

BRMJD44RA

Rev.A Apr.-2024

/ Descriptions

TO-220 NPN

Silicon NPN transistor in a TO-220 Plastic Package.

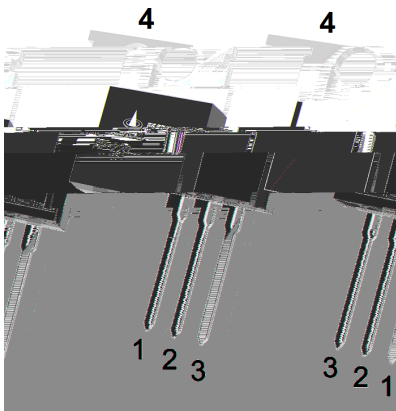
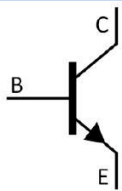
/ Features

BRMJD45RA

Complement to BRMJD45RA, HF Product.

/ Applications

These power transistors can be used as general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifiers.



PIN1 Base PIN 2 4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

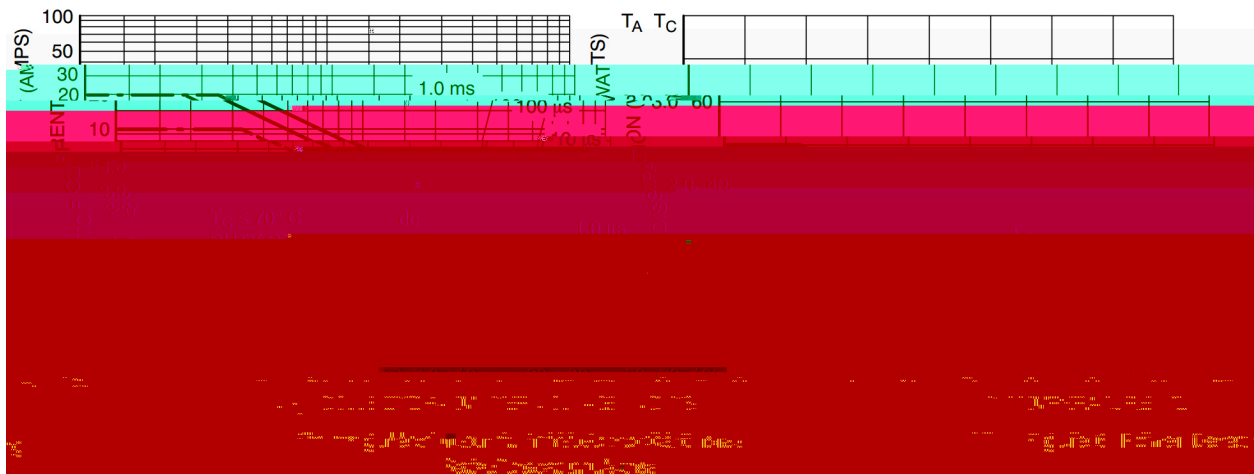
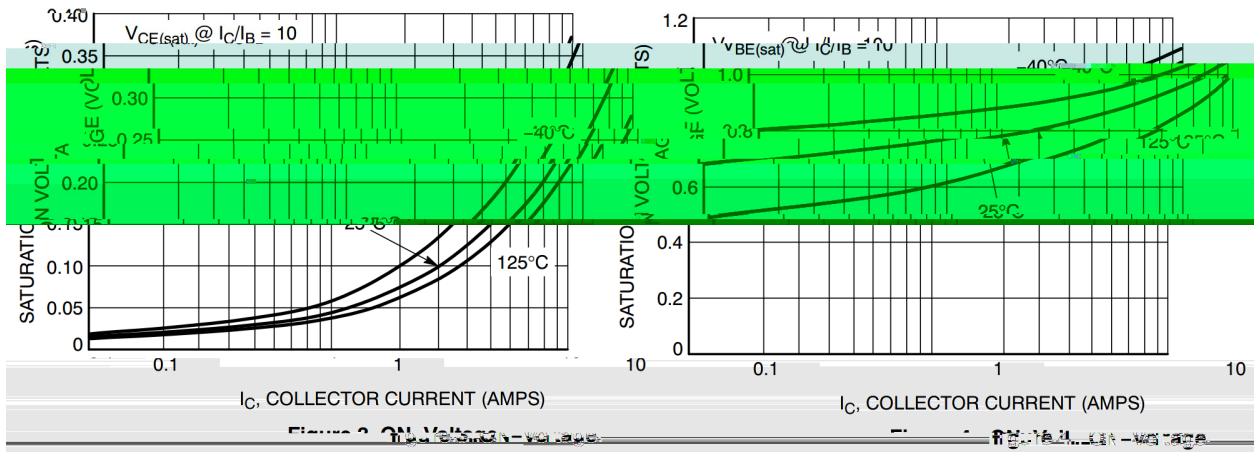
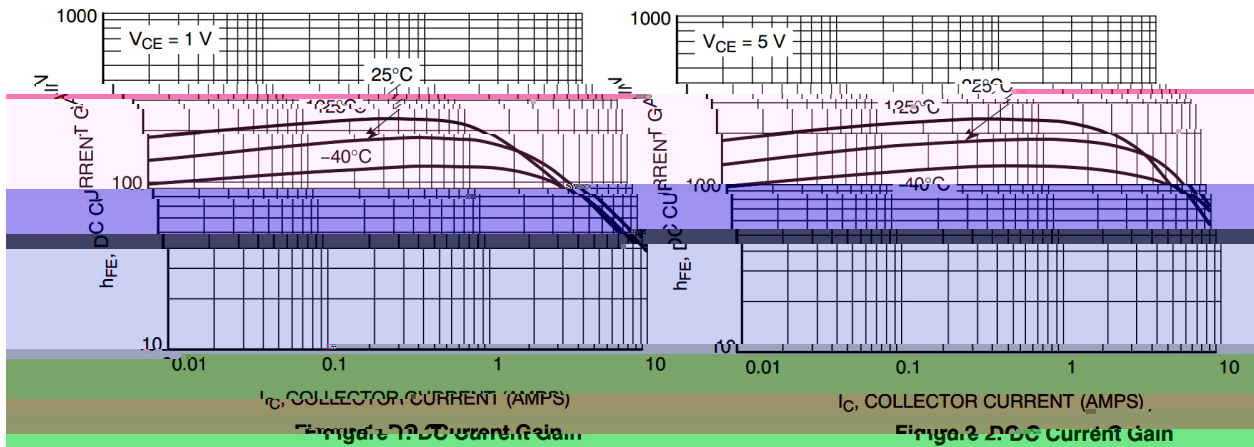
See Marking Instructions.



Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	10	A
Peak Collector Current	I_{CM}	20	A
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	70	W
	P_C	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	
Thermal Resistance, Junction to Ambient	R_{JA}	62.5	/W
Thermal Resistance, Junction to Case	R_{JC}	1.8	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=30\text{mA}$ $I_B=0$	80			V
Collector Cut-Off Current	I_{CES}	$V_{CE}=80\text{V}$ $I_B=0$			10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0\text{V}$ $I_C=0$			10	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0\text{V}$ $I_C=2.0\text{A}$	60		250	
	$h_{FE(2)}$	$V_{CE}=1.0\text{V}$ $I_C=4.0\text{A}$	40			

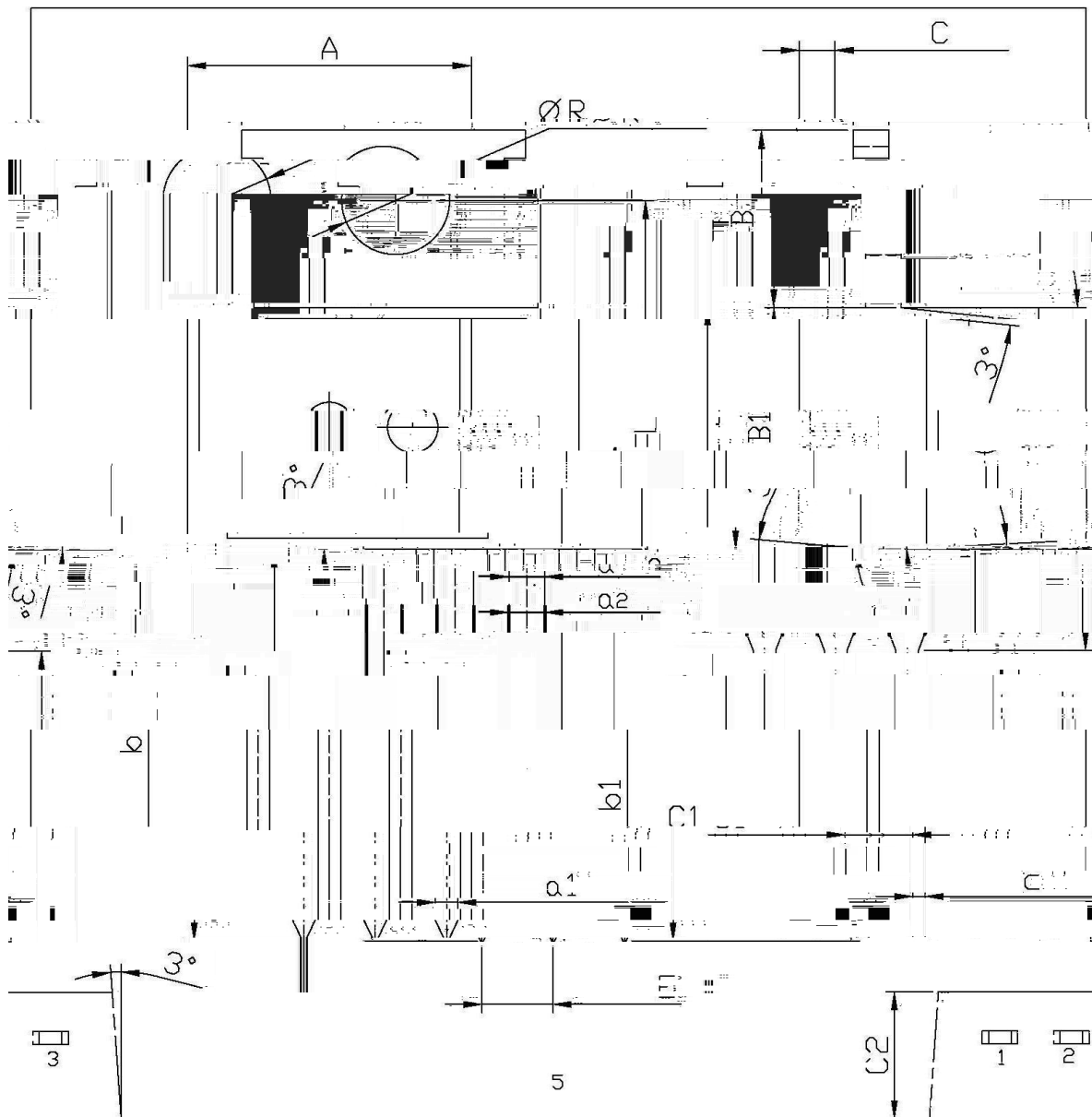
/ Electrical Characteristic Curve



/ Package Dimensions

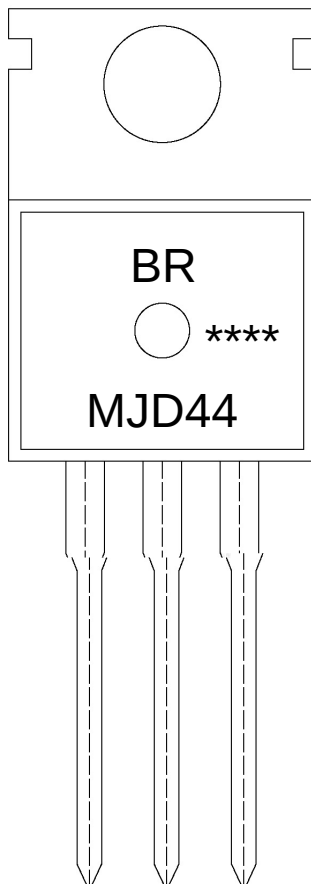
TQ-220

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C1	1.2	1.4	A1	9.8	10.2
B	6.3	6.7	R	3.56	3.64
B1	9.0	9.4	C1	15.7	16.1
C2	12.5	12.6	C2	12.5	12.6

/ Marking Instructions



BR

MJD44

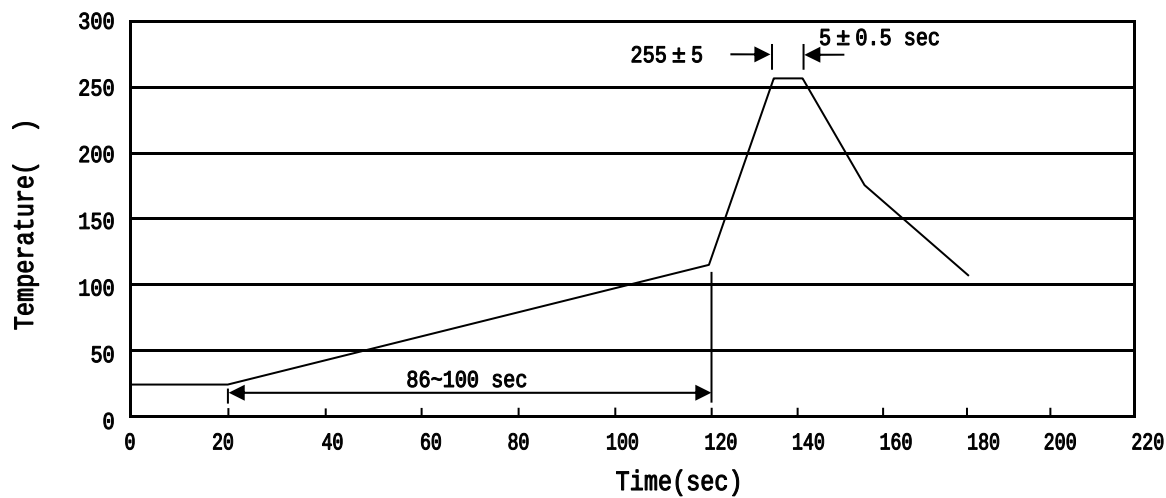
Note:

BR: Company Code

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

MJD44: Product Type Code

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 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

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ 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-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices