

BRMJB41CQ

Rev.A Qct.-2023

/ Descriptions

WR0596 M M QSQ A M y s l l 1

Silicon NPN transistor in a TO-263 Plastic Package.

/ Features

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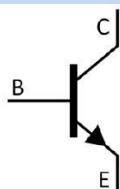
Complement to BRMJB42CQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

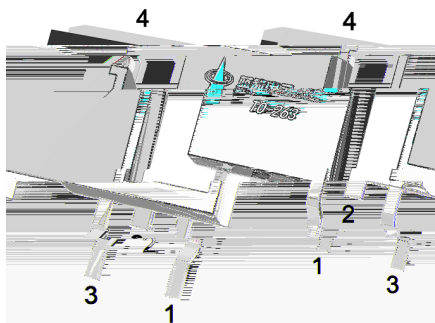
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Medium power linear switching applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 x Base

PIN 2 4 x Collector

PIN 3 x Emitter

/ hFE Classifications & Marking

M 1 "

See Marking Instructions.

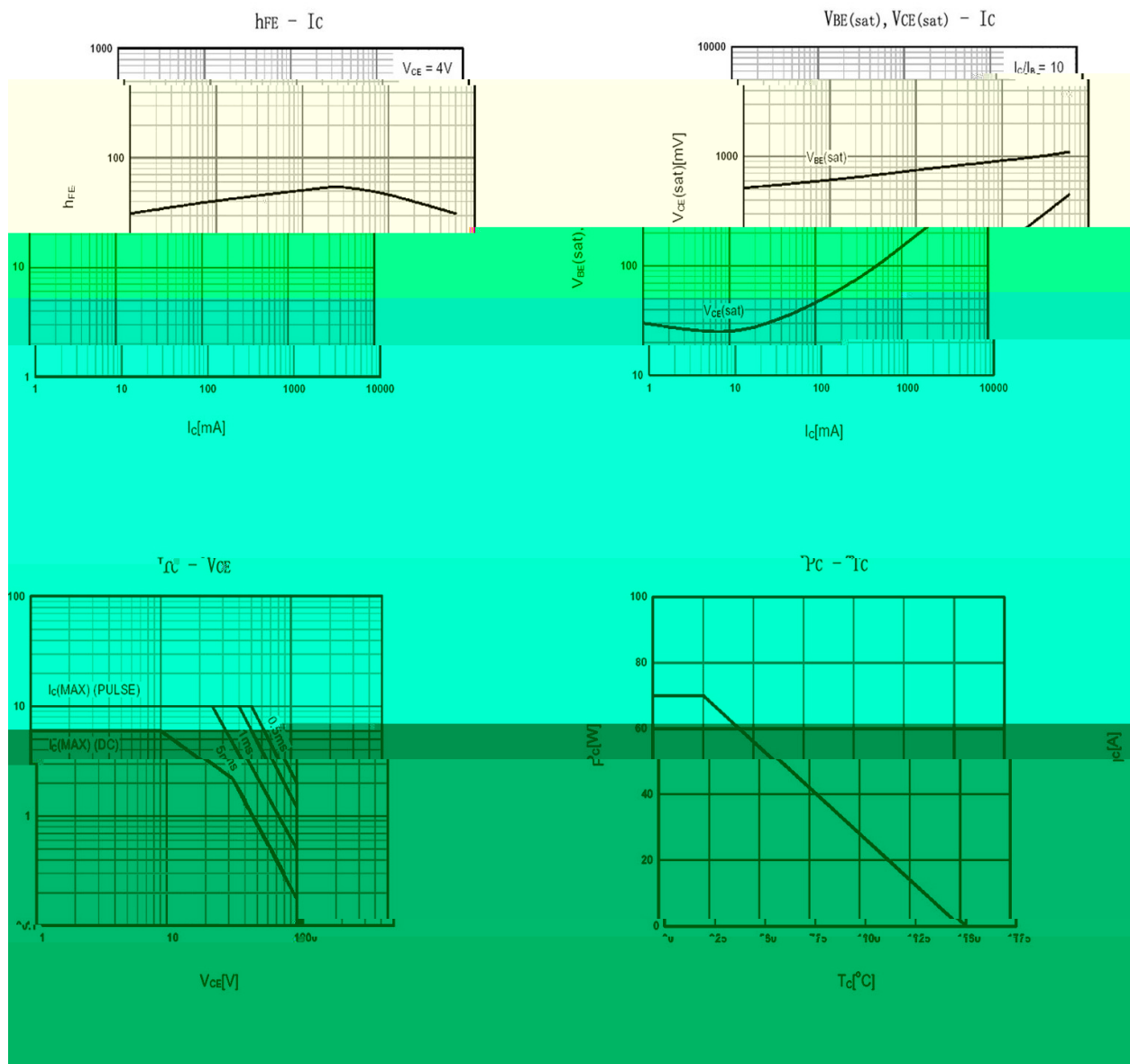
/ Absolute Maximum Ratings(Ta=25)

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	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	$P_D(T_c=25)$	65	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{sag}	-55 150	

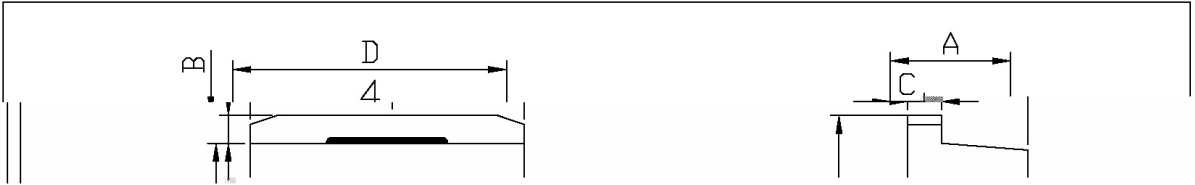
/ Electrical Characteristics(Ta=25)

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	PA
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

/ Electrical Characteristic Curve

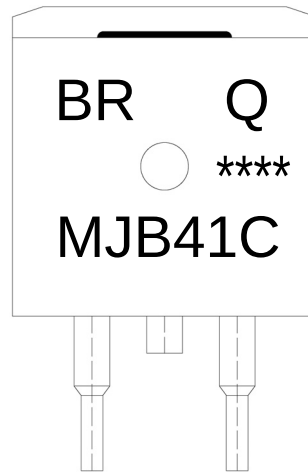


/ Package Dimensions



Symbol		Min	Max	Symbol		Min	Max
A		4.30	4.70	E		9.00	9.4
B		2.00	2.40	e1		2.34	2.7
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				

/ Marking Instructions



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$$Q_X \quad \mathbb{H} \cap \quad \dot{\eta} \quad \mathbb{F} \quad \beta \quad \%$$

PME74F χ $\frac{1}{2}$ β $\frac{3}{2}$ N

$$----\chi \quad \mathbb{H} \vdash \check{\eta}^N \Gamma_D \quad | \quad | \vdash \check{\eta}^N \Psi \varrho$$

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. Preheating: 150~200 °C, Time: 60~120sec.
 2. Peak Temp.: 255 ± 5 °C, Duration: 5 ± 0.5sec.
 3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

□ 260 ± 5 °C, Time: 10 ± 1 sec. Temp.: 260 ± 5 Time: 10 ± 1 sec

/ Packaging SPEC.

□ / 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