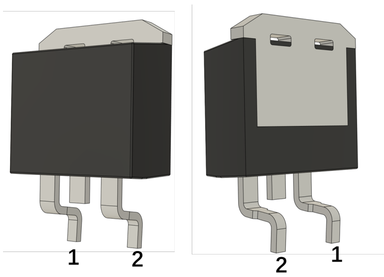
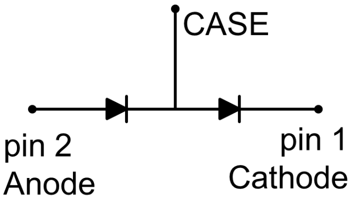
DATA SHEET

2H20100A6A

1000V-20A RD Half Bridge Module





✓

HAL

PB

Product features/产品特点

- Standard package
  标准封装
- Photo glass technology
  光阻技术
- Low conduction loss due to low V_F
  低导通损耗缘于低正向压降
- High surge current capability
  高浪涌电流承受能力
- High junction operating temperature capability $T_{j.max}$=175°C
  高结温工作能力，最高结温 $T_{j.max}$=175°C
- Halogen free, RoHS compliant
  无卤，符合RoHS

Applications/应用领域

- Input rectifier
  输入整流器
- Power Factor Correction (PFC)
  功率因素校正

Key performance parameters/关键性能参数

Parameter/参数	Value/值	Unit/单位
V_{DC}	1000	V
I_F (@T_C=80°C)	20	A
$V_{F.typ}$ (@20A)	1.0	V

Package parameters/封装信息

Type/型号	Package/封装	Marking/标识	Packaging method/包装方式
2H20100A6A	TO263	2H20100A	Tape and Reel/卷带包装

1. Maximum ratings at T_j=25°C, unless otherwise specified.

最大额定值默认T_j=25°C除非另有说明

Table 1 Maximum ratings/最大额定值

Parameter **参数**	**Symbol** **符号**	**Test conditions** **测试条件**	**Value** **值**	**Unit** **单位**
Repetitive peak reverse voltage 重复峰值反向电压	V_{RRM}		1000	V
Crest working reverse voltage 最高工作反向电压	V_{RWM}		1000	V
Average Forward Current 平均正向电流	$I_{F.AV}$	T_C=25°C	40	A
		T_C=80°C	20	
Surge non-repetitive forward current, sine halfwave 浪涌非重复峰值正向电流，正弦半波	$I_{F.SM}$	@60Hz	350	A
Power dissipation 总耗散功率	P_{tot}	T_j=25°C	313	W
		T_j=100°C	156	

2. Thermal characteristics
热特性

Table 2 Thermal characteristics/热特性

Parameter 参数	Symbol 符号	Test conditions 测试条件	Value/值			Unit 单位
			Min.	Typ.	Max.	
Storage temperature 存储温度	T_{stg}		-55		150	°C
Operating junction temperature 工作结温	T_j		-55		175	°C
Thermal resistance, junction-case 结-壳热阻	$R_{th(j-c)}$				0.48	K/W
Thermal resistance, junction-ambient 结-环境热阻	$R_{th(j-a)}$				65	K/W
Soldering temperature, reflow solderin 焊接温度，回流焊	T_{sold}	reflow MSL1			260	°C

3. Electrical characteristics at T_j=25°C, unless otherwise specified.

电气特性默认T_j=25°C除非另有说明

Table 3 Static characteristics/静态特性

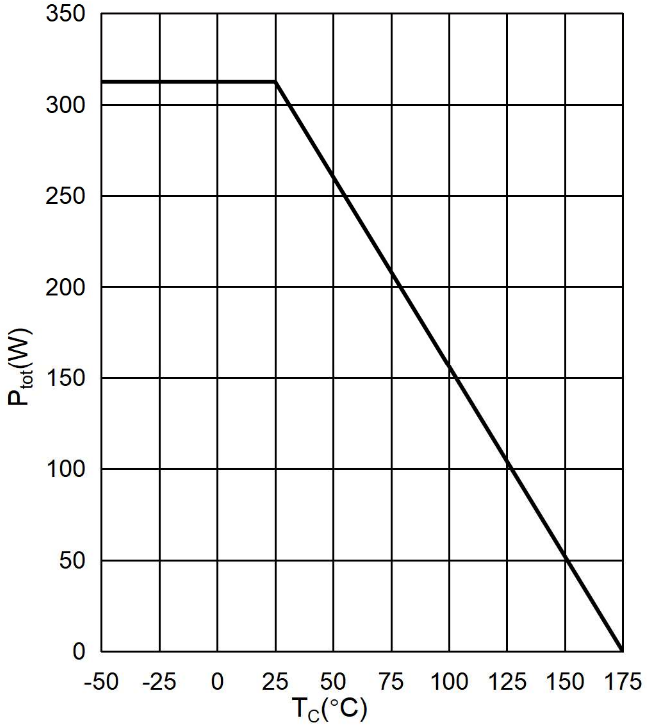
Parameter 参数	Symbol 符号	Test conditions 测试条件	Value/值			Unit 单位
			Min.	Typ.	Max.	
DC blocking voltage 直流阻断电压	V_{DC}	I_R=10μA	1000			V
Forward voltage 正向压降	V_F	I_F=20A		1.0	1.4	V
Reverse leakage current 反向漏电流	I_R	V_R=1000V			0.8	μA

Table 4 Dynamic characteristics/动态特性

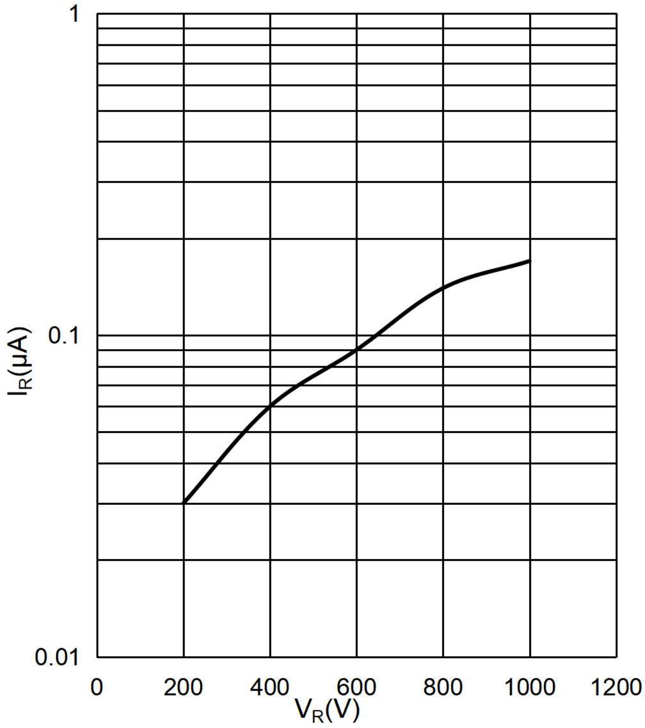
Parameter 参数	Symbol 符号	Test conditions 测试条件	Value/值			Unit 单位
			Min.	Typ.	Max.	
Recovered recovery time 反向恢复时间	t_{rr}	V_R=600V,I_F=0.5A	1000			nS

4. Electrical characteristics diagrams
电气特性图表

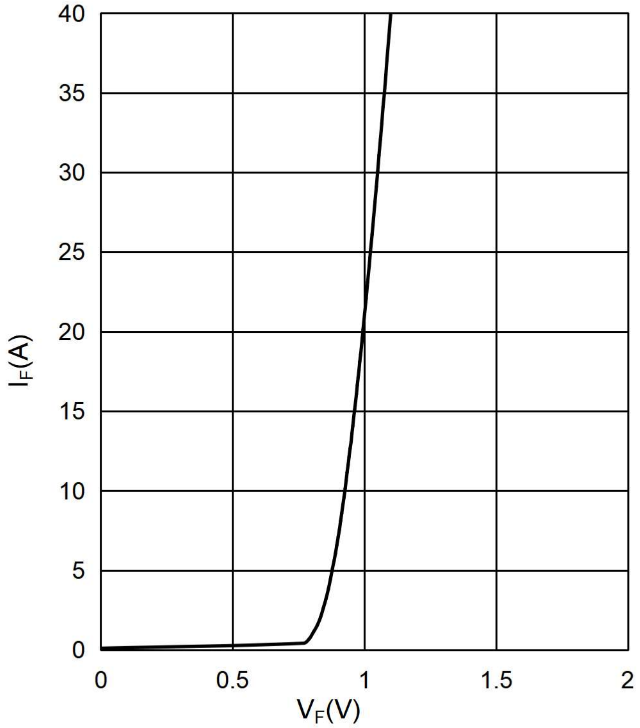
Power dissipation/耗散功率
P_{tot}=f(T_C); @ $R_{th(j-c).MAX}$



Typ.Reverse current of voltage /典型漏电与电压函数
I_R=f(V_R); T_j=25℃

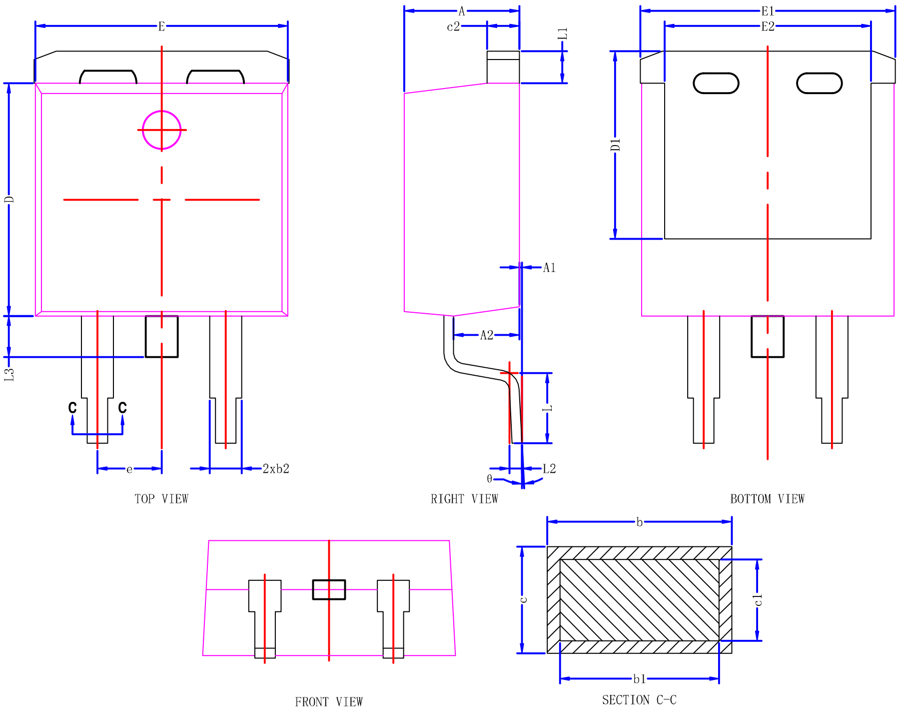


Typ. Forward characteristics/典型正向特性
I_F=f(V_F); T_j=25℃



5. Package outline
封装外形

Figure 1. Outline TO263, dimensions in mm/TO263外形尺寸（毫米）



SYMBOL	DIMENSIONS		
	MIN.	NOM.	MAX.
A	4.47	4.57	4.67
A1	0.00	0.10	0.25
b	0.71	0.81	0.91
b2	1.17	1.27	1.37
c	0.360	0.381	0.500
c2	1.17	1.27	1.37
D	8.70	9.00	9.30
D1	7.10	7.44	7.80
E	9.70	9.92	10.30
E1	7.98	8.18	8.48
E2	9.85	10.00	10.15
e	2.44	2.54	2.64
H	15.00	15.28	15.60
L	2.25	2.54	2.80
L1	1.10	1.35	1.60
L2	---	---	1.78
ϴ	0°	---	8°
L3	0.254 BSC		

Note:

- Package body sizes exclude mold flash,Protrusion or gate burrs,Mold flash, Protrusion or gate burrs shall not exceed 0.127mn per side;
- Package body sizes determined at the outermost extremes of the plastic body, Exclusive of mold flash, gate burrs and interlead flash,but including any mismatch between the top bottom of the plastic body;
- The package top may be smaller than the package botton;
- Dimension "b" does not include dambar protrusion.Allowable dambar protrusion shall be 0.10mm total in excess of ´b“ dimension at maximmun material condition. the dambar can't be located on the lower radius of the foot.

注:

- 包体尺寸不包括模具飞边、凸起或浇口毛刺，模具飞边、凸起或浇口毛刺每侧不应超过 0.127mn;
- 在塑料本体最外极端确定的包装本体尺寸，不包括模具飞边、浇口毛刺和封头间飞边，但包括塑料本体顶部底部之间的任何不匹配;
- 包装顶部可小于包装底部;
- 尺寸“b”不包括防潮条凸起。在最大材料条件下，允许的坝筋突出量应为 0.10mm，超过´b“尺寸。坝筋不能位于基脚的下半径。

6. Revision history

修订历史

Table 5 Date and version number/日期与版本号

Date日期	Revision版本	Changes更改内容
2025-11-16	Rev. G 1.0	Target Datasheet（目标规格书）

7. Matters needing attention

注意事项

Appendix 1. Important Technical Guidance, Application Policy, and Copyright Notice/重要技术指南、应用规范与版权声明

[Data and Design Guidance]	**【数据与设计指引】**
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