

/ Descriptions

KF \$))' = E GE Silicon NPN transistor in a TO-220F Plastic Package.

/ Features

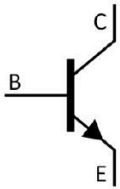
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High h_{FE} , low $V_{CE(sat)}$.

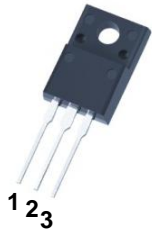
/ Applications

Driver for solenoid and motor, series regulator and general purpose.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

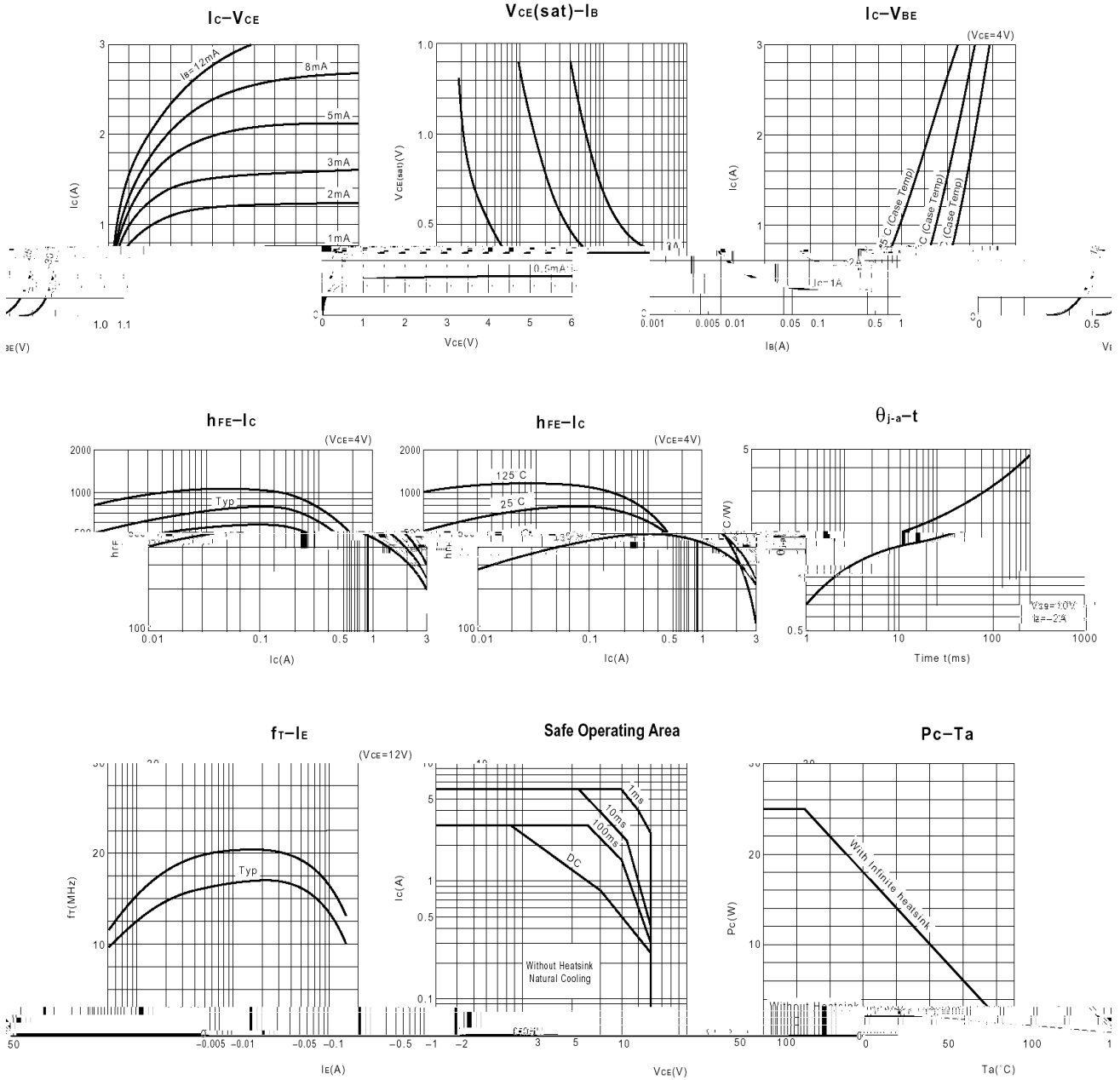
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	3.0	A
Base Current	I_B	1.0	A
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	25	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}C$

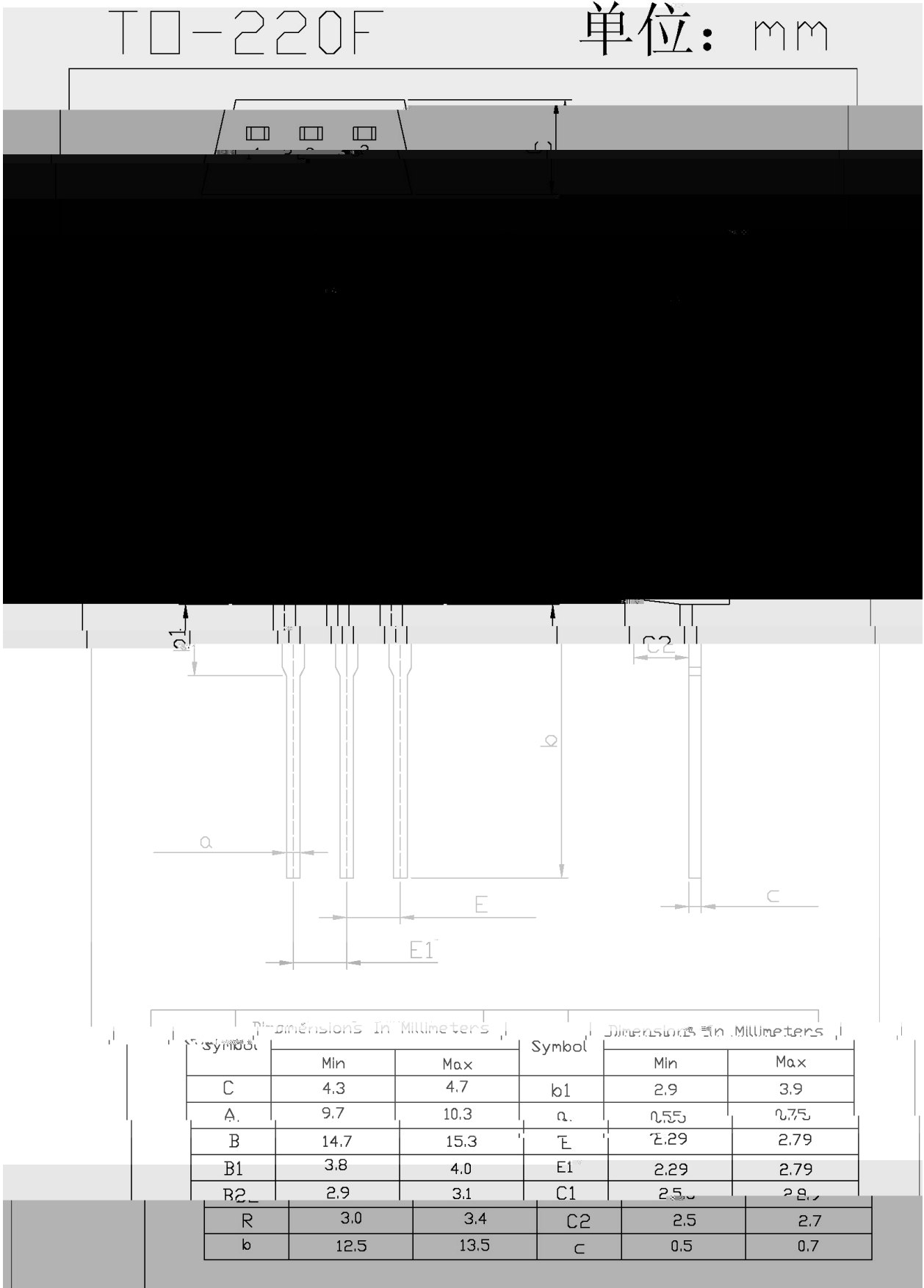
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=25mA$	60			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=80V$ $I_E=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			100	μA
DC Current Gain	h_{FE}	$V_{CE}=4.0V$ $I_C=500mA$	500		2000	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=50mA$			0.5	V
Transition Frequency	f_T	$V_{CE}=12V$ $I_C=0.2A$		15		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		50		pF

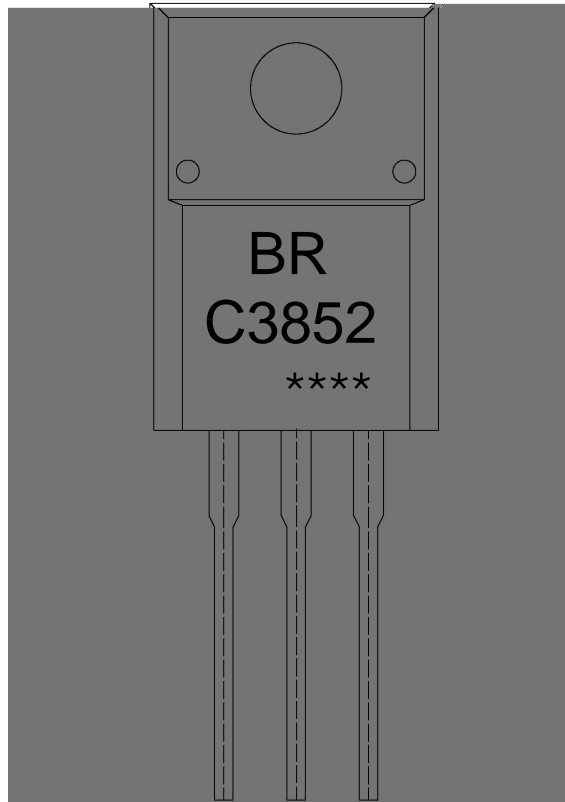
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



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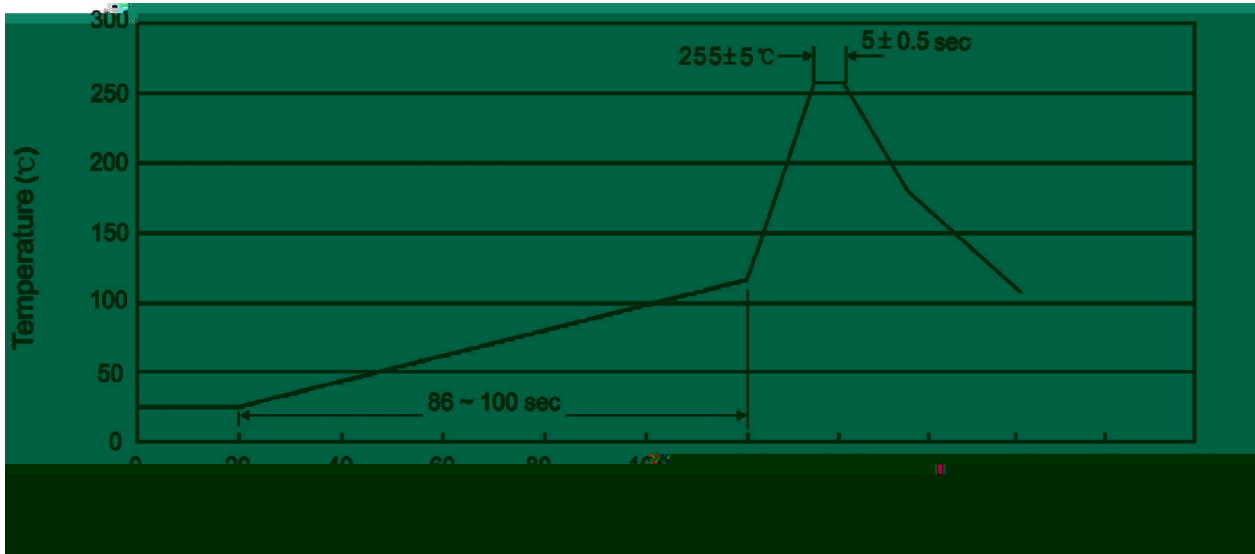
Note:

BR: Company Code.

C3852: 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°C 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