

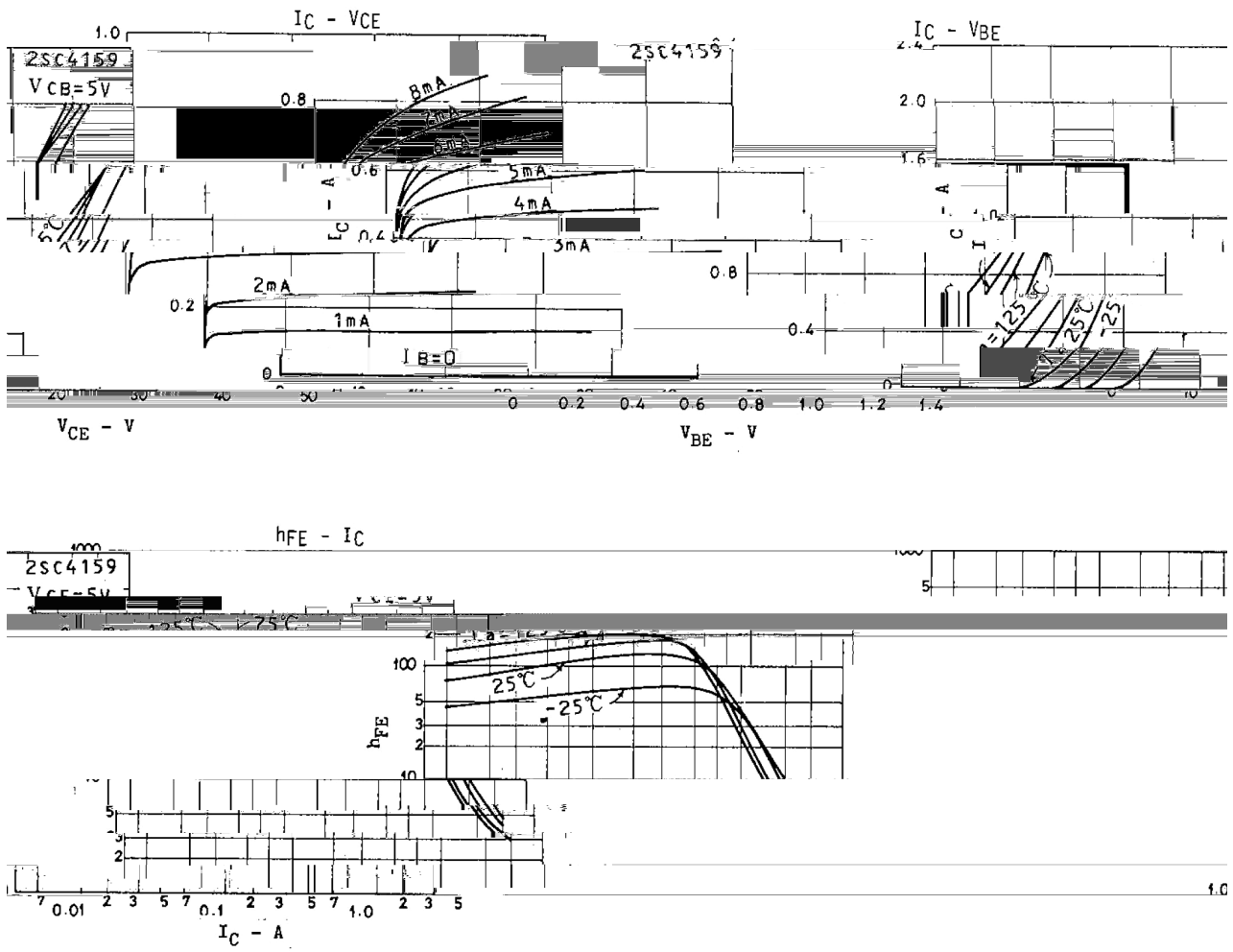
Rev.F Mar.-2016

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

High voltage.

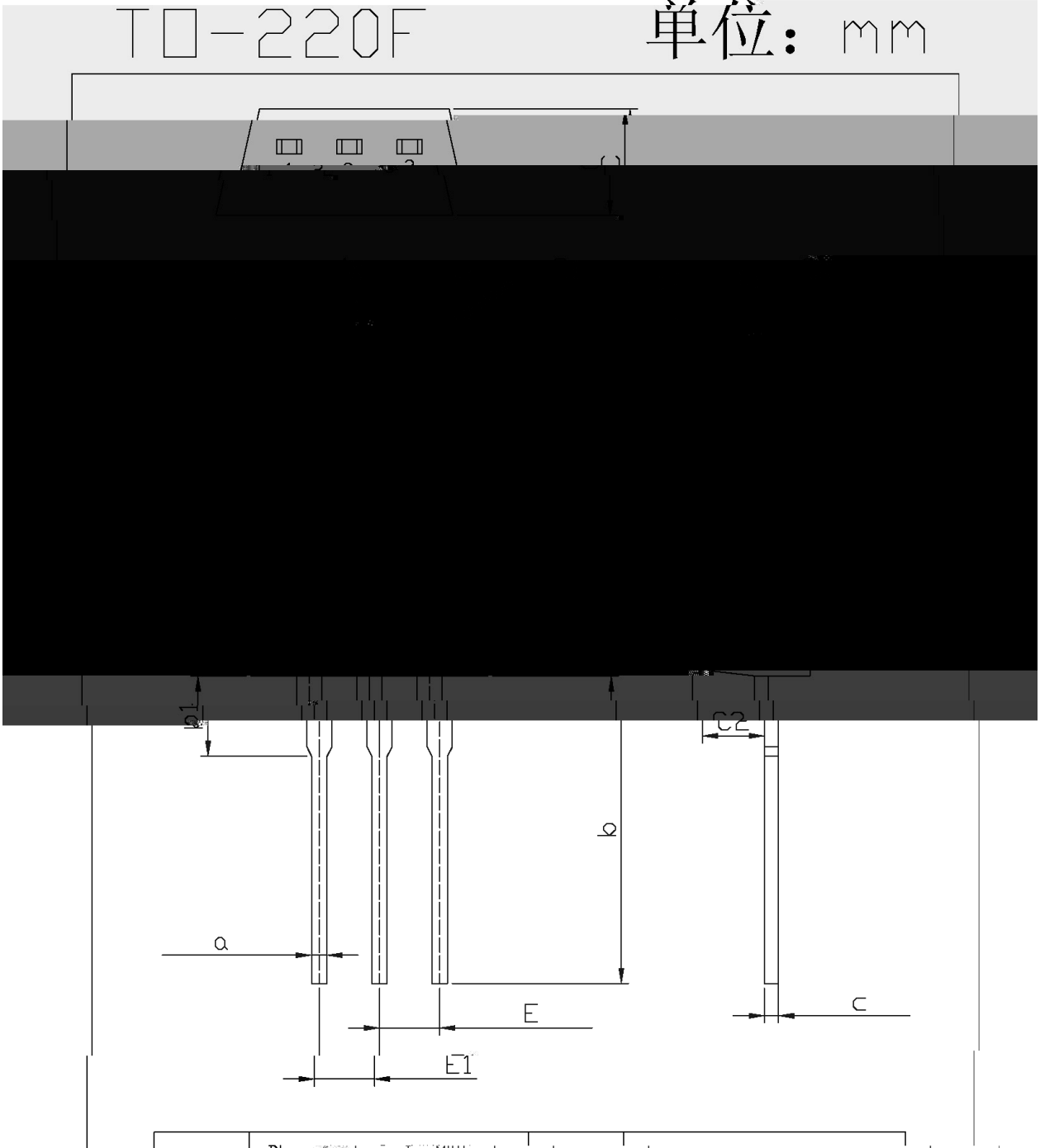
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	1.5	A
Collector Current – Continuous(Pulse)	I_{cp}	3.0	A
Collector Power Dissipation	$P_C(T_C=25^\circ C)$	15	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 150	$^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=1.0mA$ $I_E=0$	180			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $R_{BE}=\infty$	160			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=1.0mA$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=120V$ $I_E=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0V$ $I_C=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=300mA$	60		200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$		0.3		V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=10mA$			1.5	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=50mA$		100		MHz

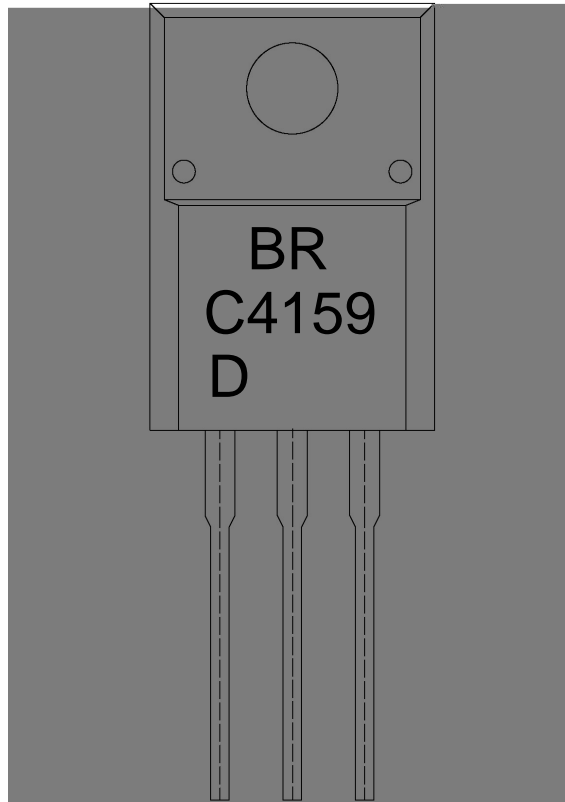


TO-220F

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	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
b1	3.8	4.0	E1	2.29	2.79
B2	2.9	3.1	C1	2.5	2.9



BR

h_{FE}

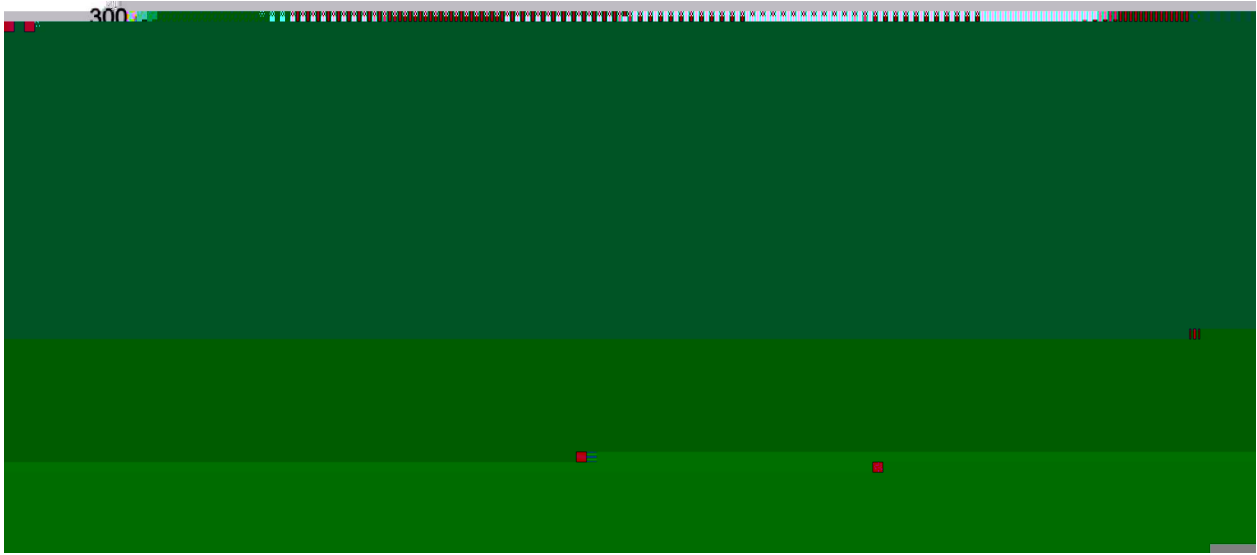
Note:

BR: Company Code.

C4159: Product Type.

D: h_{FE} Classifications Symbol

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



- | | | | | | |
|---|-----|-----|----|---------|---|
| 1 | 25 | 150 | 60 | 90sec; | Note:
1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:255 5 , Duration:5 0.5sec.
3. Cooling Speed: 2~10 /sec. |
| 2 | 255 | 5 | 5 | 0.5sec; | |
| 3 | | 2 | 10 | /sec. | |

270 5 10 1 sec. Temp.:270±5℃ Time:10±1 sec

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只套管	套管盒	只盒	盒箱	只箱	套管	盒	箱