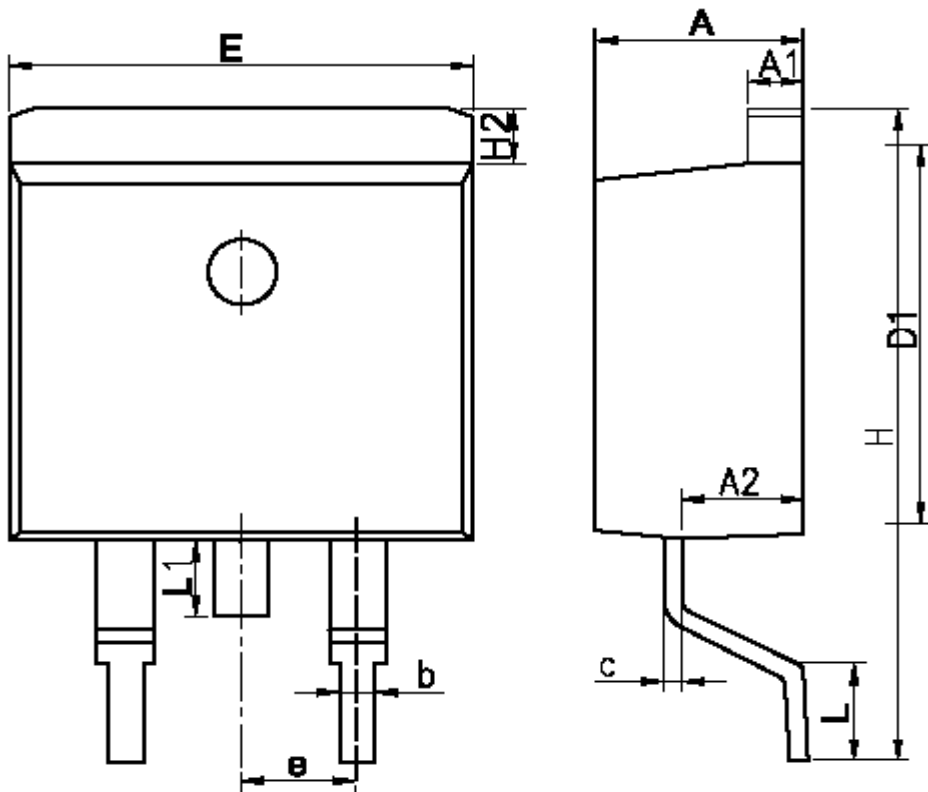




外形尺寸 PACKAGE MECHANICAL DATA

TO-263

单位 Unit : mm



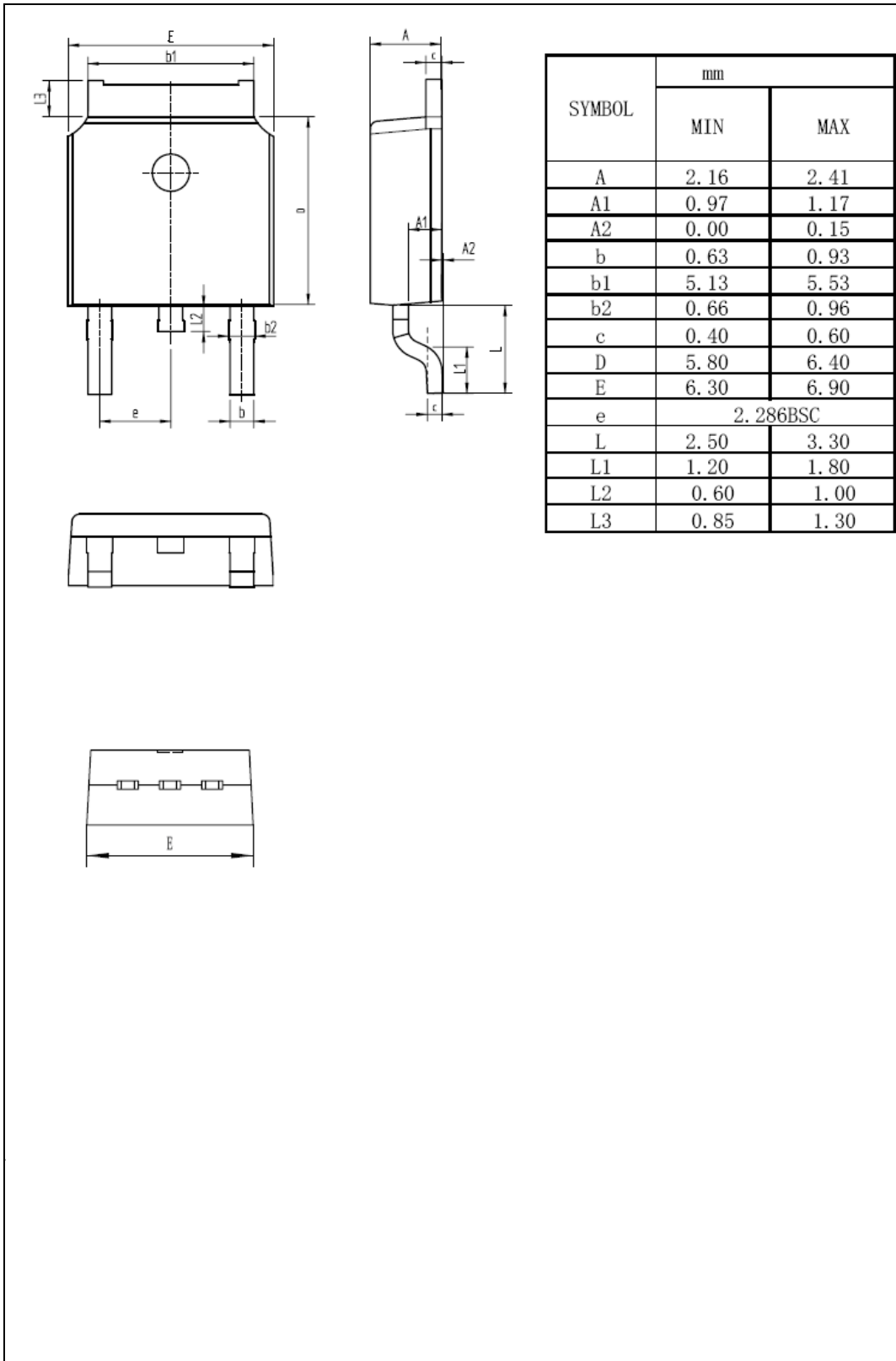
SYMBOL	MM	
	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70

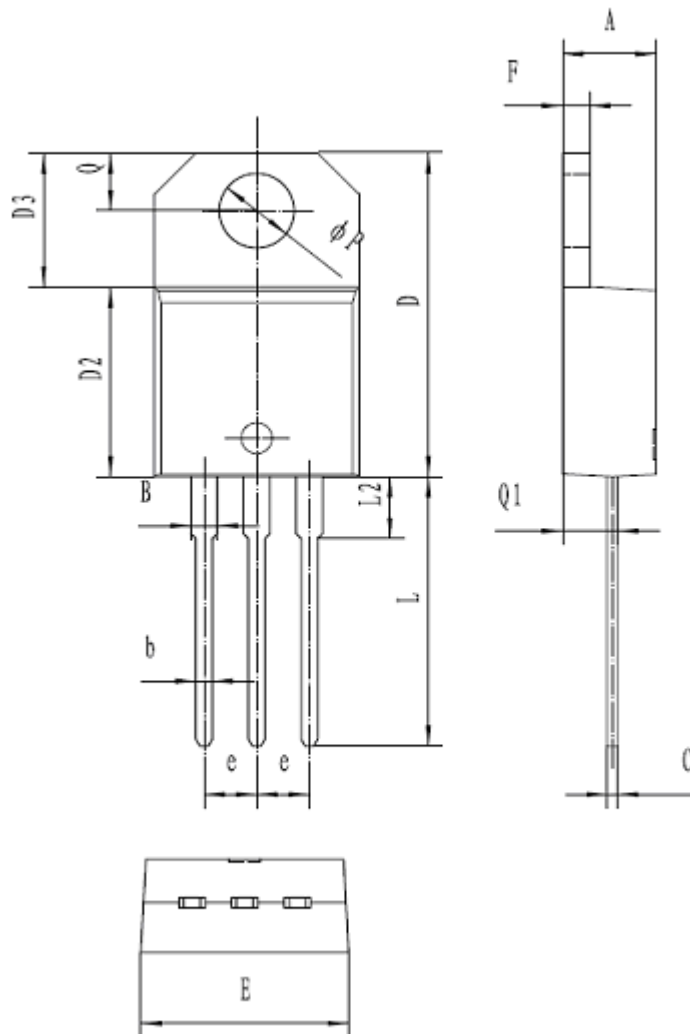


外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm





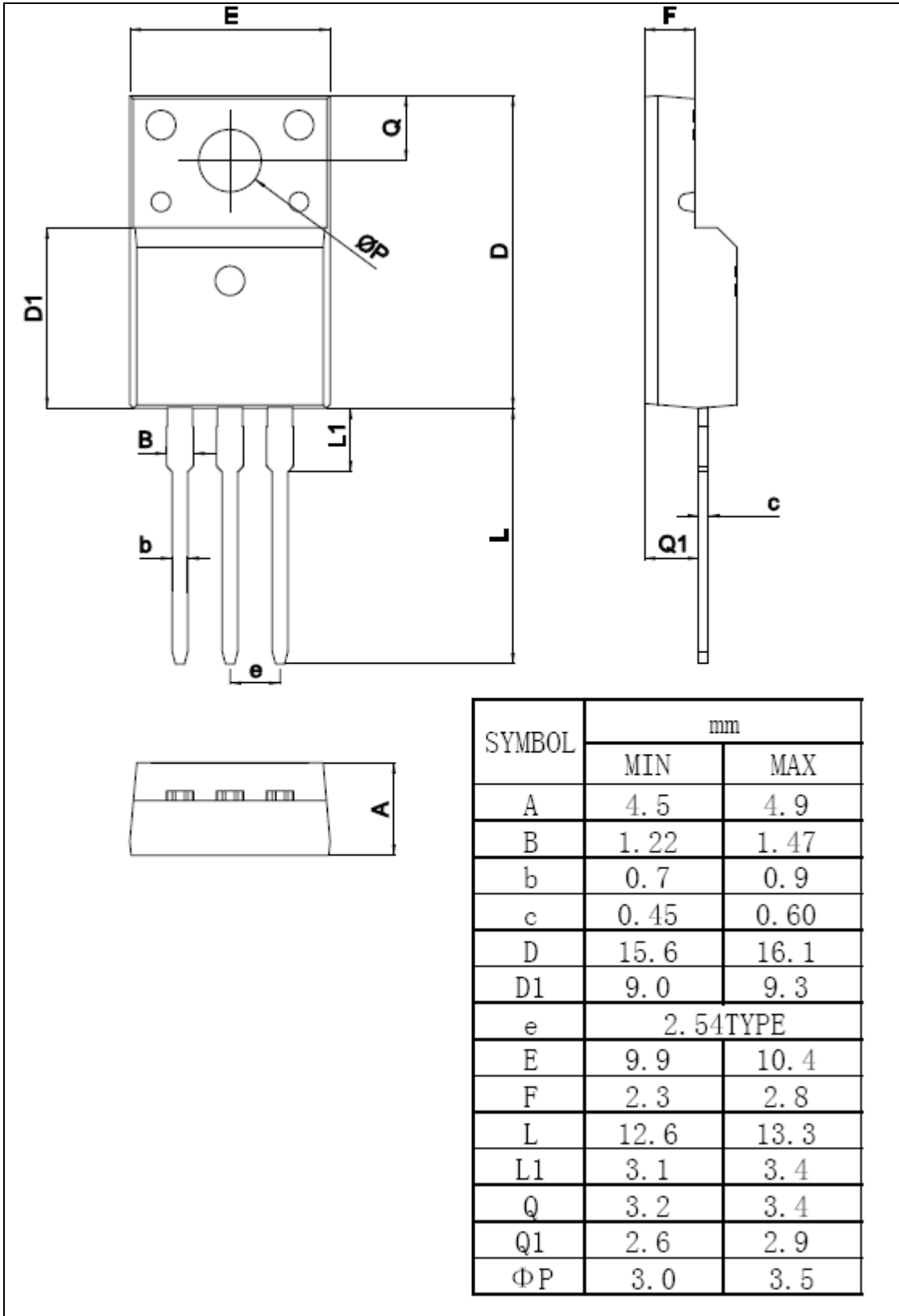
符号 symbol	MIN	MAX
A	4.40	4.60
B	1.14	1.70
b	0.61	0.88
C	0.47	0.70
D	15.20	15.90
D2	8.60	9.70
D3	6.20	6.60
E	10.00	10.40
e	2.40	2.70
F	1.23	1.32
L	13.00	14.00
L2	typ. 3.75	
Q	2.65	2.95
Q1	2.89	3.42
P	3.72	3.85



外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF-K1

单位 Unit : mm





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