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

Low V

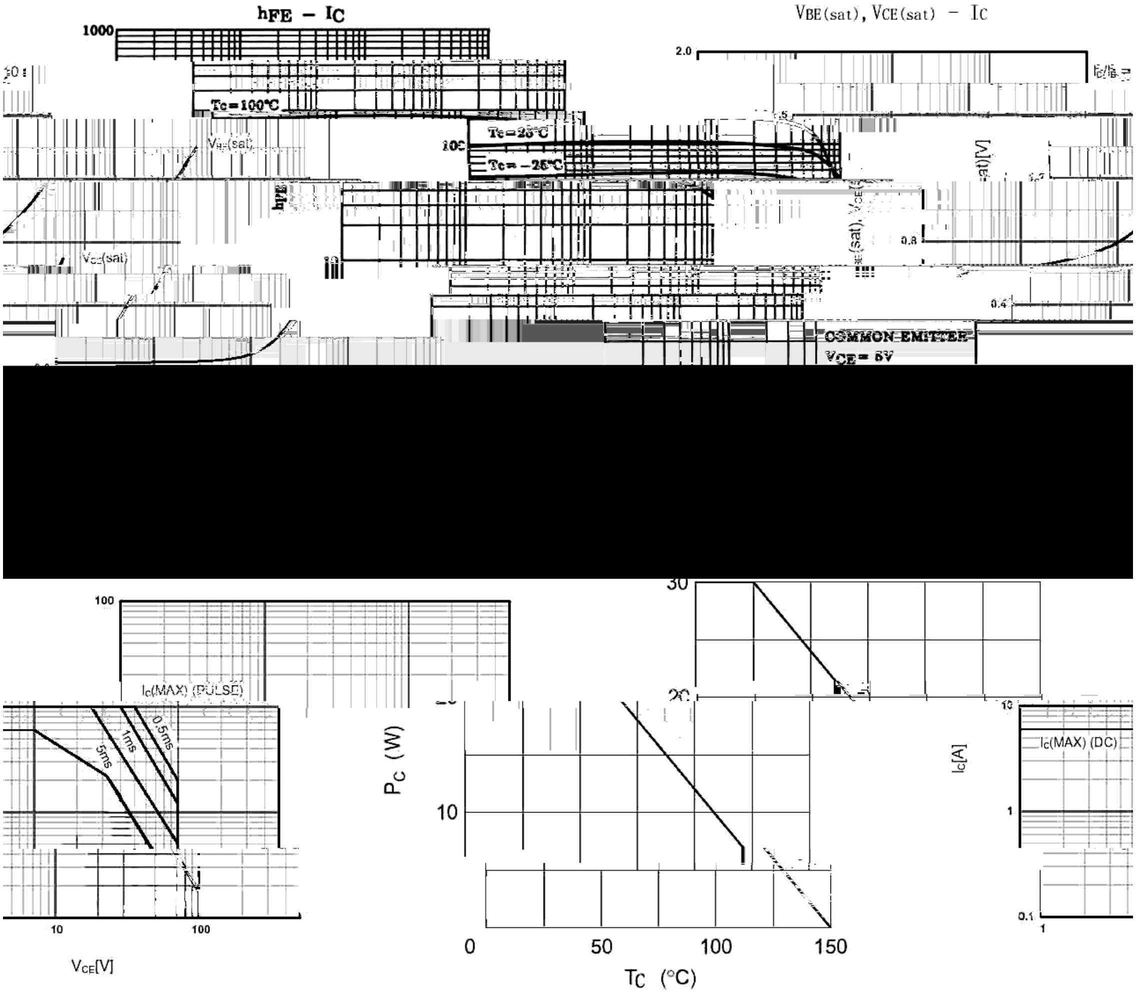
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	7.0	A
Collector Current – Continuous(Pulse)	I_{CP}	10	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_C=25\ )$	30	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=50 A I_E=0	100			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA I_B=0	80			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=50 A I_C=0	5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=100V I_E=0			10	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			10	A
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=1.0A	60		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=4.0A I_B=0.4A			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=4.0A I_B=0.4A			1.5	V
Transition Frequency	f_T	V_{CE}=5.0V I_C=0.5A f=5.0MHz		5.0		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0A f=1.0MHz		150		pF

/ Electrical Characteristic Curve



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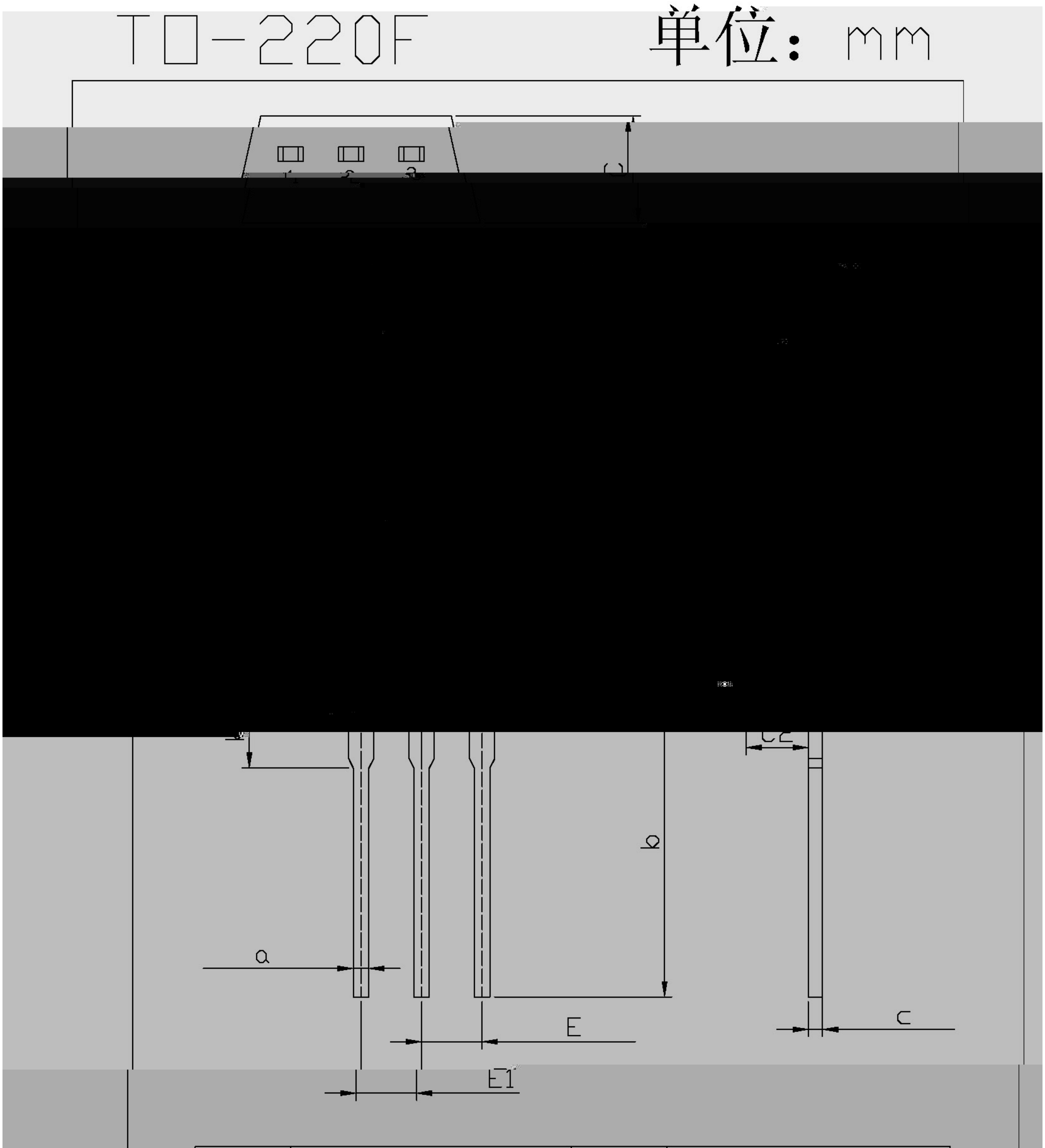
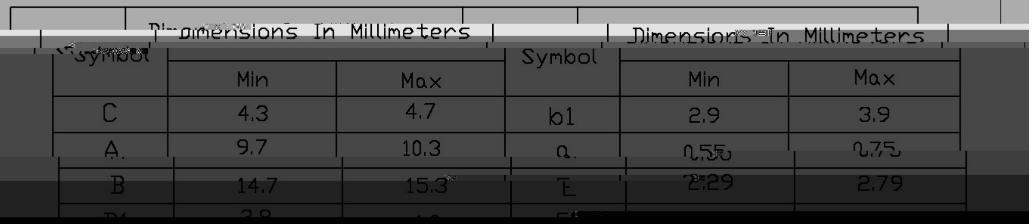
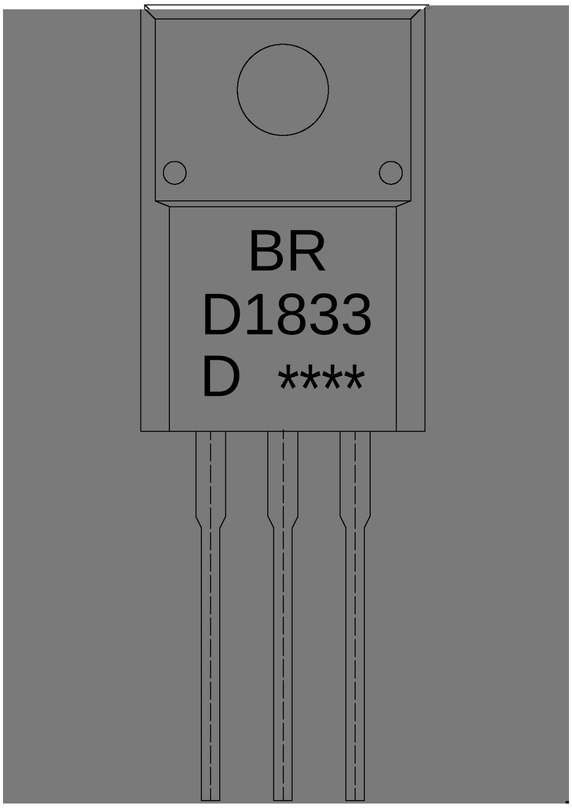
/ Package Dimensions





Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	0.55	0.75
B	14.7	15.3	E	2.29	2.79

/ Marking Instructions



Note:

BR:	Company Code.
D1833:	Product Type.
D:	h_{FE} Classifications Symbol
****:	Lot No. Code, code change with Lot No.

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

Note:

1 25 150 60 90sec;
2 255 5 5 0.5sec;
3 2 10 /sec.

1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:255 5 , Duration:5 0.5sec.
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