

/ Descriptions

TO-220F

NPN

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

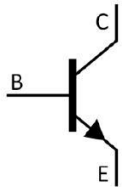
/ Features

, 2SA940A

Wide Safe Operating Area, complementary to 2SA940A.

/ Applications

Power amplifier applications, vertical output applications.

/ Equivalent Circuit**/ Pinning**

PIN1 Base

PIN 2 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	150	V
Collector to Emitter Voltage	V_{CEO}	150	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	1.5	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

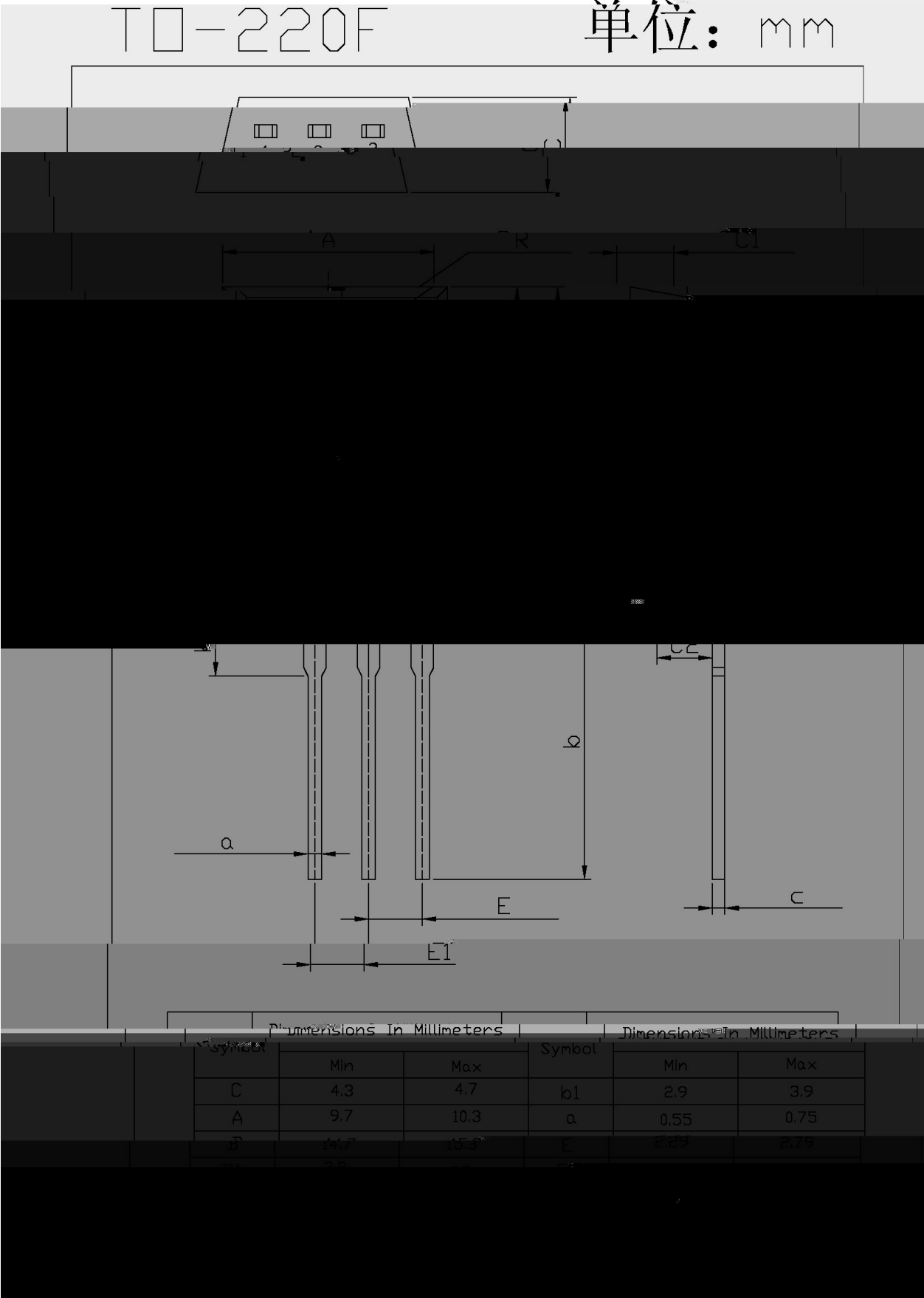
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=120\text{V}$ $I_E=0$			10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0\text{V}$ $I_C=0$			10	A
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}$ $I_C=500\text{mA}$	40	75	140	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ $I_B=50\text{mA}$			1.5	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=10\text{V}$ $I_C=500\text{mA}$	0.65	0.75	0.85	V
Transition Frequency	f_T	$V_{CE}=10\text{V}$ $I_C=500\text{mA}$		4.0		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		35		pF

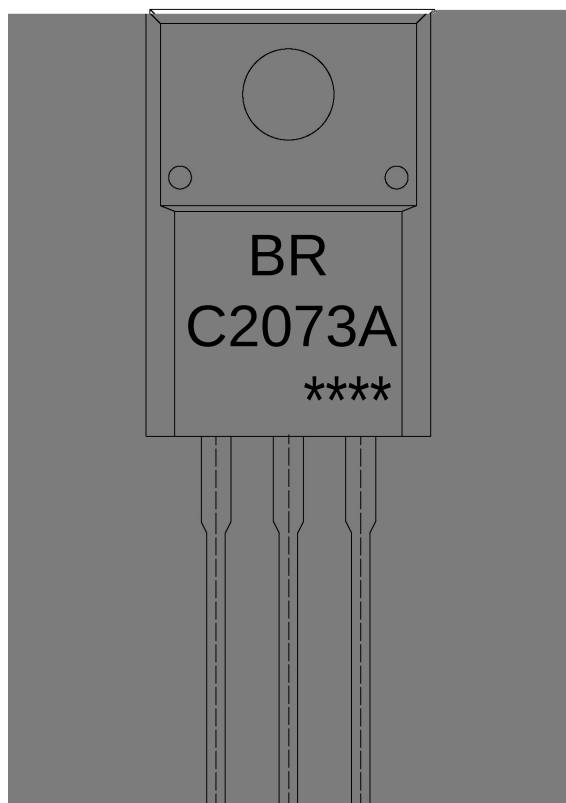
/ **Electrical Characteristic Curve**



/ Package Dimensions



/ Marking Instructions



BR

C2073A

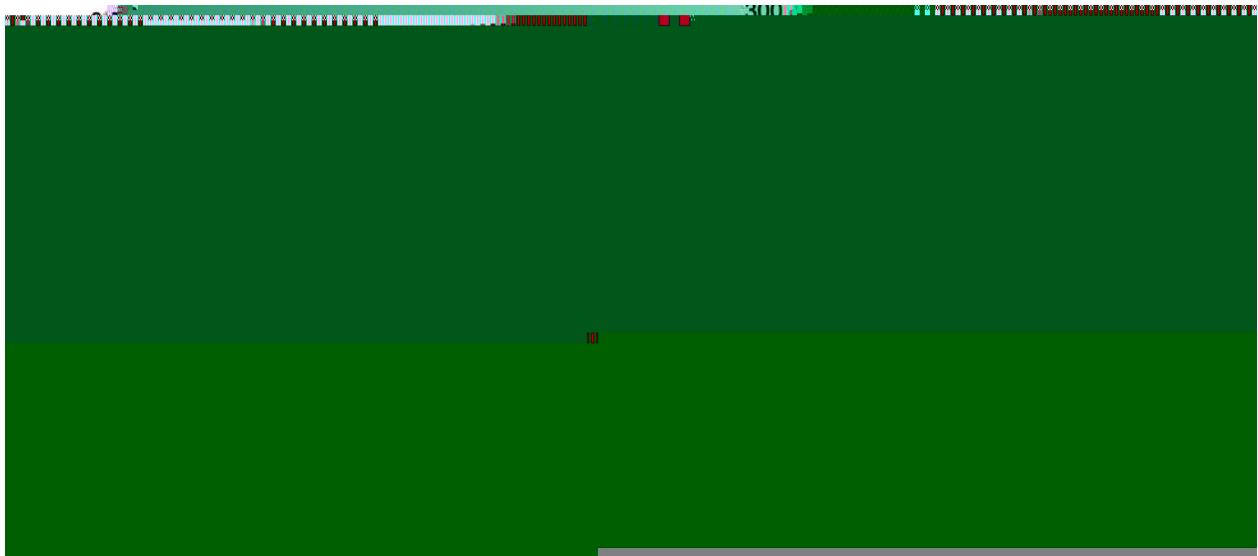
Note:

BR: Company Code.

C2073A: 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