

/ Descriptions

Silicon NPN transistor in a TO-220F Plastic Package.

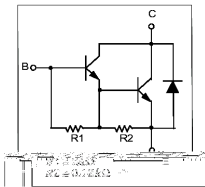
/ Features

Complement to TIP127F.

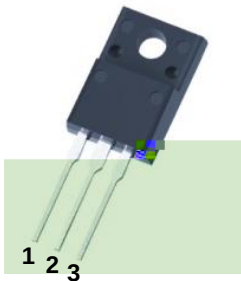
/ Applications

Medium power linear switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

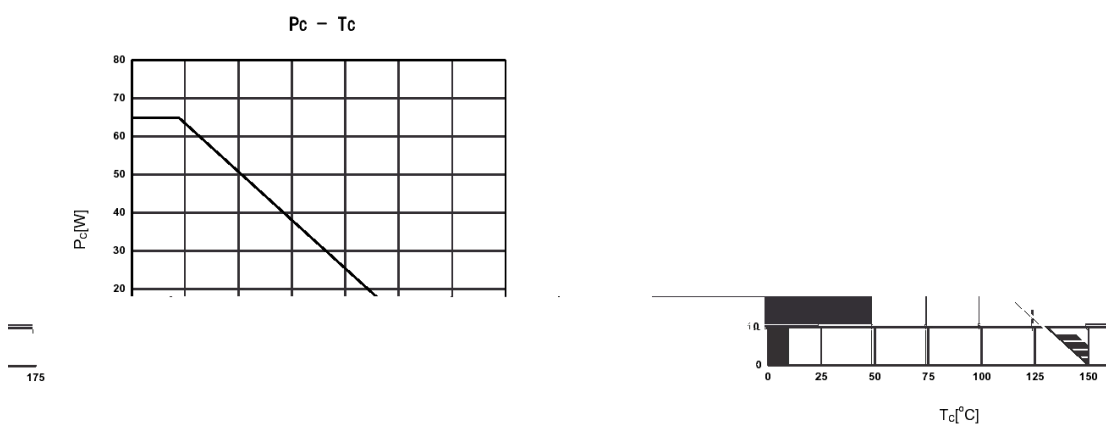
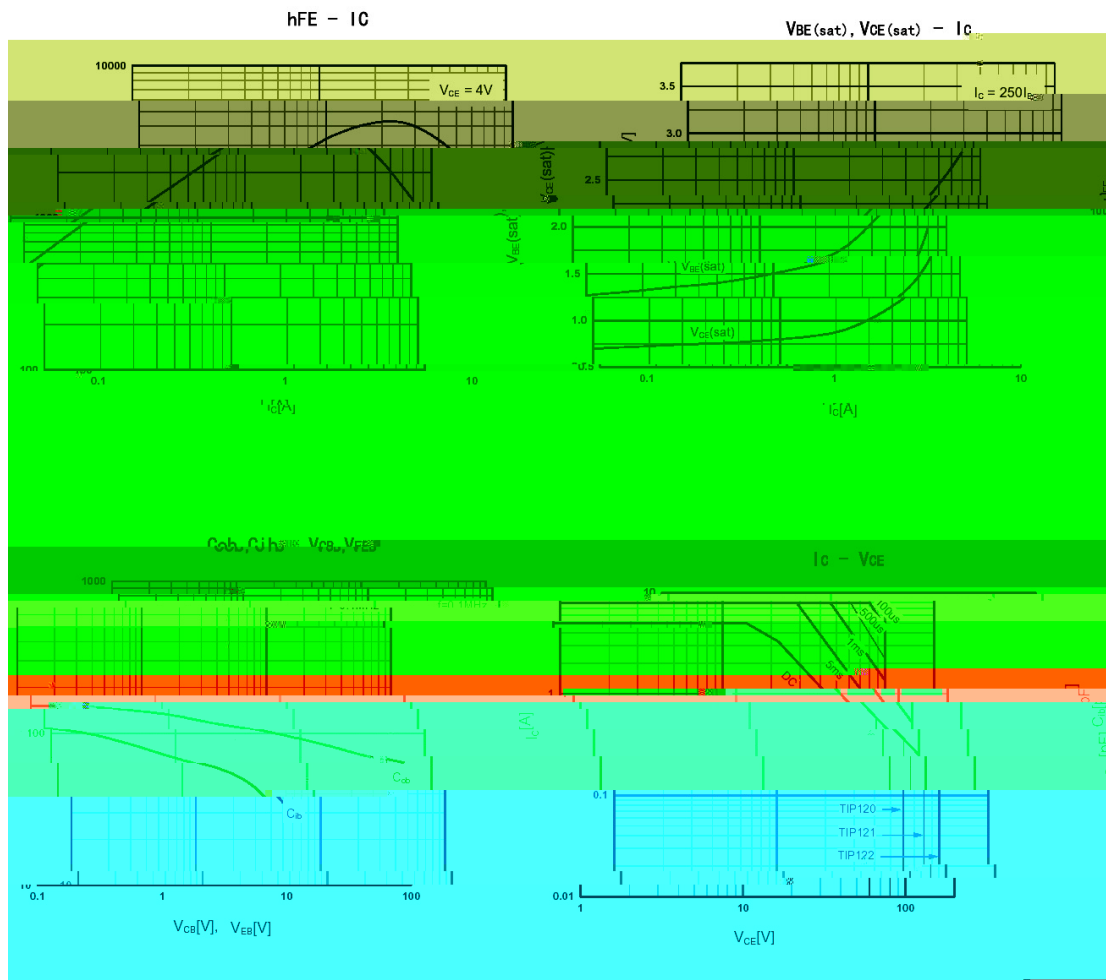
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	5.0	A
Collector Current – Continuous(Pulse)	I_{CP}	8.0	A
Base Current	I_B	120	mA
Collector Power Dissipation	P_C	2.0	W
	$P_C(T_c=25)$	60	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

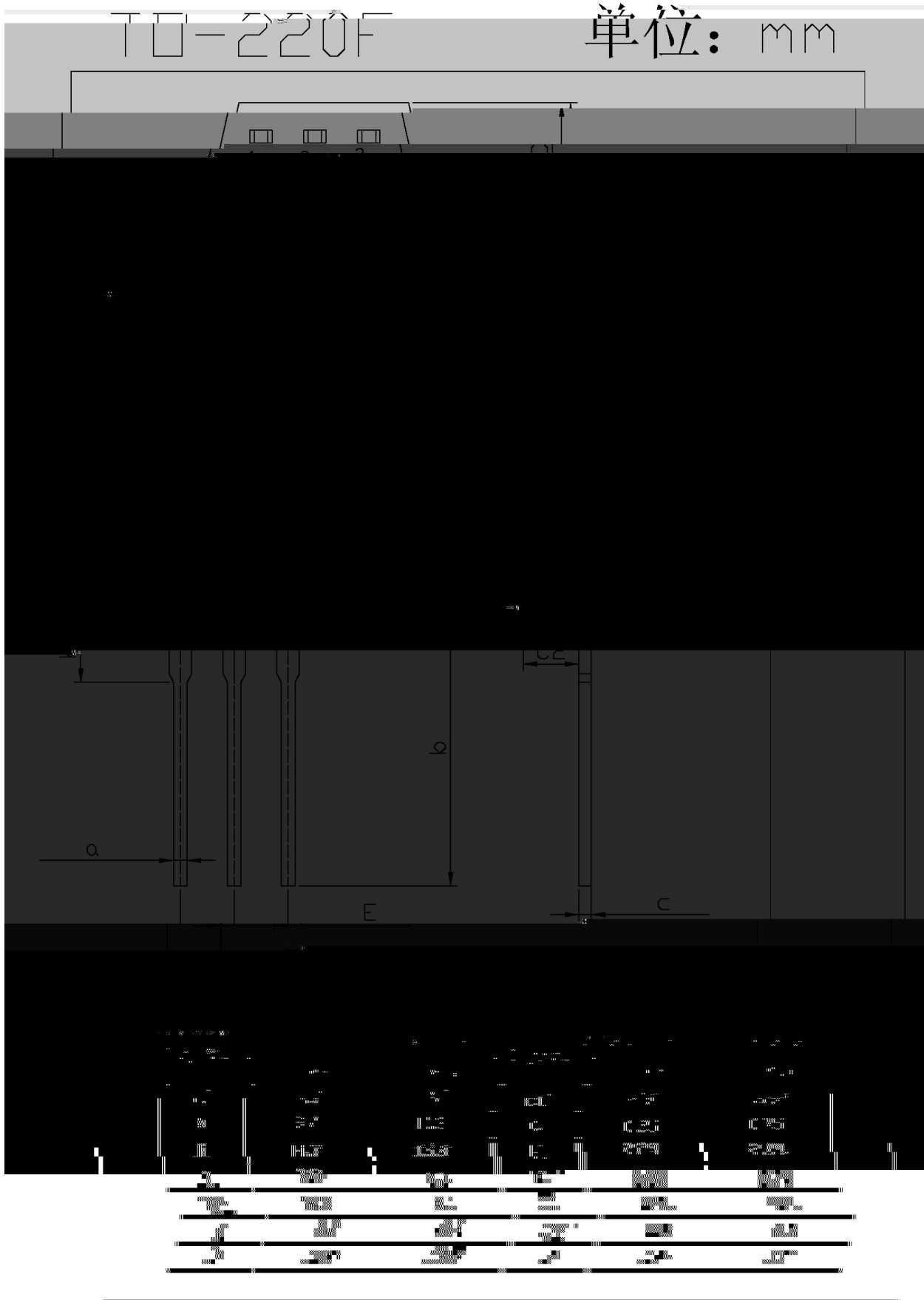
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=100mA$ $I_B=0$	100			V
Collector Cut-Off Current	I_{CEO}	$V_{CE}=50V$ $I_B=0$			0.5	mA
Collector Cut-Off Current	I_{CBO}	$V_{CB}=100V$ $I_E=0$			0.2	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			2.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=3.0V$ $I_C=0.5A$	1000			
	$h_{FE(2)}$	$V_{CE}=3.0V$ $I_C=3.0A$	1000			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=3.0A$ $I_B=12mA$			2.0	V
	$V_{CE(sat)(2)}$	$I_C=5.0A$ $I_B=20mA$			4.0	V
Base to Emitter Voltage	V_{BE}	$I_C=3.0A$ $V_{CE}=3.0V$			2.5	V
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=0.1MHz$			200	pF

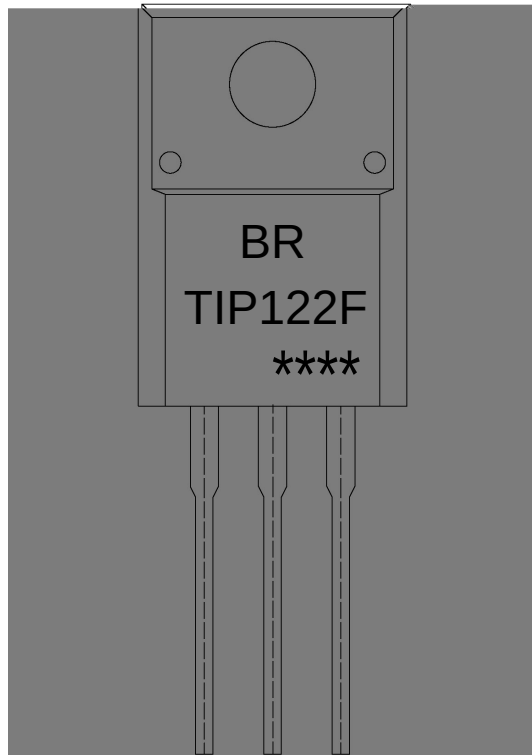
/ **Electrical Characteristic Curve**



/ Package Dimensions



/ Marking Instructions



BR

TIP122F

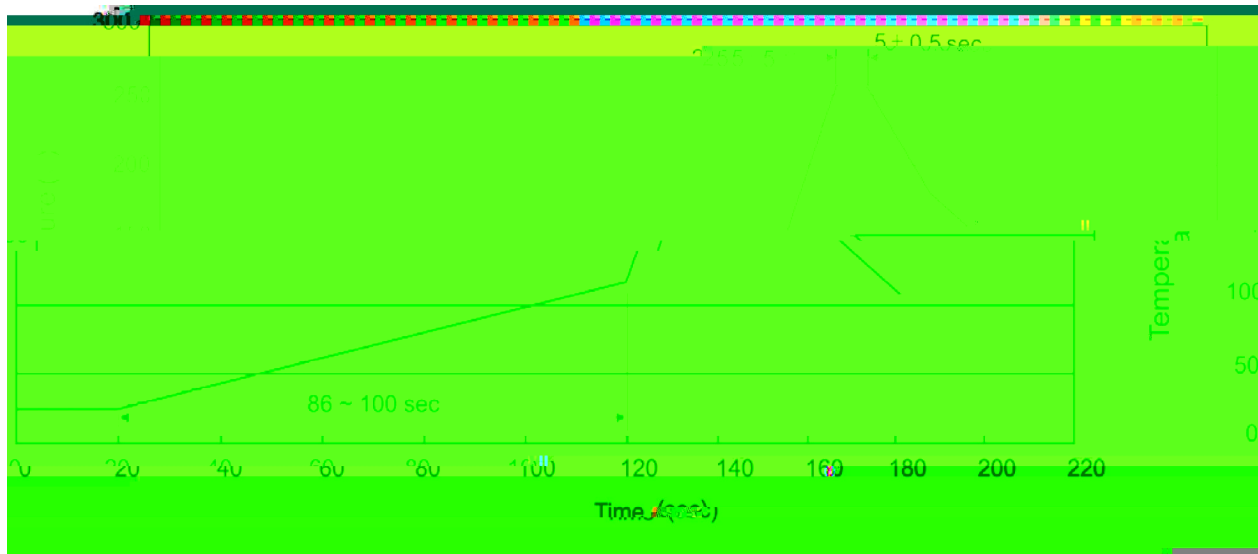
Note:

BR: Company Code.

TIP122F: Product Type Code.

****: 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	Units					Dimension (unit mm3)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-220F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm3)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-220F	50	20	1,000	5	5,000	532×31.4×5.5	532×124.9	