

/ Descriptions

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

/ Features

High breakdown voltage, excellent current characteristics.

/ Applications

TV vertical output, audio output driver and general purpose amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

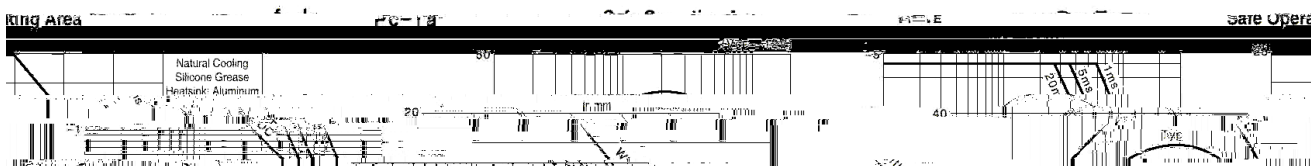
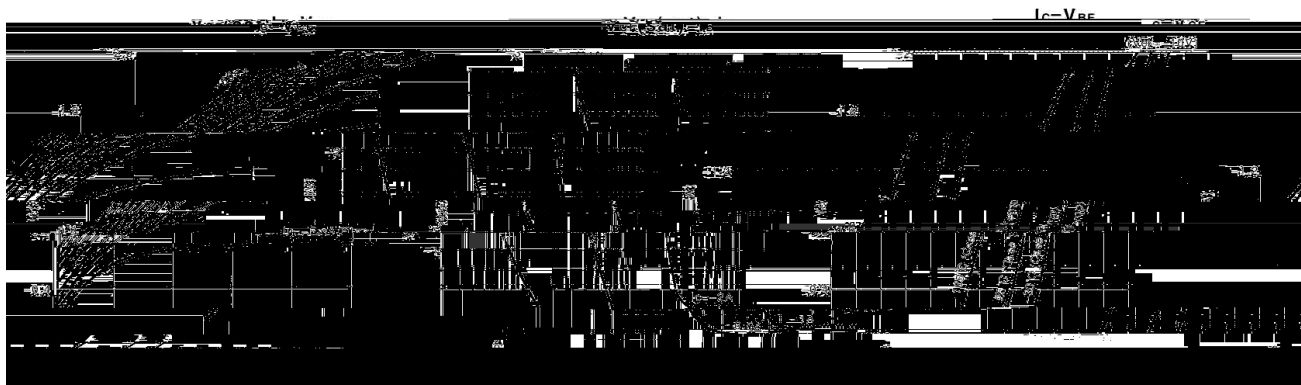
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-200	V
Collector to Emitter Voltage	V_{CEO}	-200	V
Emitter to Base Voltage	V_{EBO}	-6.0	V
Collector Current - Continuous	I_C	-2.0	A
Base Current	I_B	-1.0	A
Collector Power Dissipation	$P_C(T_C=25)$	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

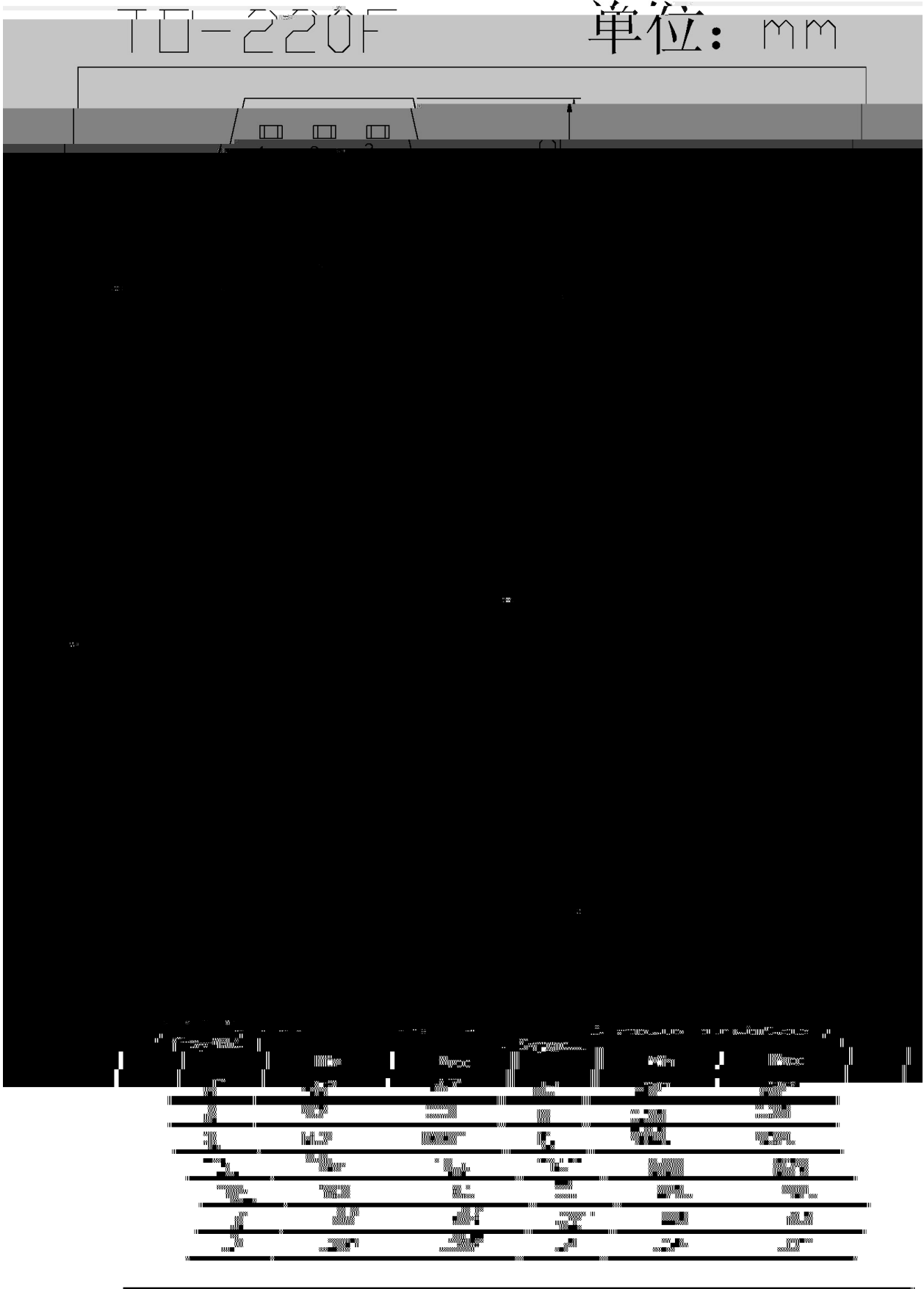
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-25mA$ $I_E=0$	-200			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-200V$ $I_E=0$			-10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-6.0V$ $I_C=0$			-10	μA
DC Current Gain	h_{FE}	$V_{CE}=-10V$ $I_C=-700mA$	60		200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-700mA$ $I_B=-70mA$			-1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-0.9	-1.2	V
Transition Frequency	f_T	$V_{CE}=-12V$ $I_E=200mA$		20		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V$ $f=1.0MHz$		60		pF

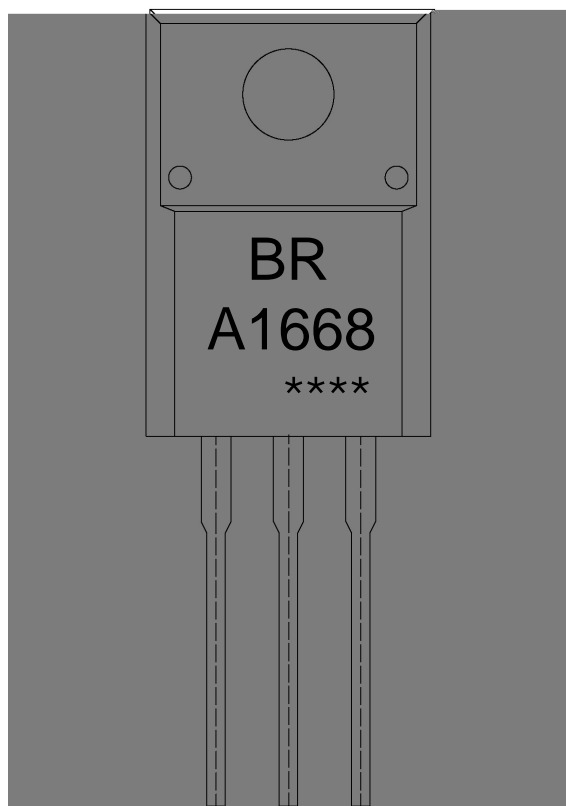
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

A1668

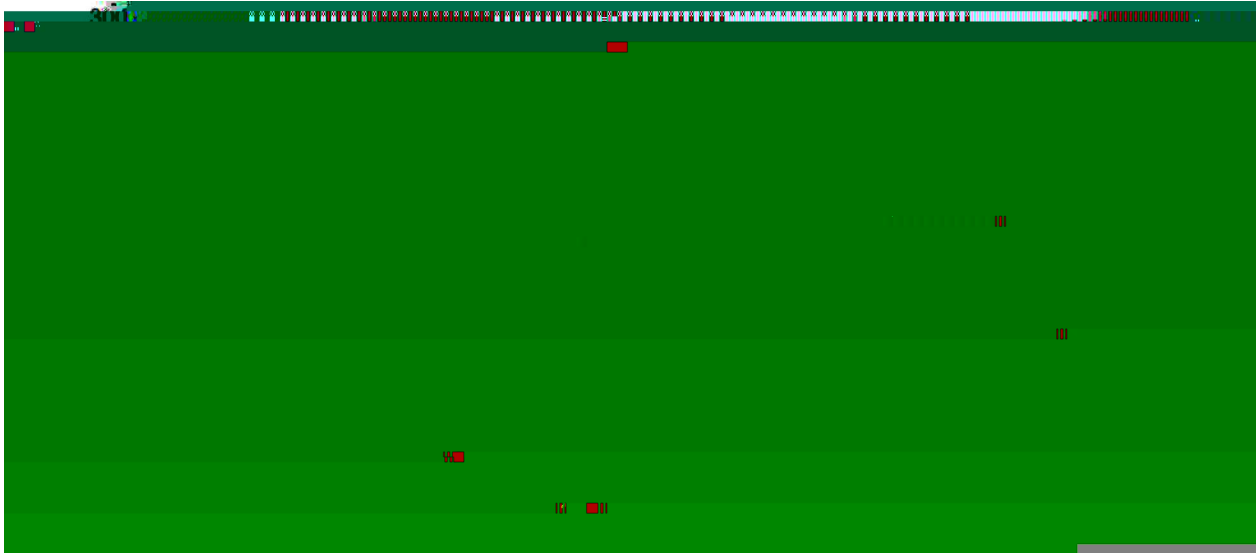
Note:

BR: Company Code.

A1668: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



- | | | | | | | |
|---|-------|-----|-----------|--------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | Note: | 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)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box