

## Descriptions

Silicon NPN transistor in a TO-220 Plastic Package.

## Features

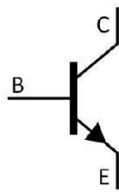
High voltage.

Symbol	Parameter	Rating	Unit
$V_{CEO}$	Collector to Emitter Voltage	200	V
$I_C$	Collector Current - Continuous	7	A

## Applications

High voltage switching and humidifier.

## Equivalent Circuit & Pinning



TO-220

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

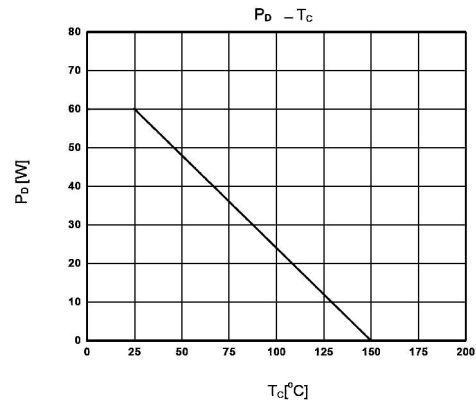
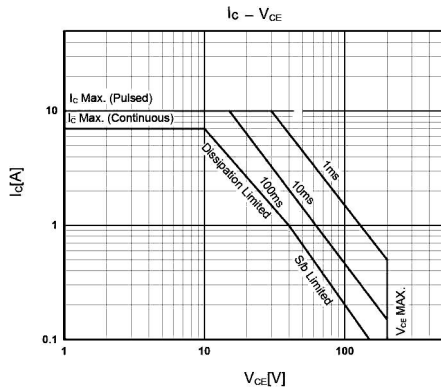
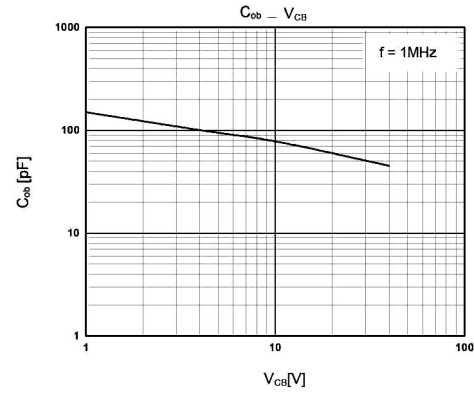
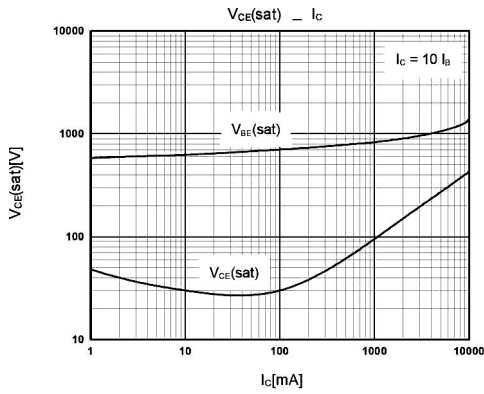
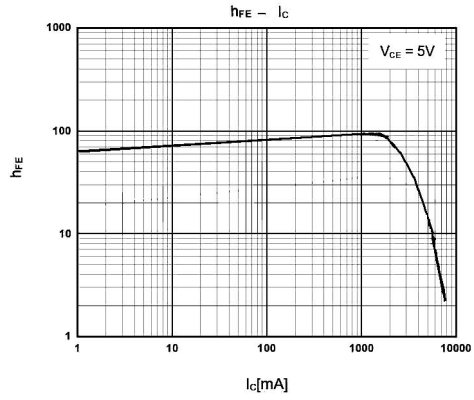
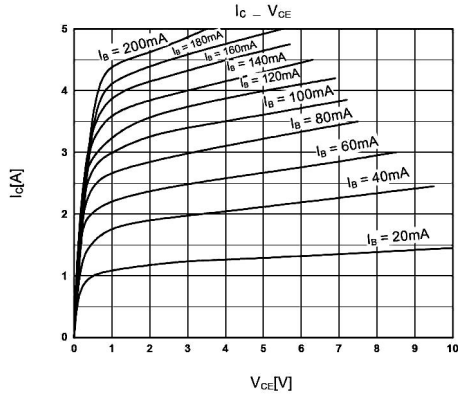
## Absolute Maximum Ratings(Ta=25°C)

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	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

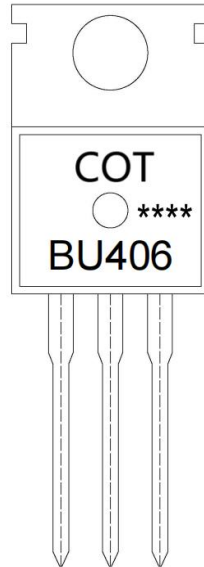
## Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=400V$ $I_E=0$			10	$\mu A$
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=200V$ $I_B=0$			50	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{BE}=6.0V$ $I_C=0$			10	$\mu A$
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	$\mu A$
	$I_{CES(3)}$	$V_{CE}=250V$ $V_{BE}=0$ $T_C=150^\circ C$			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	$\mu S$

Electrical Characteristic Curve



**Marking Instructions**



Note:  
 COT: Company Code.  
 BU406: Product Type.  
 \*\*\*\*: Lot No. Code, code change with Lot No.

**Packaging SPEC**

**BULK**

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	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 <sup>3</sup> )		
	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

Package Outline Dimensions

TO-220

单位: mm

