

/ Descriptions

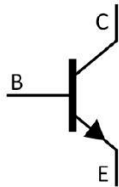
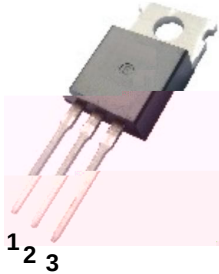
Silicon NPN transistor in a TO-220 Plastic Package.

/ Features

High voltage.

/ Applications

High voltage switching and humidifier.

/ Equivalent Circuit**/ Pinning**

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

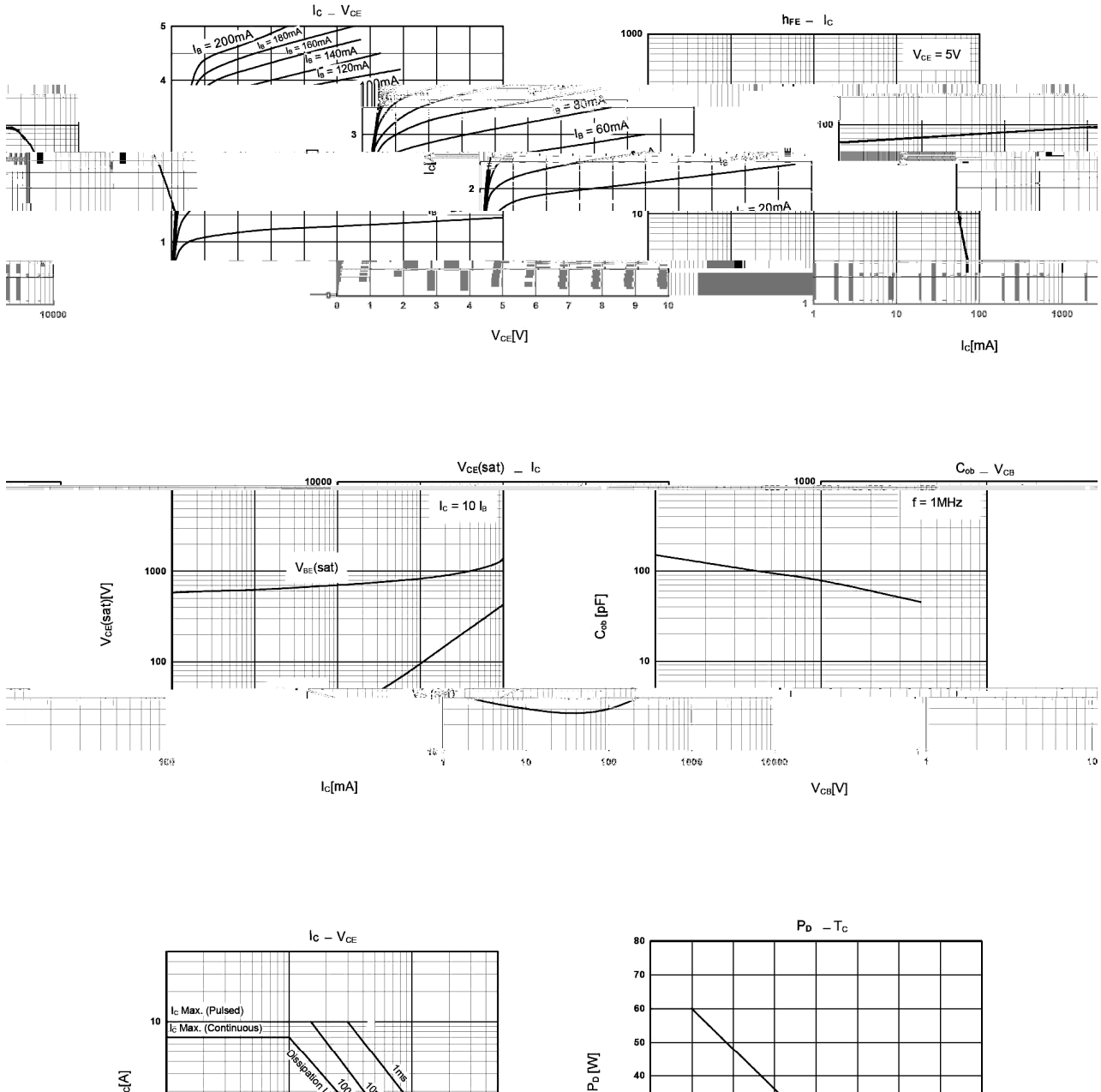
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	400	V
Collector to Emitter Voltage	V_{CEO}	200	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current(DC)	I_C	7.0	A
Collector Current(Pulse)	I_{CP}	10	A
Base Current	I_B	4.0	A
Collector Dissipation	P_C	60	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=400V$ $I_E=0$			10	μA
Collector Cut-Off Current	I_{CEO}	$V_{CE}=200V$ $I_B=0$			50	μA
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=6.0V$ $I_C=0$			10	μA
Collector Cut-Off Current	$I_{CES(1)}$	$V_{CE}=400V$ $V_{BE}=0$			5	mA
	$I_{CES(2)}$	$V_{CE}=250V$ $V_{BE}=0$			100	μA
	$I_{CES(3)}$	$V_{CE}=250V$ $V_{BE}=0$ $T_C=150$			1.0	mA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=2.0A$	60		120	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5.0A$ $I_B=0.5A$			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5.0A$ $I_B=0.5A$			1.2	V
Current Gain Bandwidth Product	f_T	$V_{CE}=10V$ $I_C=0.5A$	10			MHz
Turn-Off Time	t_{off}	$I_C=5.0A$ $I_B=0.5A$			0.75	μS

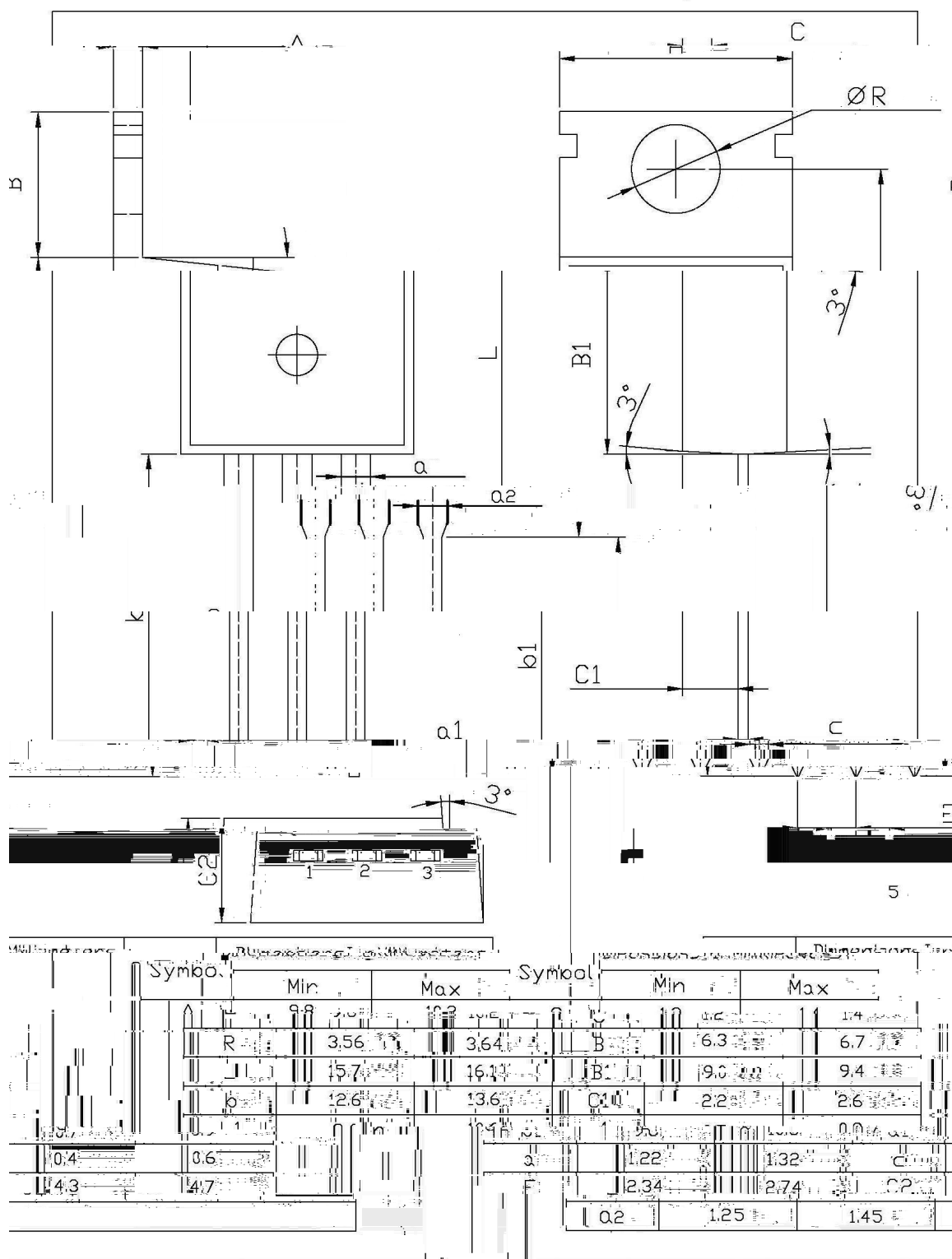
/ **Electrical Characteristic Curve**



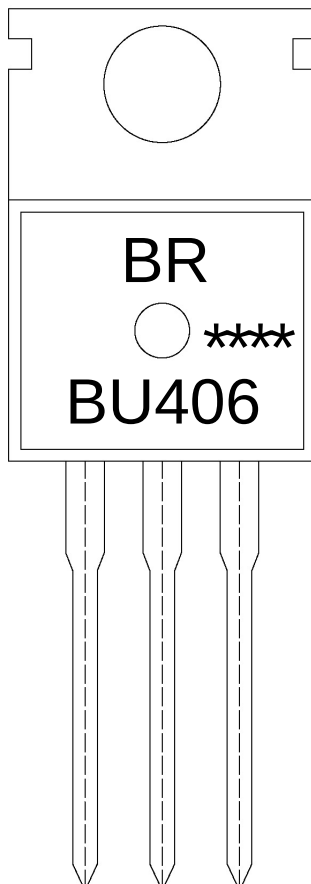
/ Package Dimensions

TQ-220

单位: mm



/ Marking Instructions



BR

BU406

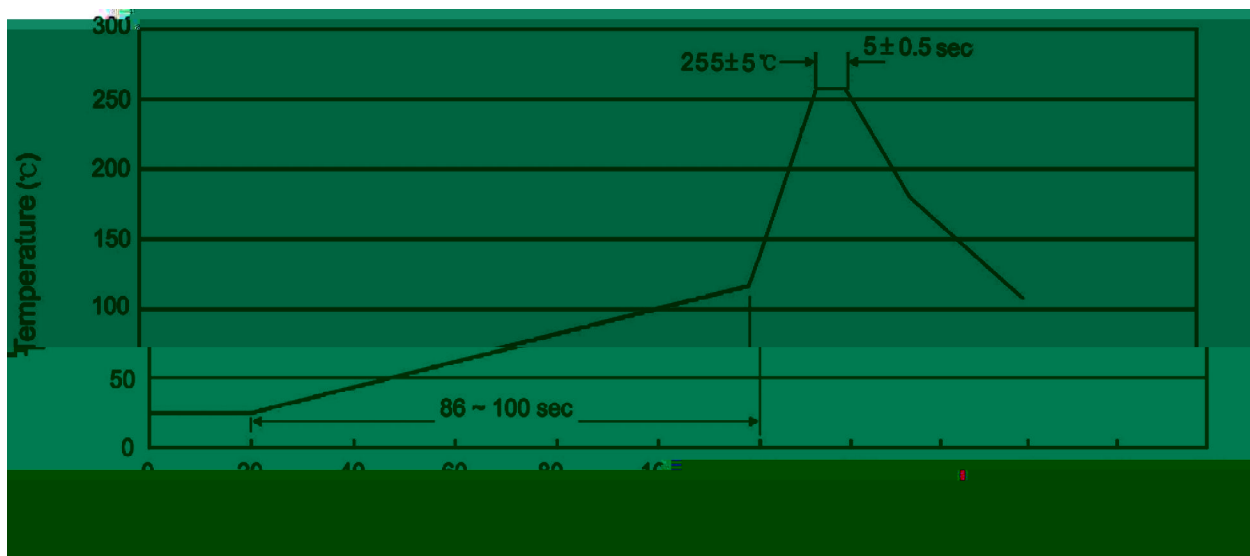
Note:

BR: Company Code

BU406: Product Type.

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

() / 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

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

/ Notices

