

BRCS2N65QF

Rev.A Sep.-2022

描述 / Descriptions

TO-126F 塑封封装 N 沟道 MOS 场效应管。
N-CHANNEL MOSFET in a TO-126F Plastic Package.

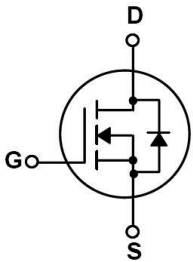
特征 / Features

低栅电荷,低反馈电容,开关速度快。
Low gate charge, low crss, fast switching.

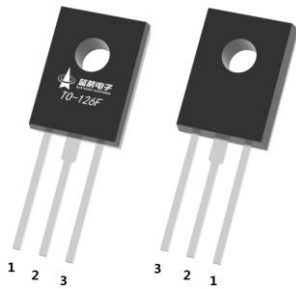
用途 / Applications

用于高功率 DC/DC 转换和功率开关。
These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : G PIN 2 : D PIN 3 : S

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。
See Marking Instructions.

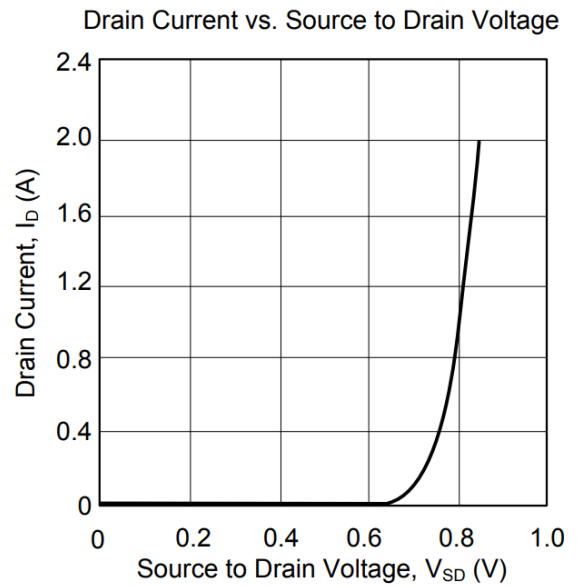
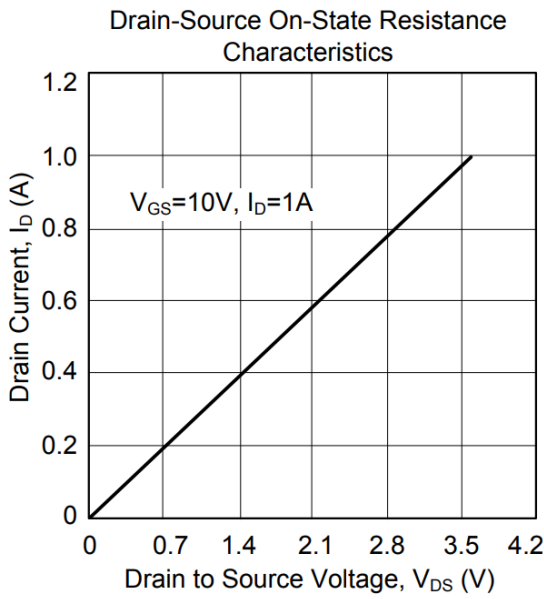
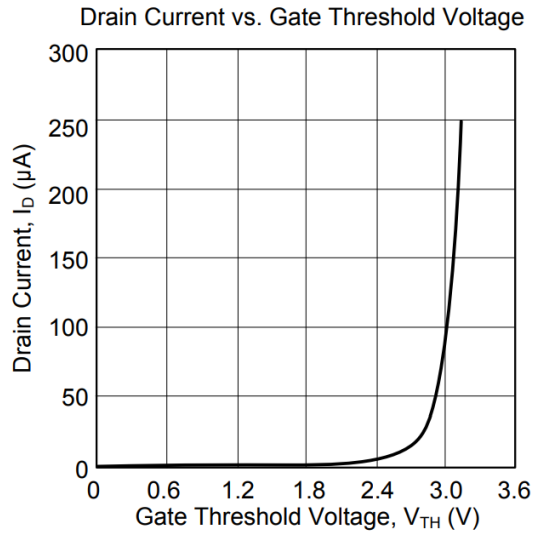
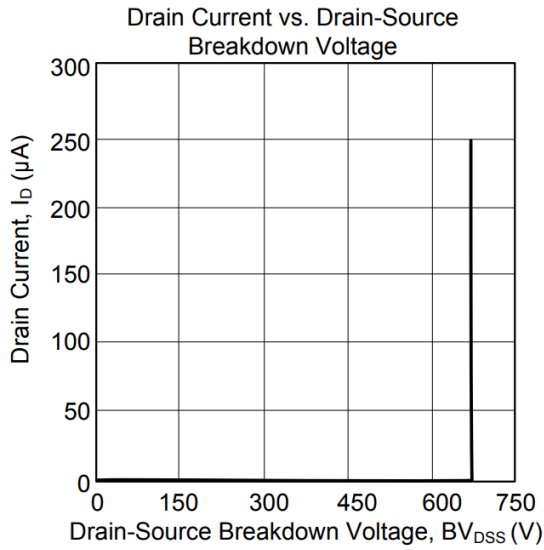
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	$I_D(T_C=25^\circ C)$	2.0	A
Drain Current	$I_D(T_C=100^\circ C)$	1.3	A
Drain Current - Pulsed	I_{DM}	6.0	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	39	mJ
Avalanche Current	I_{AR}	3.0	A
Power Dissipation	$P_D(T_C=25^\circ C)$	23	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$
Thermal resistance, junction - case	Steady-State $R_{\theta JC}$	5.4	$^\circ C/W$

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	650			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=1.0A$			5.0	Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=2.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		280		pF
Output Capacitance	C_{oss}			20		pF
Reverse Transfer Capacitance	C_{rss}			3.5		pF
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		3.5		Ω
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=300V$ $I_D=2.0A$ $R_G=25\Omega$		7.2		ns
Turn-On Rise Time	t_r			24		ns
Turn-Off Delay Time	$t_{d(off)}$			20		ns
Turn-Off Fall Time	t_f			25		ns

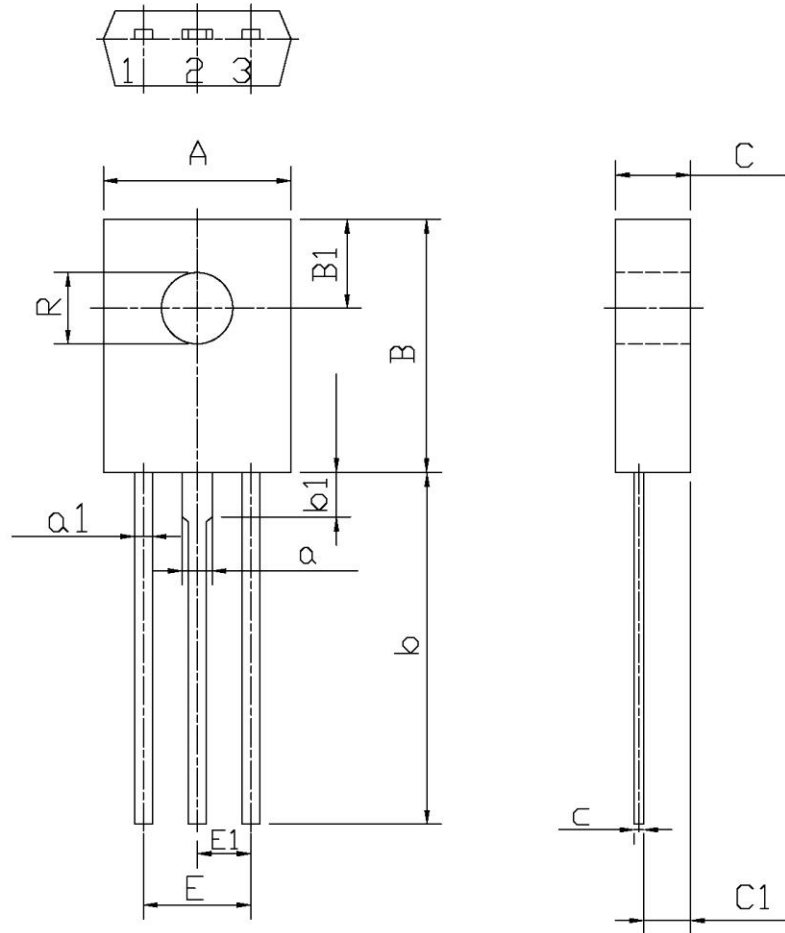
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

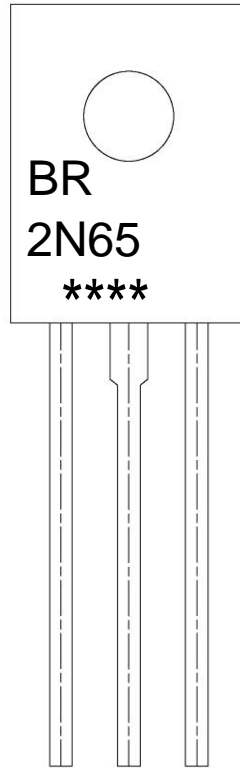
T□-126F

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	7.8	8.2	a1	0.66	0.86
B	10.8	11.2	E	4.4	4.8
B1	3.8	4.2	C	3.1	3.3
R	2.95	3.15	C1	1.9	2.1
b	14	16	c	0.3	0.6
b1	1.9		a	1.27	
E1	2.1	2.5			

印章说明 / Marking Instructions



说明：

BR： 为公司代码

2N65： 为型号代码

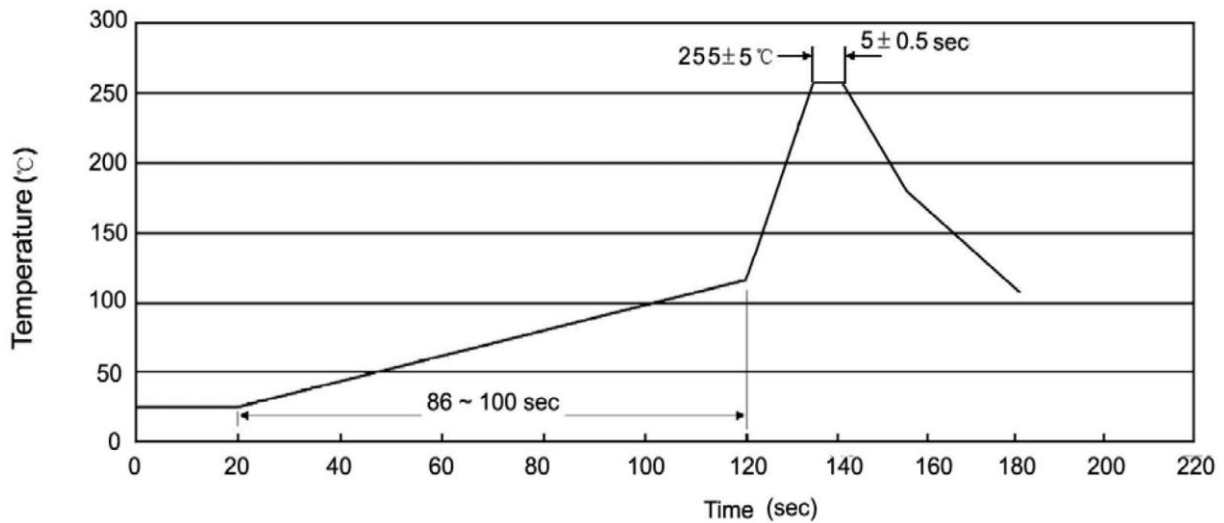
****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

2N65: Product Type.

****: Lot No. Code, code change with Lot No.

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)


说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec；
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec；
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-126/F	500	6	3,000	5	15,000	135×190	237×172×102	560×245×195

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-126/F	65	26	1,690	5	8,450	532×31×5.6	555×164×50	575×290×180

使用说明 / Notices