

BRMJB42CQ

Rev.A Oct.-2023

/ Descriptions

TO-263 PNP

Silicon PNP transistor in a TO-263 Plastic Package.

/ Features

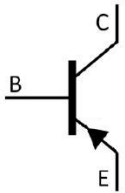
BRMJB41CQ AEC-Q101

Complement to BRMJB41CQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

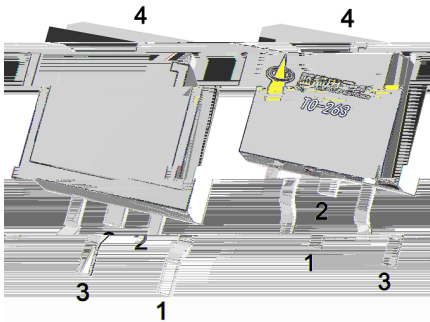
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

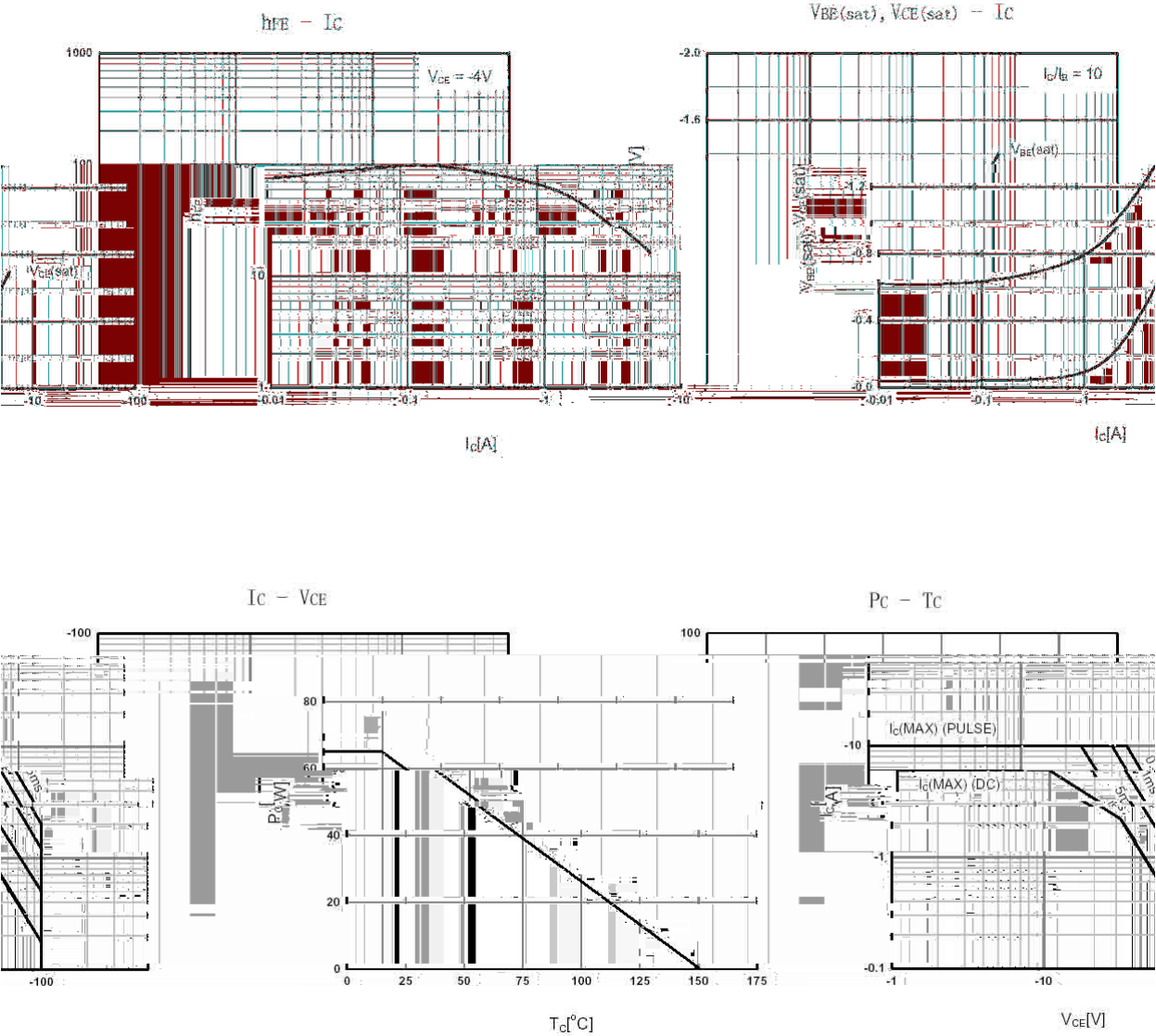
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-100	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-6.0	A
Peak Collector Current	I_{CP}	-10	A
Base Current - Continuous	I_B	-2.0	A
Power Dissipation	P_D	2.0	W
Power Dissipation	$P_D(T_C=25)$	65	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{sag}	-55 150	

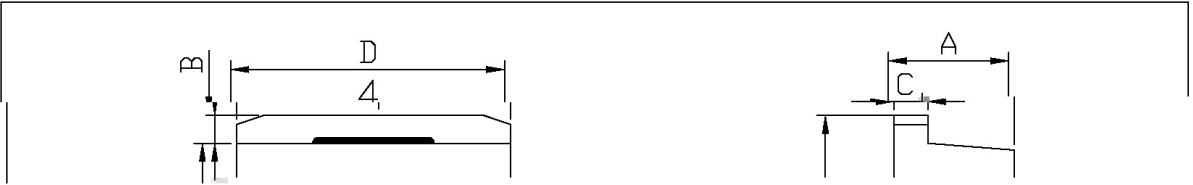
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	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}	$V_{EB}=-5.0V$ $I_C=0$			-1.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-4.0V$ $I_C=-3.0A$	15		75	
	$h_{FE(2)}$	$V_{CE}=-4.0V$ $I_C=-0.3A$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-6.0A$ $I_B=-0.6A$			-1.5	V
Base to Emitter Voltage	V_{BE}	$I_C=-6.0A$ $V_{CE}=-4.0V$			-2.0	V
Transition Frequency	f_T	$V_{CE}=-10V$ $I_C=-500mA$	3.0			MHz

/ Electrical Characteristic Curve



/ Package Dimensions

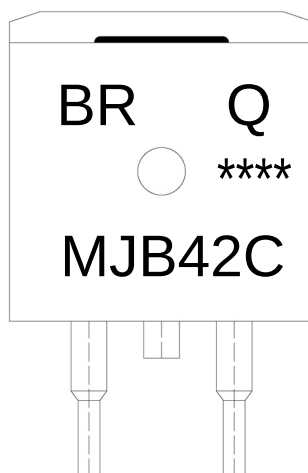


Symbol	Min	Max	Symbol	Min	Max
A	4.30	4.70	E	9.00	
B	1.00	1.40	e1	2.34	
b	0.70	0.90	e2	4.88	
b1	1.15	1.35	L1	15.00	
b2	0.40	0.60	L2	2.24	
C	1.20	1.40	L3	1.20	
D	9.80	10.20			

TP-263



/ Marking Instructions



BR

Q

MJB42C

Note:

BR: Company Code

Q: Automobile halogen-free product Code

MJB42C: Product Type

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.

/ REEL