

Rev.A Qct.-2023

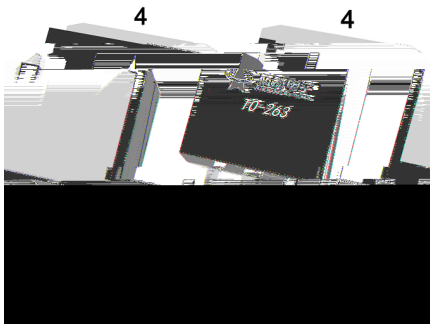
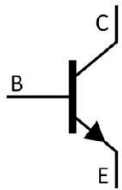
TO-263 NPN

Silicon NPN transistor in a TO-263 Plastic Package.

BRMJB42CQ AEC-Q101

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

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

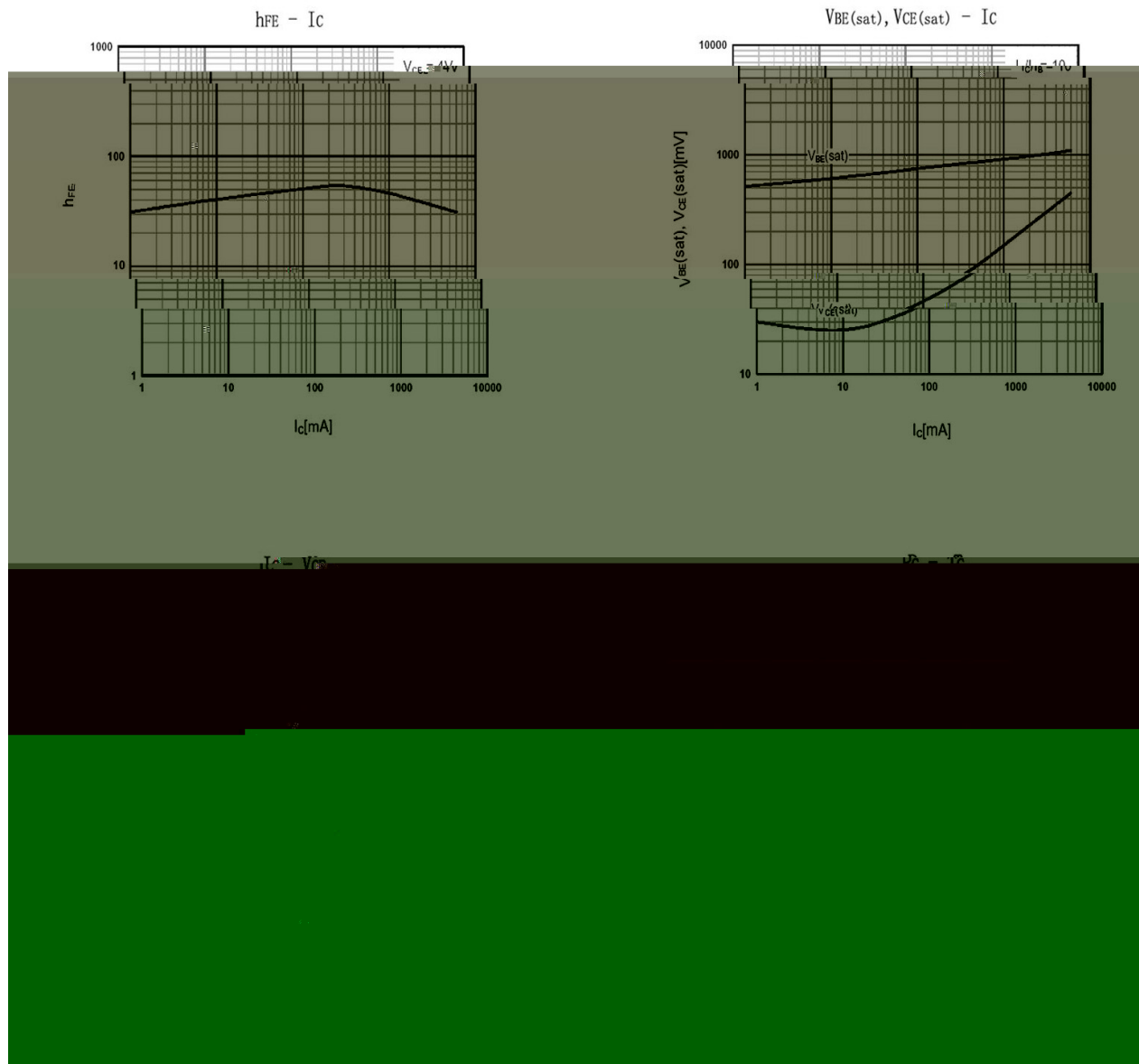


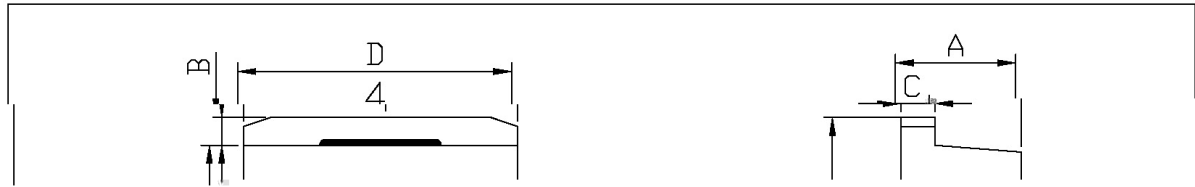
PIN1 Base PIN 2 4 Collector PIN 3 Emitter

See Marking Instructions.

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	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	$P_D(T_C=25^\circ C)$	65	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{sag}	-55 150	

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}	$V_{EB}=5V$ $I_C=0$			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

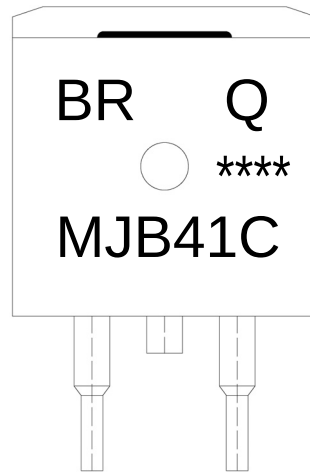




单位: mm

Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E _L	0.00	0.10
B	1.00	1.40	e ₁	2.34	2.74
b	0.70	0.90	e ₂	4.88	5.28
b ₁	1.15	1.35	L ₁	15.00	16.00
b ₂	0.40	0.60	L ₂	2.24	2.84
C	1.20	1.40	L ₃	1.20	1.60
D	9.80	10.20			

— 243



BR

Q

MJB41C

Note:

BR: Company Code

Q: Automobile halogen-free product Code

MJB41C: 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. |

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
TO-263	800	1	800	6	4,800	13 ×24	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180