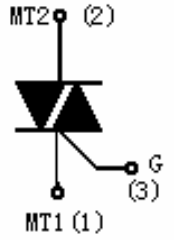
T1635NZP

主要参数 MAIN CHARACTERISTICS

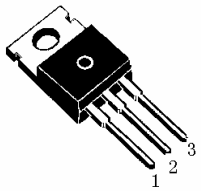
$I_{T(RMS)}$	16A
V_{DRM}	800V
I_{GT}	20mA

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

TO-220C



用途 APPLICATIONS

- 交流开关 AC switching
- 相位控制 Phase control

产品特性 FEATURES

- 平面工艺芯片，高可靠性和一致性 The planar process chip for reliability and uniform
- 三象限可控硅，触发电流的一致性好 Uniform gate trigger currents in three quadrants
- 环保 RoHS 产品 RoHS products

订货信息 ORDER MESSAGES

订货型号 Order codes				印记 Marking	封装 Package
有卤-条管 Halogen-Tube	无卤-条管 halogen-Free-Tube	有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel		
T1635NZP-C-B	T1635NZP-C-BR	N/A	N/A	T1635NZP	TO-220C

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,	16	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	140	A
		full sine wave ,t=16.7ms	150	A
	I^2t	t=10ms	98	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	dI/dt	I_{TM}=20A, I_G=0.2A, dI_G/dt=0.2A/μs	100	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}		-40~150	℃

电特性 ELECTRICAL CHARACTERISTIC (T_C=25℃)

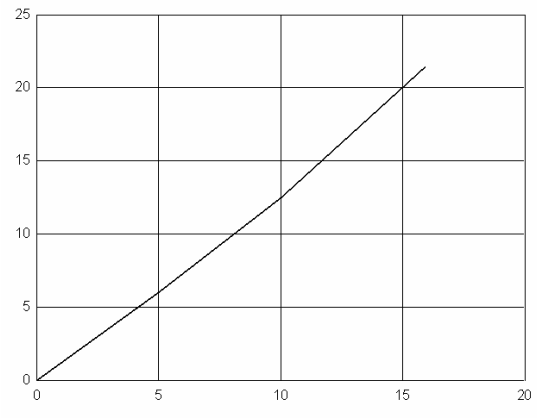
项　　目 Parameter	符　号 Symbol	测 试 条 件 Condition		最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I_{DRM}	V_{DM}=V_{DRM}, Tj=150℃, gate open			--	1.0	mA
峰值通态电压 Peak on-state voltage	V_{TM}	I_{TM}=18A, Tj=25℃,			--	1.5	V
门极触发电流 Gate trigger current	I_{GT}	V_{DM}=12V, R_L=100Ω	MT1(-),MT2(+),G(+)		--	20	mA
			MT1(-),MT2(+),G(-)		--	20	mA
			MT1(+),MT2(-),G(-)		--	20	mA
门极触发电压 Gate trigger voltage	V_{GT}	V_{DM}=12V, R_L=100Ω	MT1(-),MT2(+),G(+)		0.7	1.0	V
			MT1(-),MT2(+),G(-)		0.7	1.5	V
			MT1(+),MT2(-),G(-)		0.7	1.5	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	MT1(-),MT2(+),G(+)		-	30	mA
			MT1(-),MT2(+),G(-)		-	30	mA
			MT1(+),MT2(-),G(-)		-	30	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V_{DM}=67% $V_{DRM(MAX)}$, Tj=150℃, gate open		1000	-	-	V/μs
门极开通时间 Gate controlled turn-on time	tgt	I_{TM}=20A, V_{DM}=$V_{DRM(MAX)}$, I_G=0.1A, dI_G/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
结到安装面的热阻 Thermal resistance junction to mounting base	$R_{th(j-c)}$	full cycle(TO-220C)			1.2	℃/W

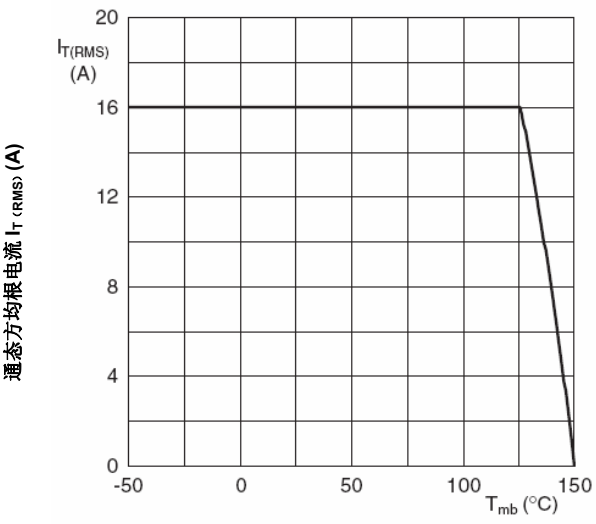
特征曲线 ELECTRICAL CHARACTERISTICS (curves)

P_{tot}- $I_{T(RMS)}$



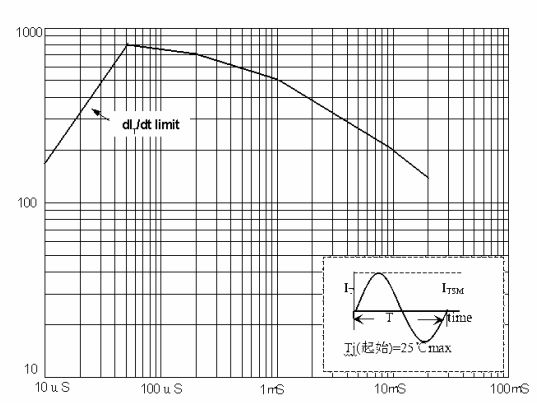
通态方均根电流 $I_{T(RMS)}$（A）

$I_{T(RMS)}$ - T_{mb}



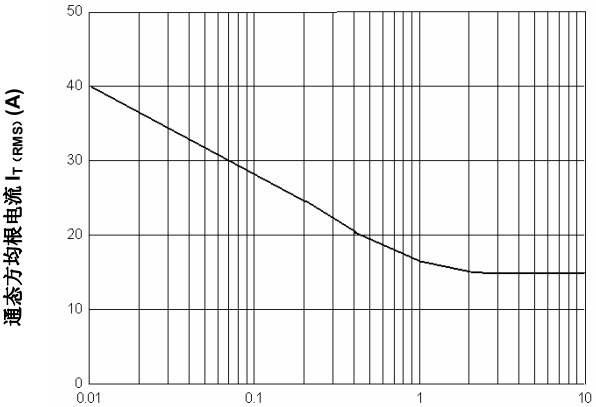
基座温度 T_{mb}(℃)

I_{TSM} - tp



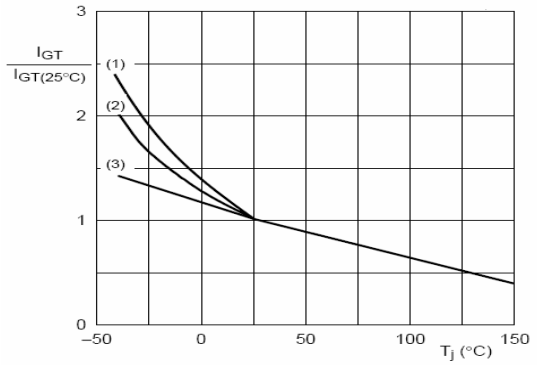
脉冲宽度 tp(ms)

$I_{T(RMS)}$- ts



冲击持续时间 ts(s)

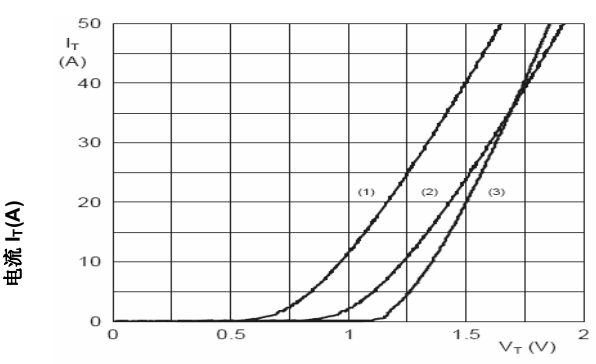
$I_{GT}(Tj)/I_{GT}(25℃)$ - Tj



(1) T2– G–
(2) T2+ G–
(3) T2+ G+

结温 Tj(℃)

V_{TM} - I_T



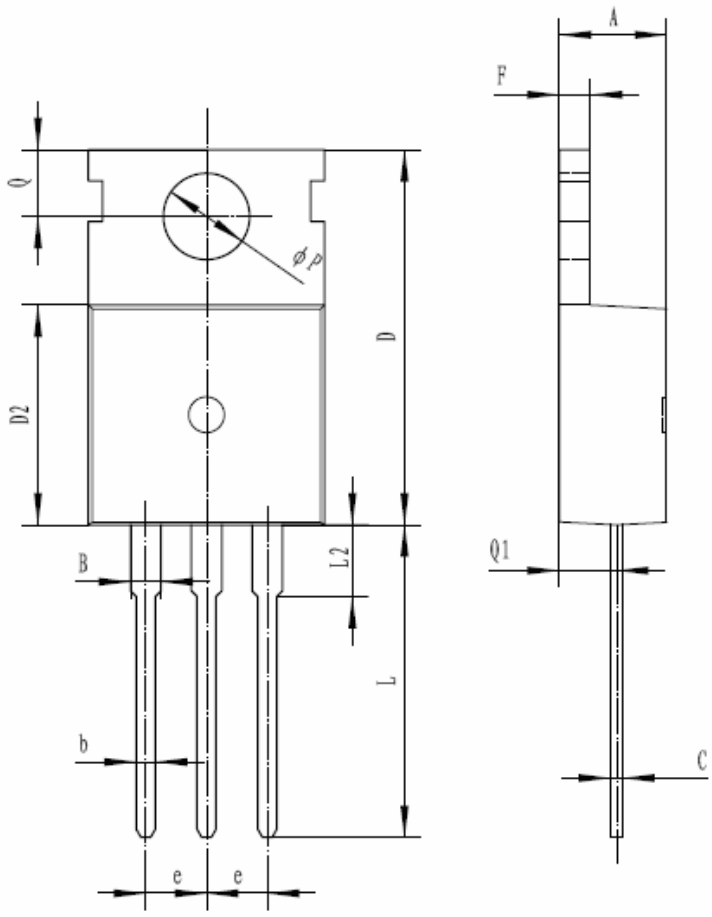
V_o = 1.024 V R_s = 0.021 Ω
(1) T_j = 150 °C; typical values
(2) T_j = 150 °C; maximum values
(3) T_j = 25 °C; maximum values

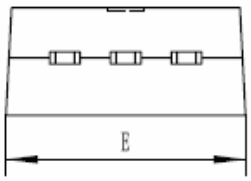
通态压降 V_{TM}(V)

外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit ：mm





符号 symbol	MIN	MAX
A	4.30	4.70
B	1.22	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	2.39	2.69
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
Q	2.60	3.00
Q1	2.20	2.60
P	3.50	3.80

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