

/ Descriptions

TO-220

NPN

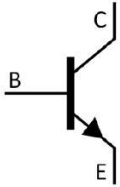
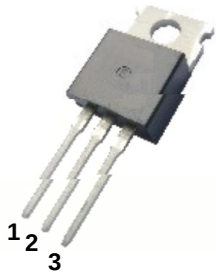
Silicon NPN transistor in a TO-220 Plastic Package.

/ Features

High voltage.

/ Applications

High voltage switching and humidifier.

/ Equivalent Circuit**/ Pinning**

PIN1 Base

PIN 2 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

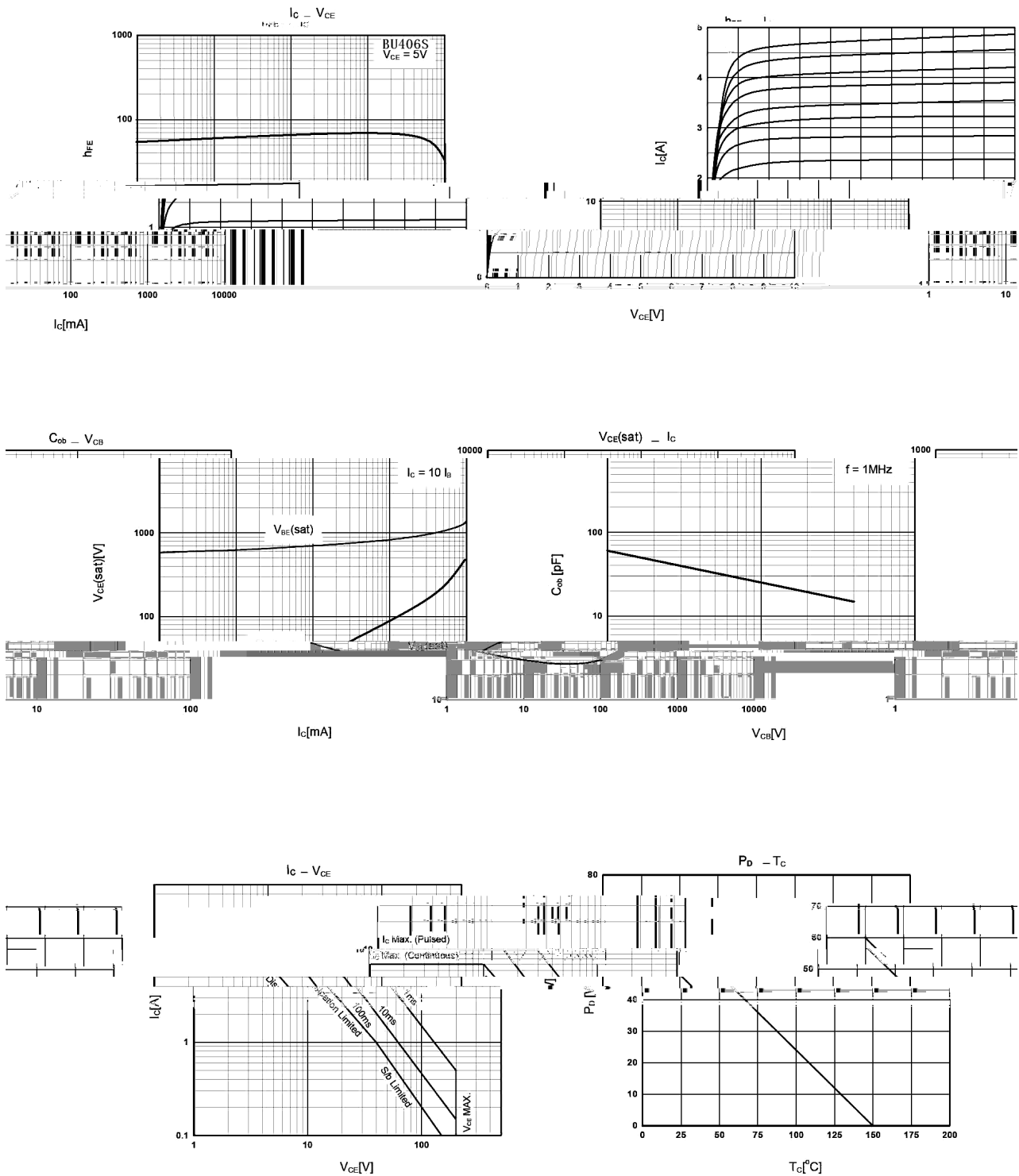
See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

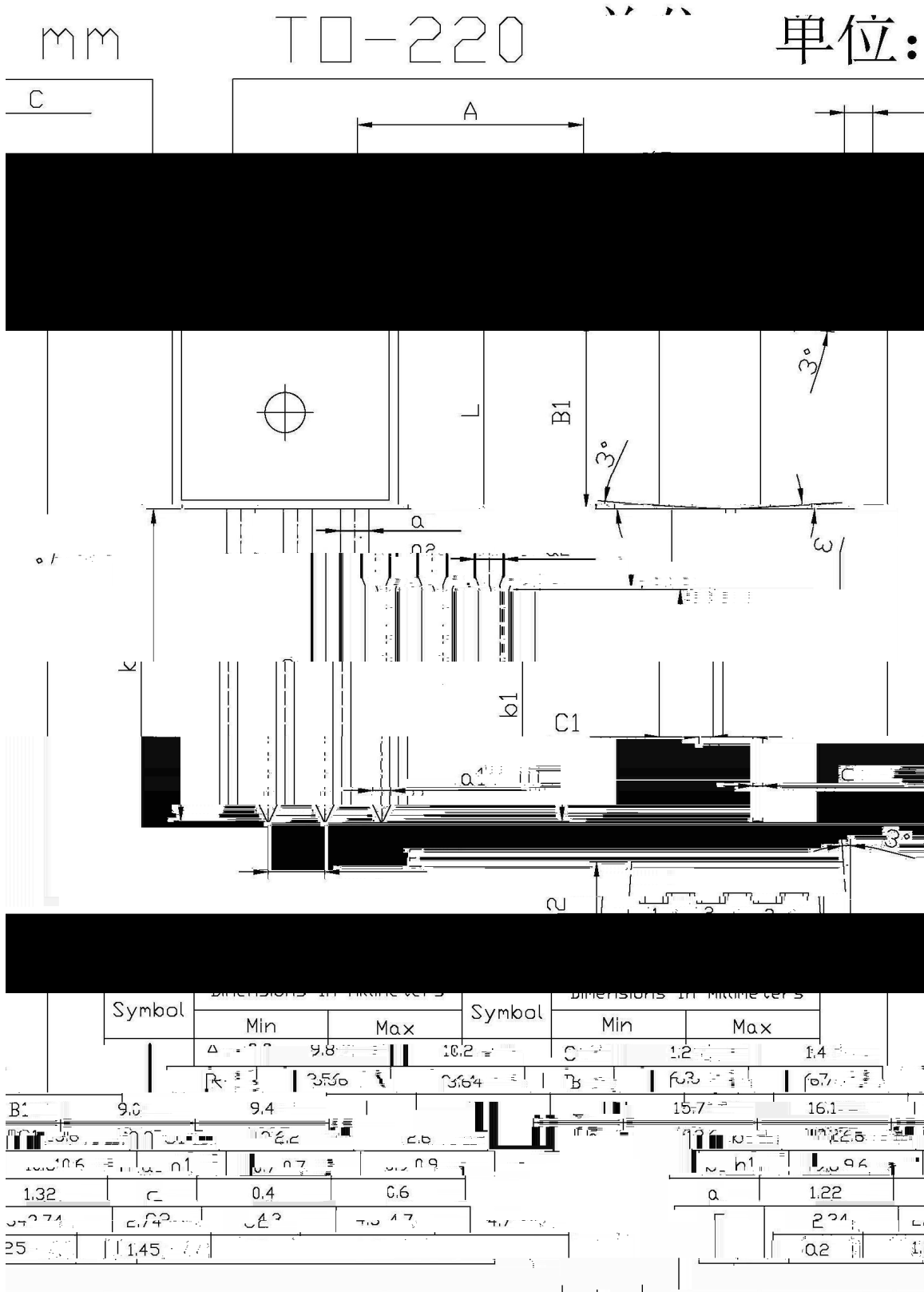
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	200	V
Collector to Emitter Voltage	V_{CEO}	120	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	7	A
Collector Current(Pulse)	I_{CP}	10	A
Base Current – Continuous	I_B	2	A
Collector Power Dissipation	P_C	60	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CES(1)}$	$V_{CE}=200V \quad V_{BE}=0$			100	A
	$I_{CES(2)}$	$V_{CE}=150V \quad V_{BE}=0$			50	A
	$I_{CES(3)}$	$V_{CE}=150V \quad V_{BE}=0$ $T_C=150$			500	A
Collector Cut-Off Current	I_{CEO}	$V_{CE}=120V \quad V_{BE}=0$			100	A
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=6.0V \quad I_C=0$			1.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V \quad I_C=2.0A$	60		120	
	$h_{FE(2)}$	$V_{CE}=5.0V \quad I_C=5.0A$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5.0A \quad I_B=0.5A$		0.22	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5.0A \quad I_B=0.5A$		1.05	1.25	V
Transition Frequency	f_T	$V_{CE}=10V \quad I_C=0.5A$	10			MHz
Turn-Off Time	t_{off}	$I_C=5.0A \quad I_B=0.5A$			0.7	S

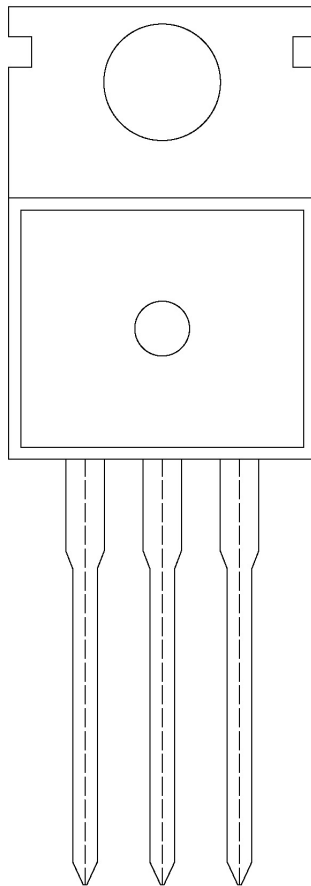
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

BU406S

Note:

BR: Company 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

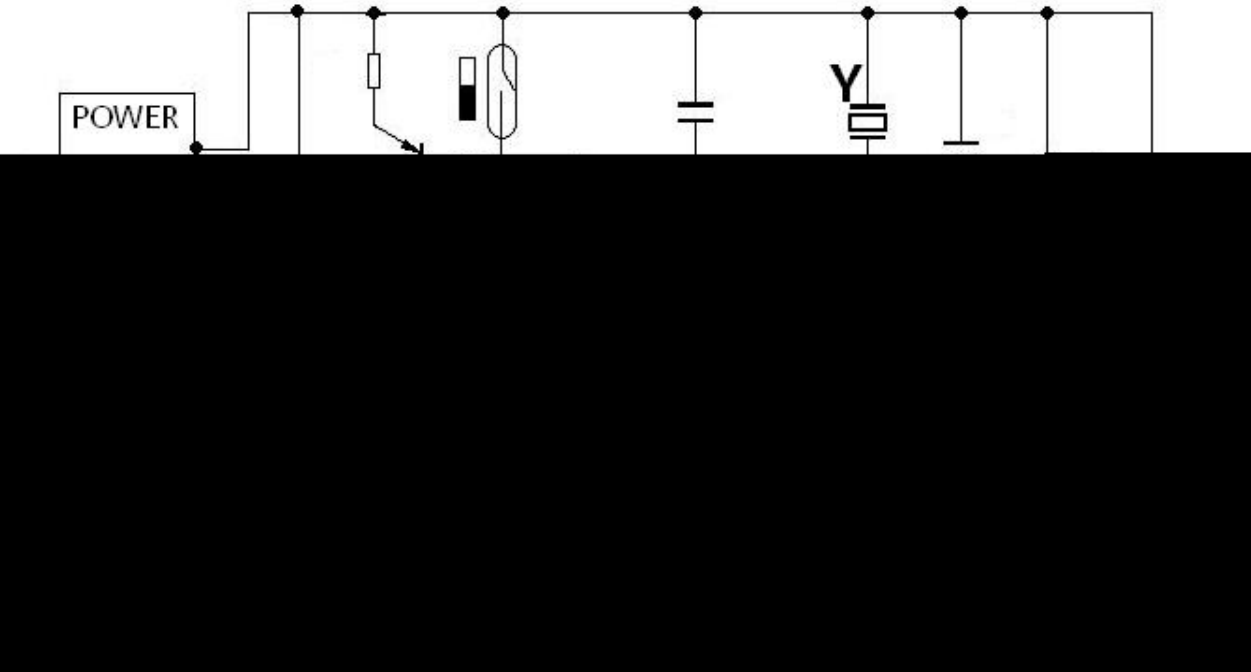
Package Type	Units					Dimension		(unit mm ³)

/ TUBE

Package Type	Units					Dimension		(unit mm ³)

/ Notices

3MHZ



- 1

2

3

4 HFE
- ≤3.0MHZ

≤40V

≤45W

60-70,70-80,80-90
- 1

2
- HFE

HFE
- HFE 60-70 70-80 80-90
- 1

2
- 3
- 3.1

3.2

3.3

3.4

3.5
- ≤5kgf.cm

PCB