

### / Descriptions

Silicon NPN transistor in a TO-18 Plastic Package.

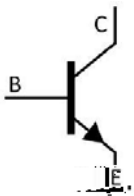
### / Features

Large current capacity, high DC current gain, Low collector-to-emitter saturation voltage High  $V_{EBO}$ .

### / Applications

low frequency general-purpose amplifiers, drivers.

### / Equivalent Circuit



### / Pinning



PIN1 Emitter      PIN 2 Collector      PIN 3 Base

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

See Marking Instructions.

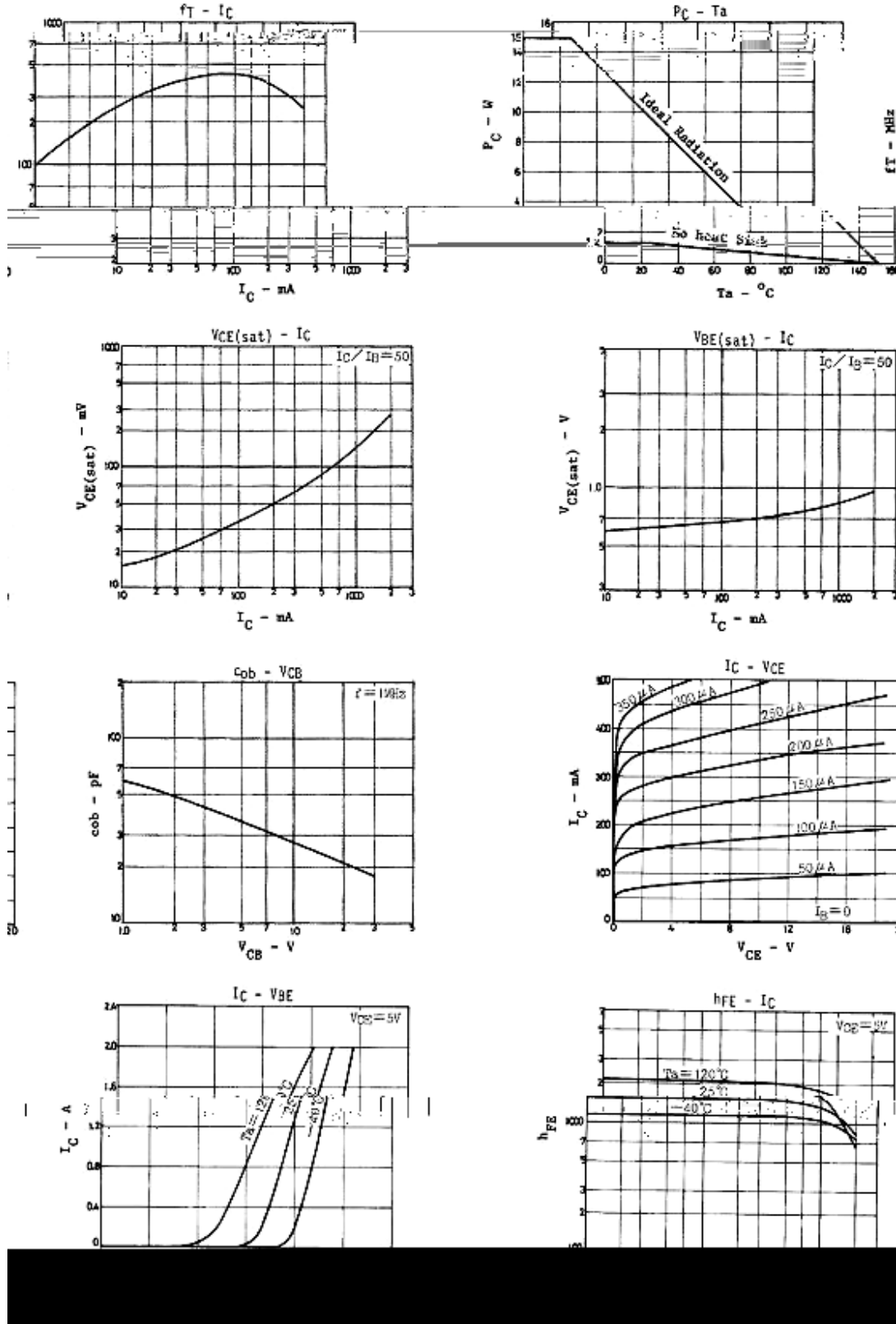
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	30	V
Collector to Emitter Voltage	$V_{CEO}$	25	V
Emitter to Base Voltage	$V_{EBO}$	15	V
Collector Current - Continuous	$I_C$	2.0	A
Peak Collector Current	$I_{CM}$	4.0	A
Collector Power Dissipation	$P_C$	1.2	W
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	15	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	$V_{CBO}$	$I_C=10\text{ A}$ $I_E=0$	30			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0\text{mA}$ $R_{EB}=\infty$	25			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=10\text{ A}$ $I_C=0$	15			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=20\text{V}$ $I_E=0$			0.1	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=10\text{V}$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0\text{V}$ $I_C=500\text{mA}$	800	1500	3200	
	$h_{FE(2)}$	$V_{CE}=5.0\text{V}$ $I_C=1.0\text{A}$	600			
Transition Frequency	$f_T$	$V_{CE}=10\text{V}$ $I_C=50\text{mA}$		260		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ $f=1.0\text{MHz}$		27		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0\text{A}$ $I_B=20\text{mA}$		0.15	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.0\text{A}$ $I_B=20\text{mA}$		0.85	1.2	V
Turn-On Time	$t_{on}$	$7I_{B1}=-7I_{B2}=I_C=700\text{mA}$		0.14		S
Storage Time	$t_{stg}$	$7I_{B1}=-7I_{B2}=I_C=700\text{mA}$		1.35		S
Fall Time	$t_f$	$7I_{B1}=-7I_{B2}=I_C=700\text{mA}$		0.1		S

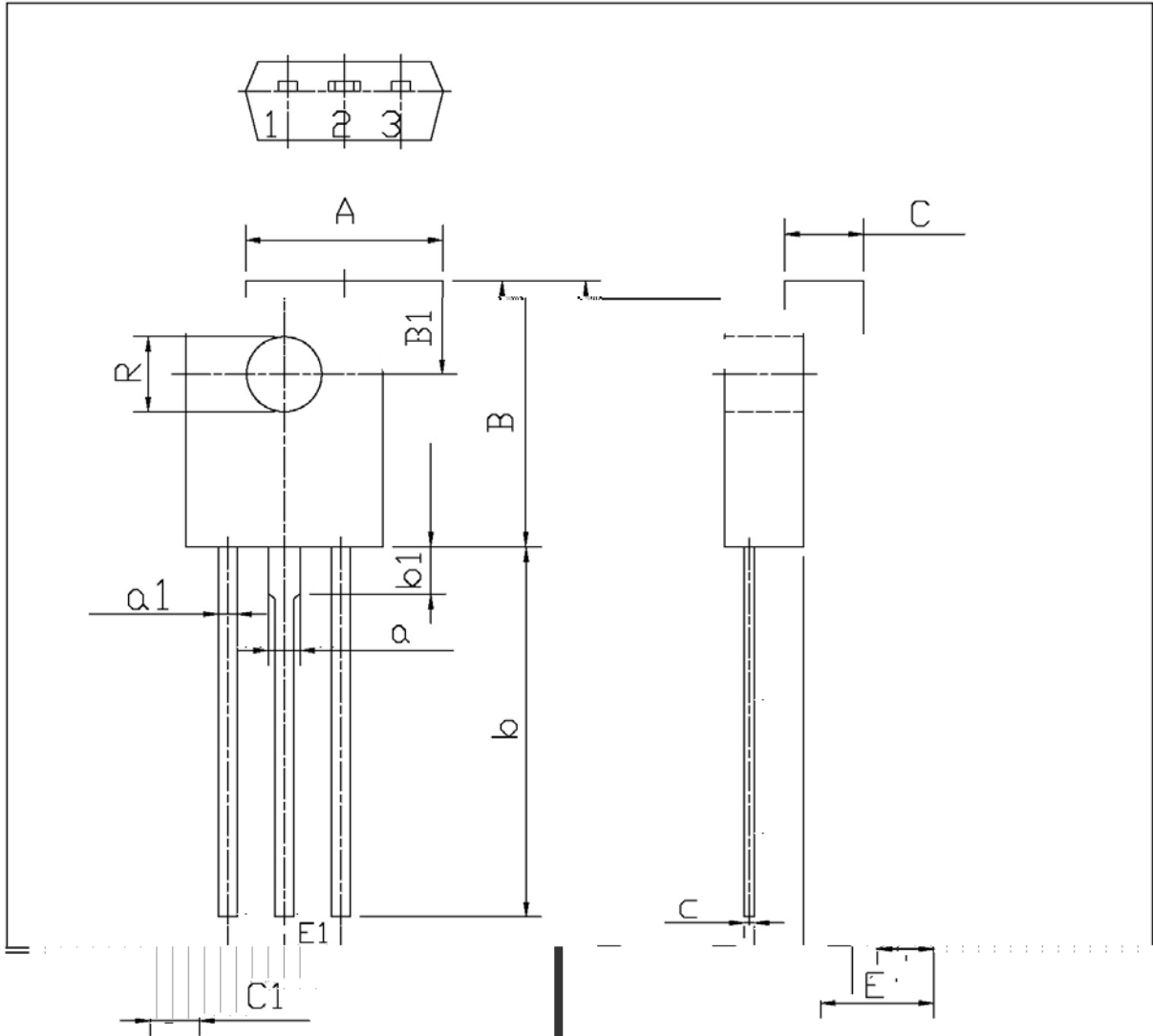
/ Electrical Characteristic Curve



/ Package Dimensions

T0-126F

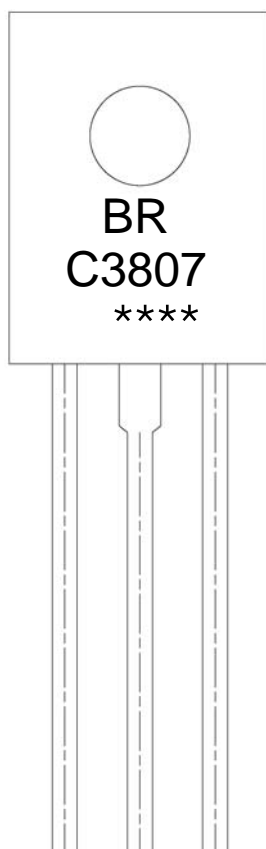
单位: mm



Symbol	Min	Max
a1	0.66	0.86
E	4.4	4.8
C	3.1	3.3
C1	1.9	2.1
α	14	16
ρ	0.3	0.4
φ	2.5	2.7
α	1.27	1.27

Symbol	Min	Max
A	7.8	8.2
B	10.8	11.2
B1	3.8	4.2
R	2.95	3.15
b1	1.4	1.6
E1	2.1	2.3

/ Marking Instructions



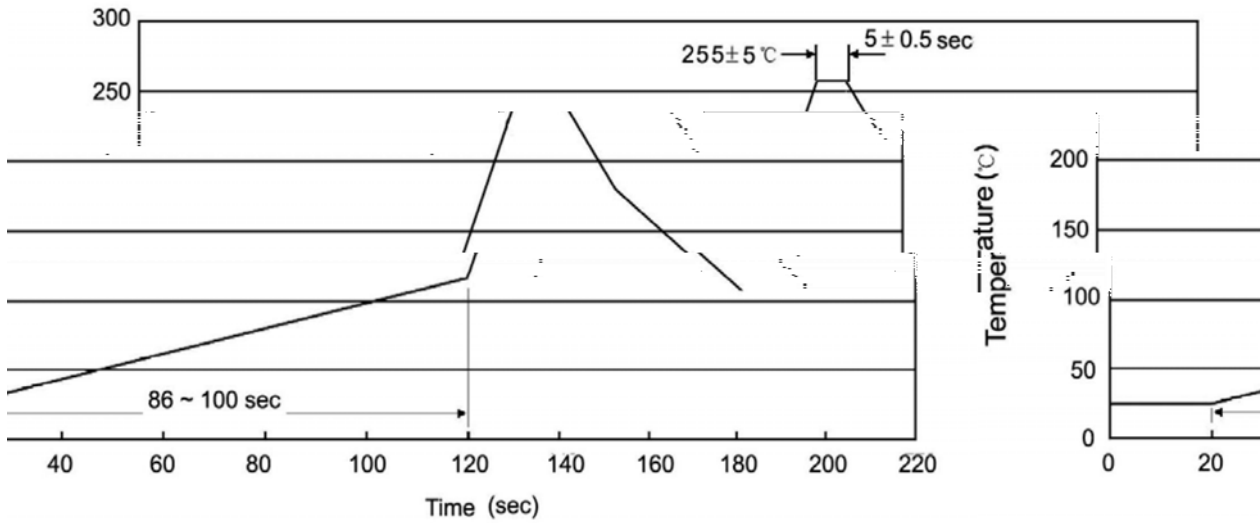
Note:

BR: Company Code

C3807: 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 5                      10 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ **Packaging SPEC.**

/ **BULK**

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-126/F	500	6	3,000	5	15,000	135×190	237×172×102	560×245×195

/ **TUBE**

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-126/F	65	26	1,690	5	8,450	532×31×5.6	555×164×50	575×290×180

/ **Notices**