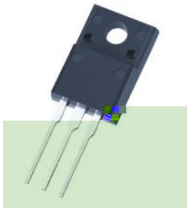


TO-220F      NPN      Silicon NPN transistor in a TO-220F Plastic Package.

High DC current gain, low  $V_{CE(sat)}$ , large collector power dissipation, wide SOA.

Low frequency power amplifier.



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

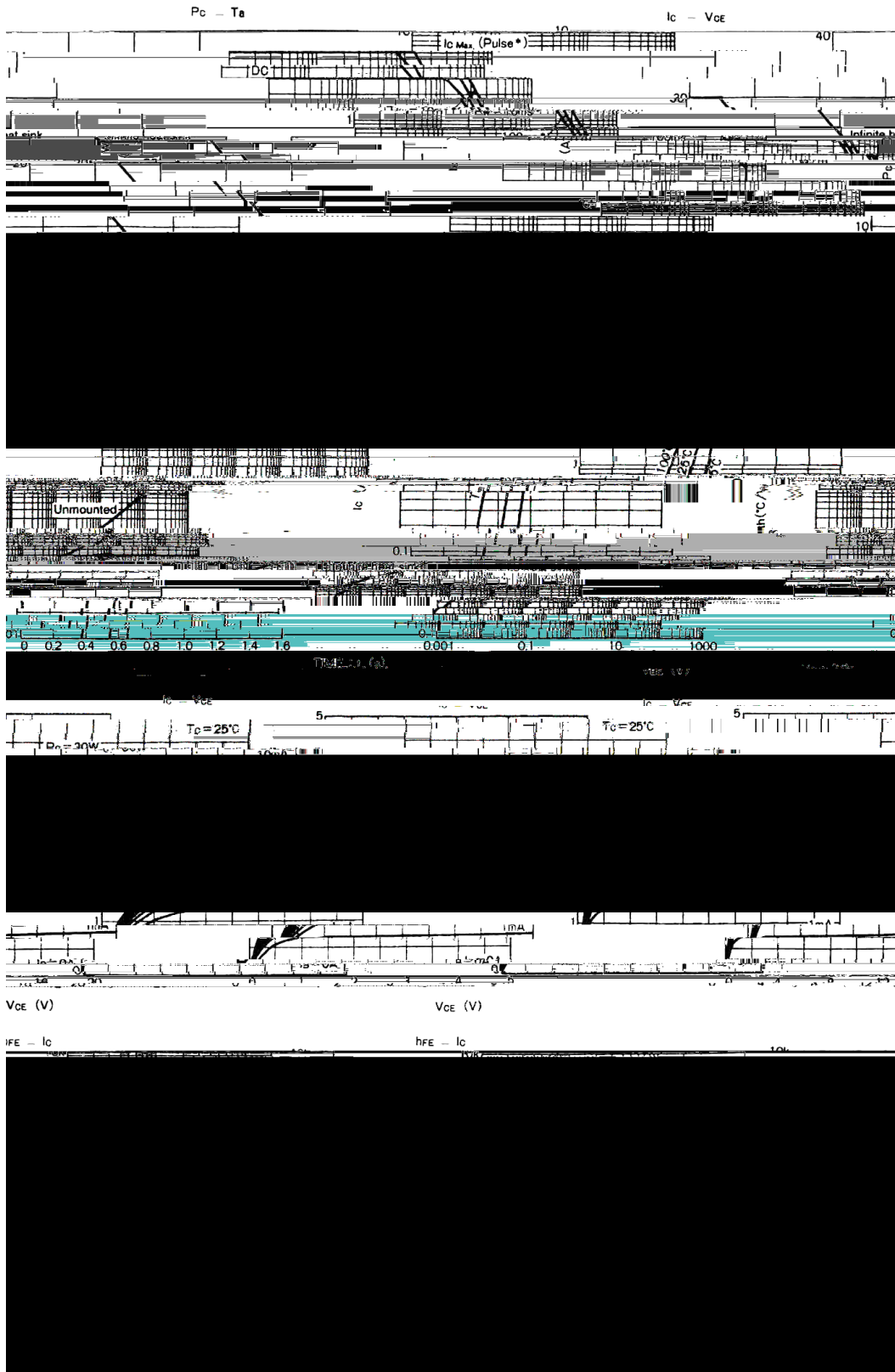
### / $h_{FE}$ Classifications & Marking

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
Collector Current – Continuous(Pulse)	$I_{CP}$	6.0	A
Collector Power Dissipation	$P_C$	2.0	W
	$P_C(T_c=25^\circ C)$	30	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

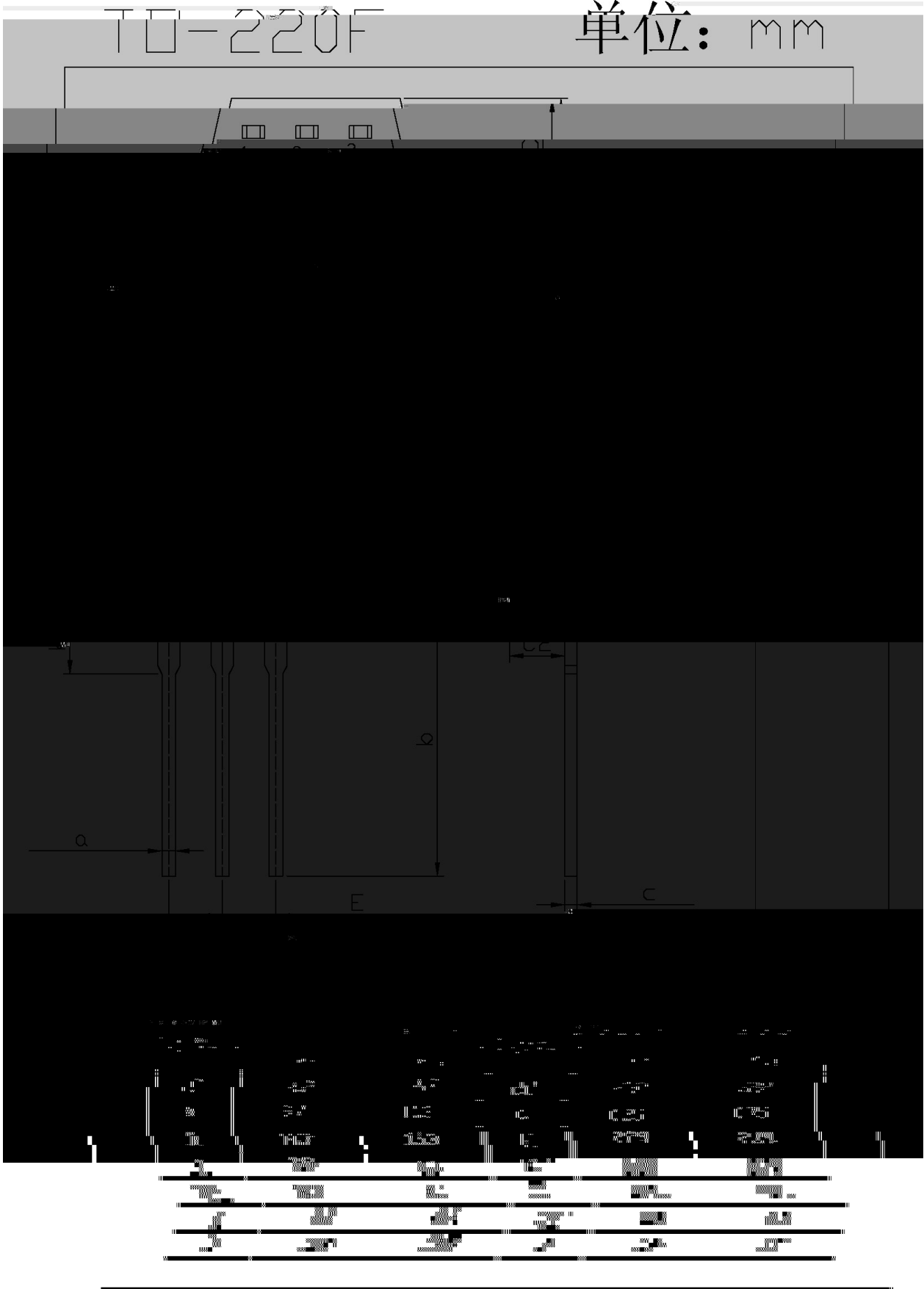
A

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=50\text{ A}$	80			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0\text{mA}$	60			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=50\text{ A}$	6.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=80\text{V}$ $I_E=0$			100	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=6.0\text{V}$ $I_C=0$			VV	0

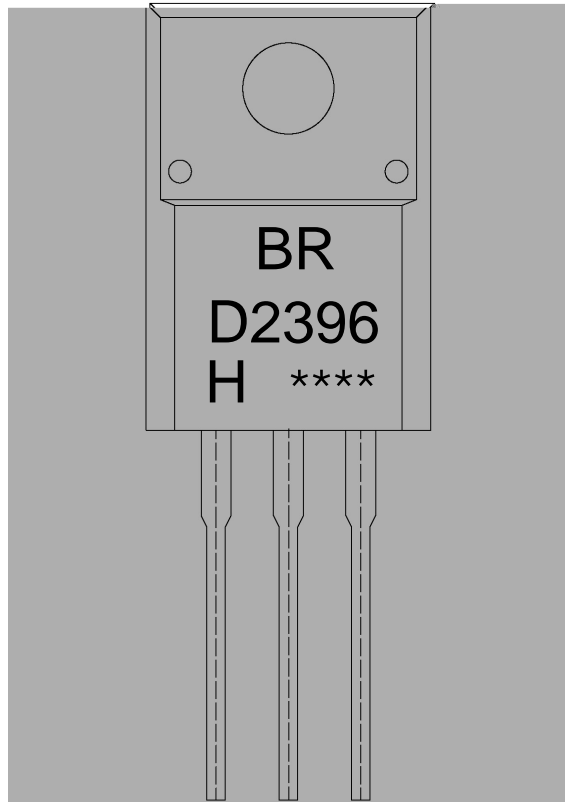
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

D2396

H:  $h_{FE}$

\*\*\*\*

Note:

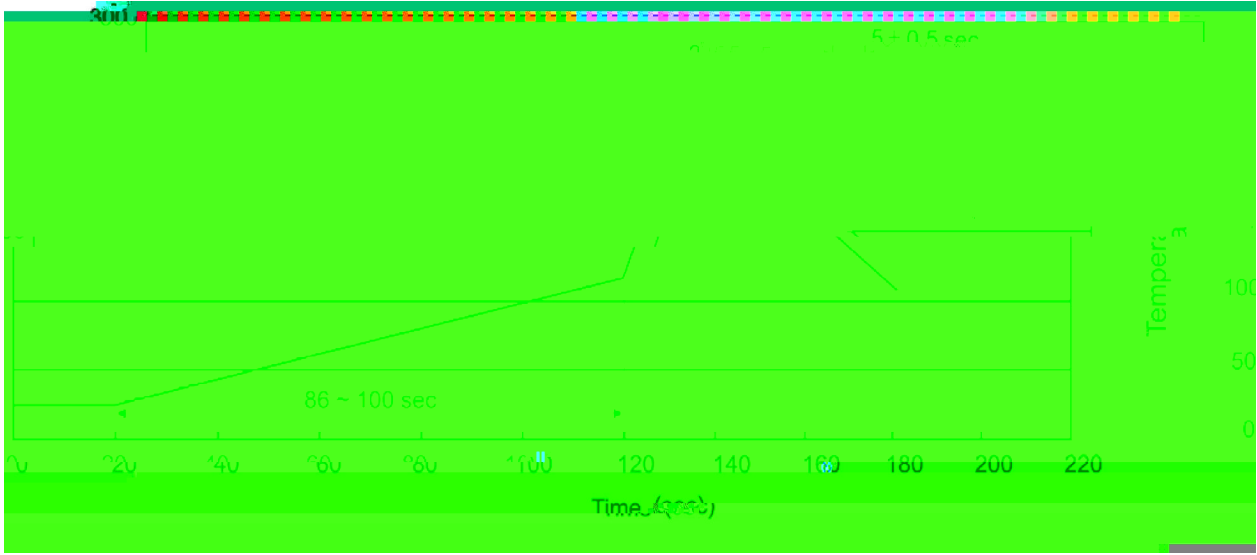
BR: Company Code.

D2396: Product Type.

H:  $h_{FE}$  Classifications Symbol

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

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



Note:

- |   |       |     |           |        |   |
|---|-------|-----|-----------|--------|---|
| 1 | 25    | 150 | 60        | 90sec; | 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 <sup>3</sup> )
	Units/Bag	Bags/Inner Box	Units/Inner Box	
	/	/	/	