

**/ Descriptions**

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

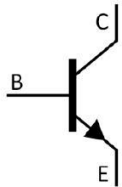
**/ Features**

        , 3CA1837  
High  $f_T$ , complementary pair with 3CA1837.

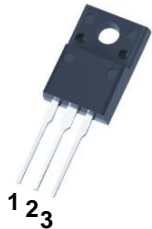
**/ Applications**

General power and driver stage amplifier applications.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

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

See Marking Instructions.

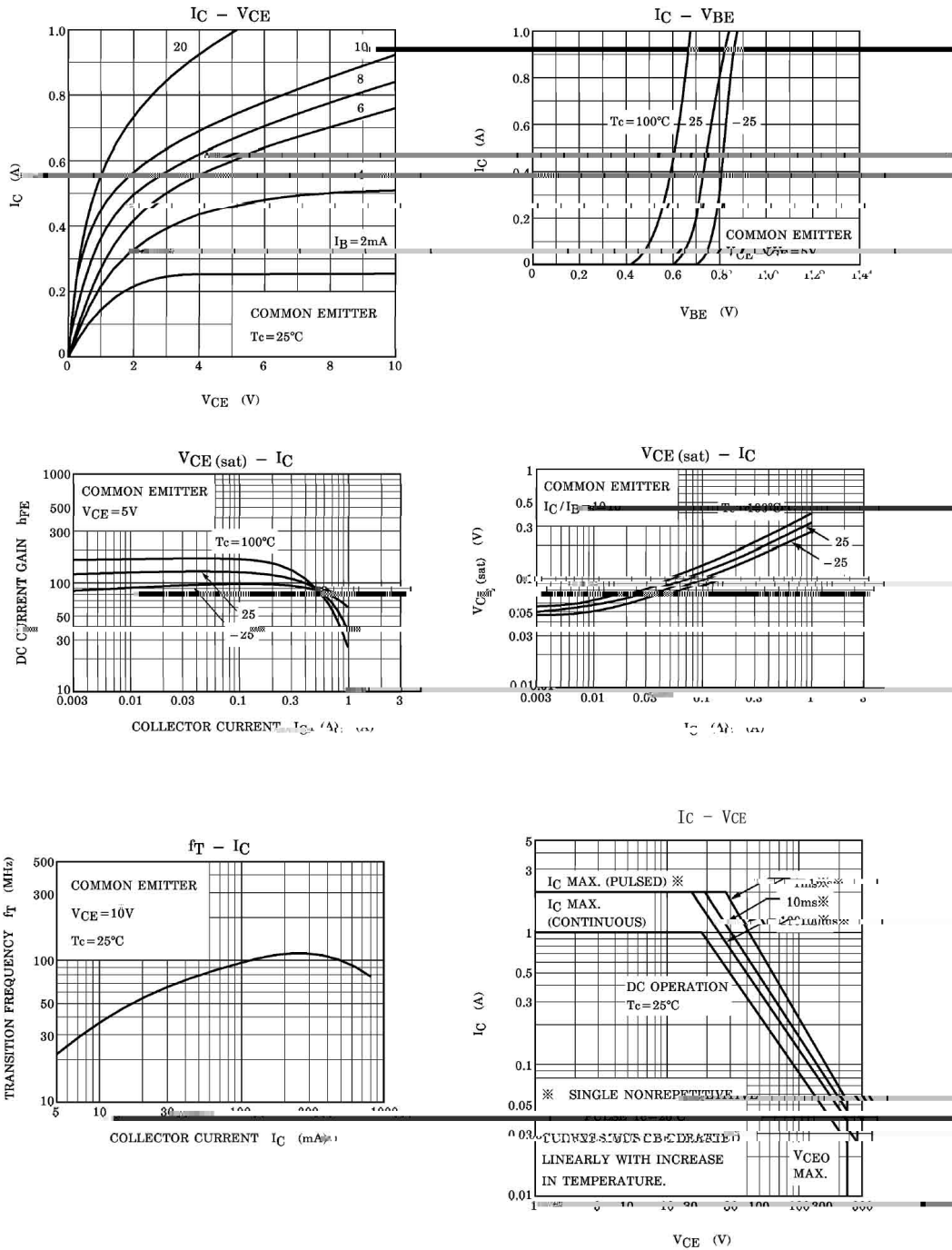
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	230	V
Collector to Emitter Voltage	$V_{CEO}$	230	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current - Continuous	$I_C$	1.0	A
Base Current - Continuous	$I_B$	0.1	A
Collector Power Dissipation	$P_C$	2.0	W
	$P_{C(T_C=25)}$	20	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

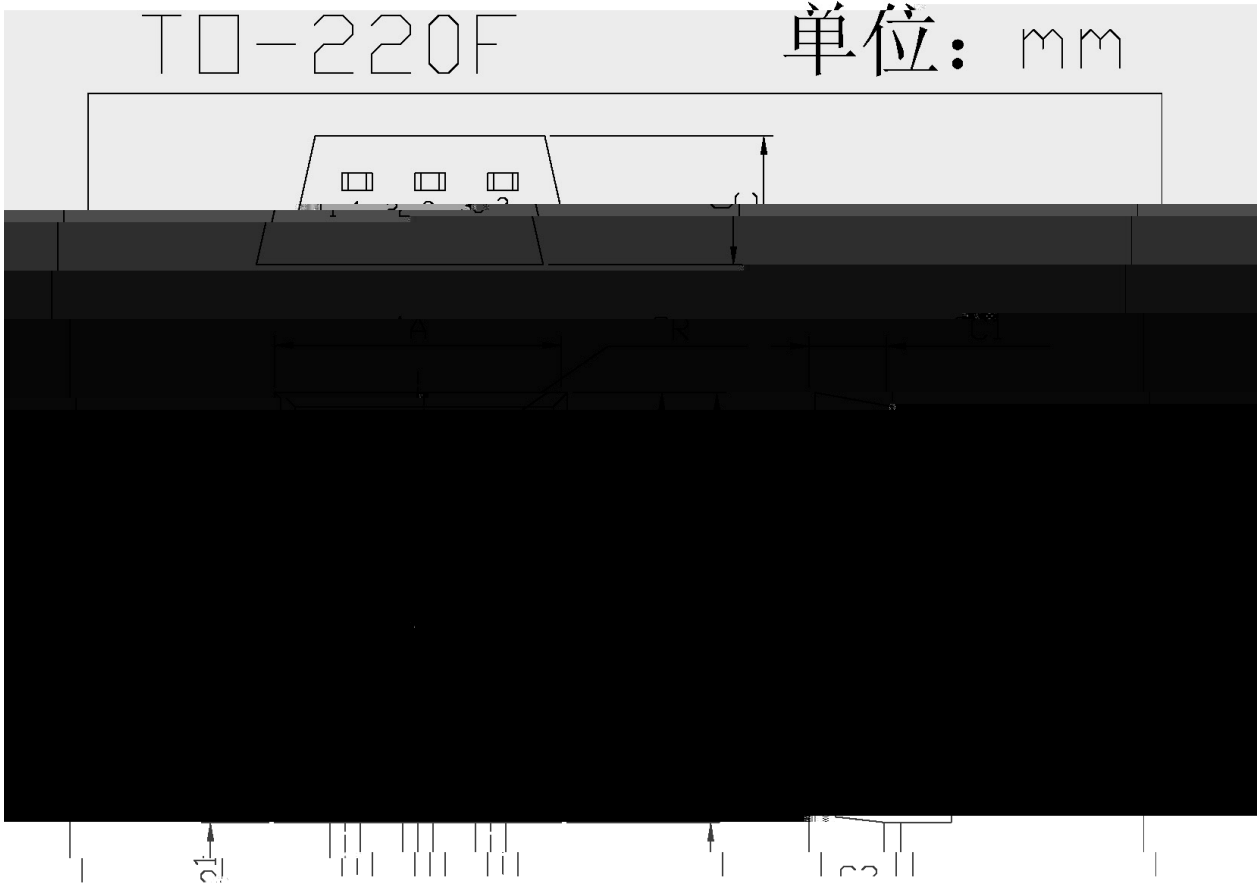
**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=10mA$ $I_B=0$	230			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=230V$ $I_E=0$			1.0	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0$			1.0	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=5.0V$ $I_C=100mA$	100		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			1.5	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=5.0V$ $I_C=500mA$			1.0	V
Transition Frequency	$f_T$	$V_{CE}=10V$ $I_C=100mA$		100		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		20		pF

/ Electrical Characteristic Curve



/ 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
b1	2.9	4.0	E1	2.29	2.79
R	3.0	3.4	C1	2.5	2.9
b	12.5	13.5	C2	2.5	2.7
			c	0.5	0.7

**/ Marking Instructions**



BR

DA4793

\*\*\*\*

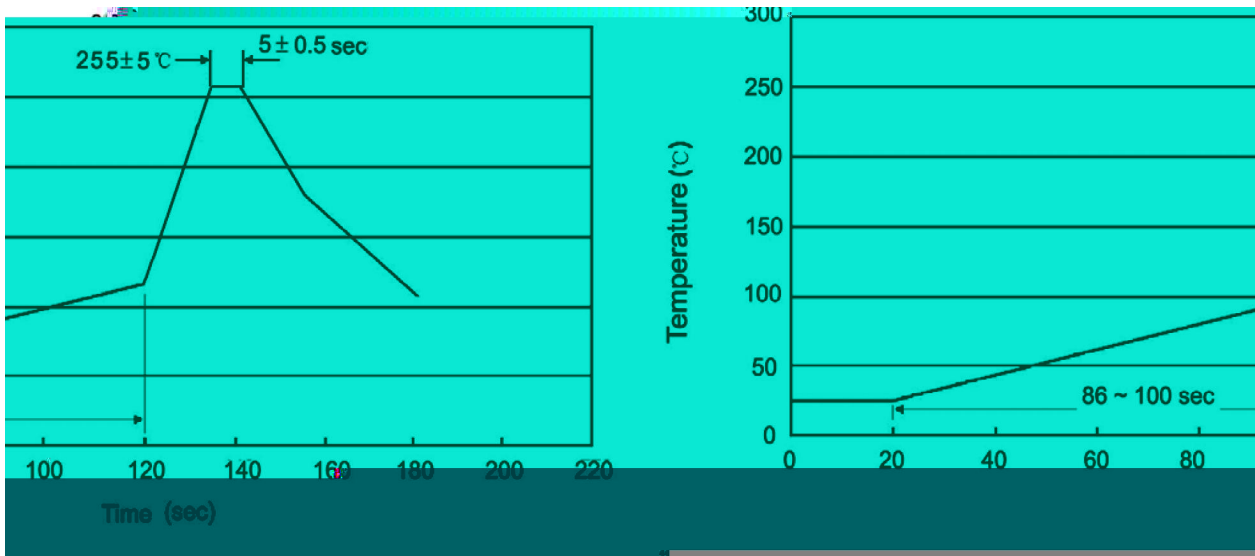
Note:

BR: Company Code.

DA4793: 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

$270 \pm 5$                        $10 \pm 1$  sec.                      Temp.: $270 \pm 5$                       Time: $10 \pm 1$  sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	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 <sup>3</sup> )		
	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