

BRMJB41CQ

Rev.A Qct.-2023

描述 / Descriptions

TO-263 塑封封装 NPN 半导体三极管。

Silicon NPN transistor in a TO-263 Plastic Package.

特征 / Features

与 BRMJB42CQ 互补，符合 AEC-Q101 标准高可靠性要求，无卤产品。

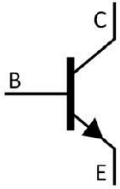
Complement to BRMJB42CQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

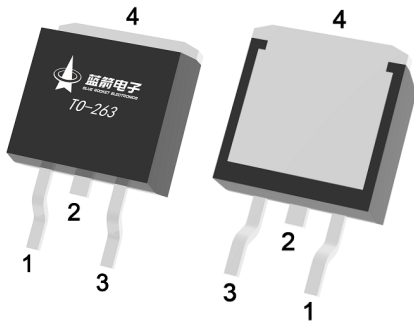
用于中功率线性开关放大，满足汽车应用的严格要求。

Medium power linear switching applications, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base

PIN 2、4 : Collector

PIN 3 : Emitter

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

见印章说明。

See Marking Instructions.

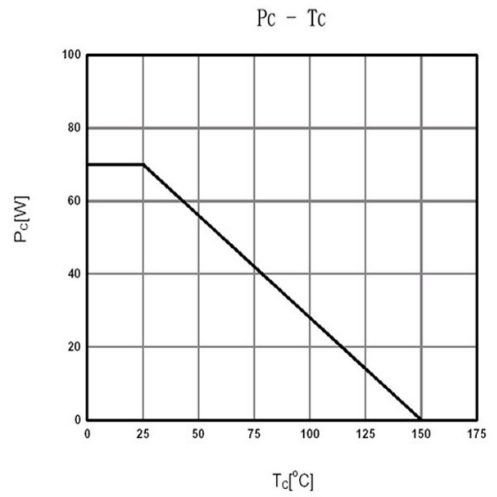
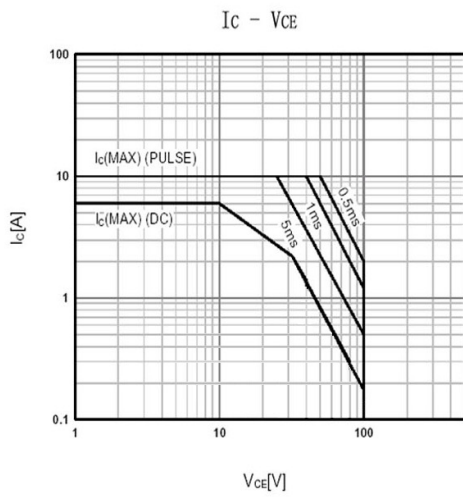
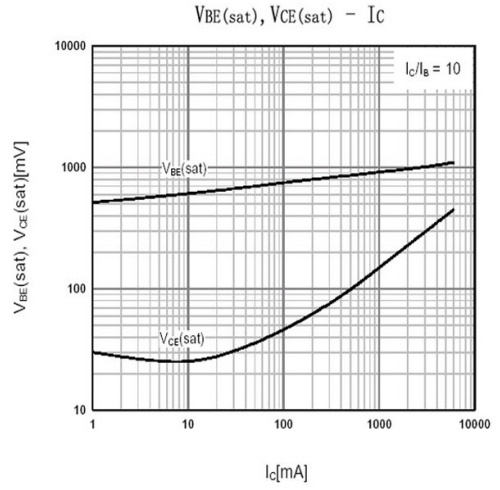
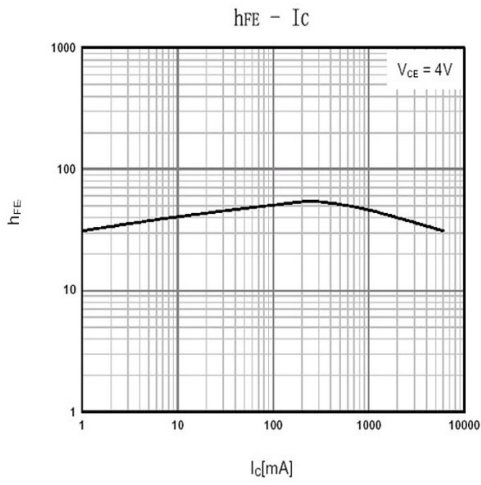
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CB0}	100	V
Collector to Emitter Voltage	V _{CEO}	100	V
Emitter to Base Voltage	V _{EBO}	5	V
Collector Current - Continuous	I _C	6	A
Peak Collector Current	I _{CP}	10	A
Base Current - Continuous	I _B	2	A
Power Dissipation	P _D	2	W
Power Dissipation	P _D (T _C =25°C)	65	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{sag}	-55~150	°C

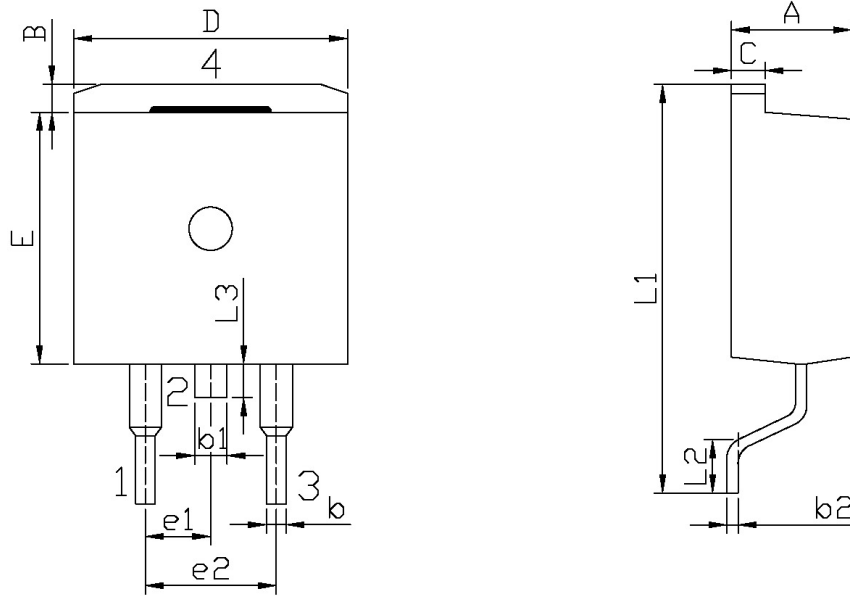
电性能参数 / Electrical Characteristics(Ta=25°C)

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
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =30mA I _B =0	100			V
Collector Cut-Off Current	I _{CEO}	V _{CE} =60V I _B =0			0.7	mA
Collector Cut-Off Current	I _{CES}	V _{CE} =100V V _{EB} =0			400	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5V I _C =0			1	mA
DC Current Gain	h _{FE(1)}	V _{CE} =4V I _C =3A	15		75	
	h _{FE(2)}	V _{CE} =4V I _C =0.3A	30			
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =6A I _B =0.6A			1.5	V
Base to Emitter Voltage	V _{BE}	I _C =6A V _{CE} =4V			2	V
Transition Frequency	f _T	V _{CE} =10V I _C =500mA	3			MHz

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

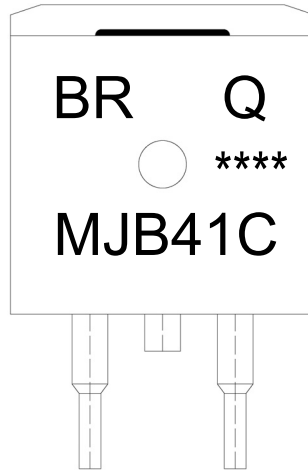


单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b	0.70	0.90	e2	4.88	5.28
b1	1.15	1.35	L1	15.00	16.00
b2	0.40	0.60	L2	2.24	2.84
C	1.20	1.40	L3	1.20	1.60
D	9.80	10.20			

TQ-263

印章说明 / Marking Instructions



说明：

BR： 为公司代码

Q： 为汽车无卤产品标识

MJB41C： 为产品型号

****： 为生产批号代码，随生产批号变化

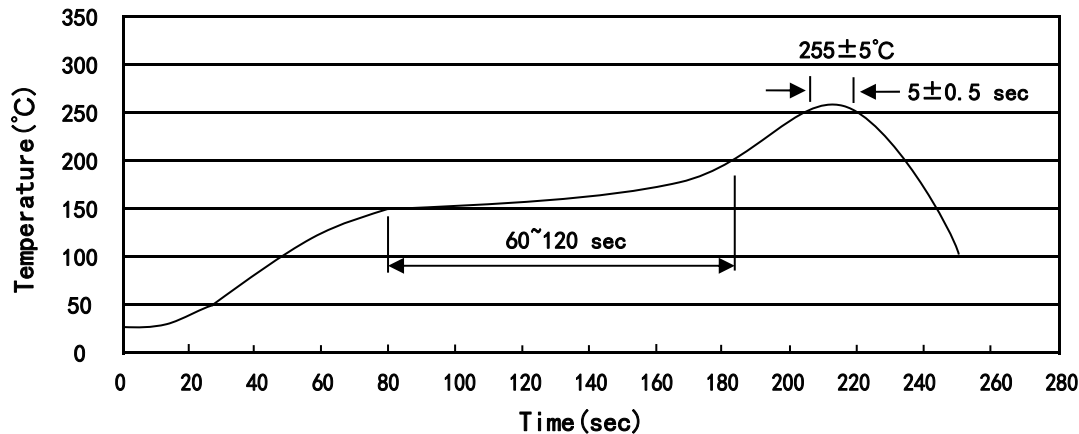
Note:

BR: Company Code

Q: Automobile halogen-free product Code

MJB41C: Product Type

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

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)


说明：

- 1、预热温度 150~200°C，时间 60~120sec;
- 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:150~200°C, Time:60~120sec.
- 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：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-263	800	1	800	6	4,800	13" ×24	360×360×50	380×335×366

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-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

使用说明 / Notices