

/ Descriptions

Silicon NPN transistor in a TO-18 Plastic Package.

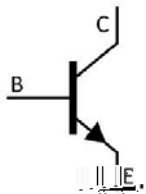
/ Features

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.

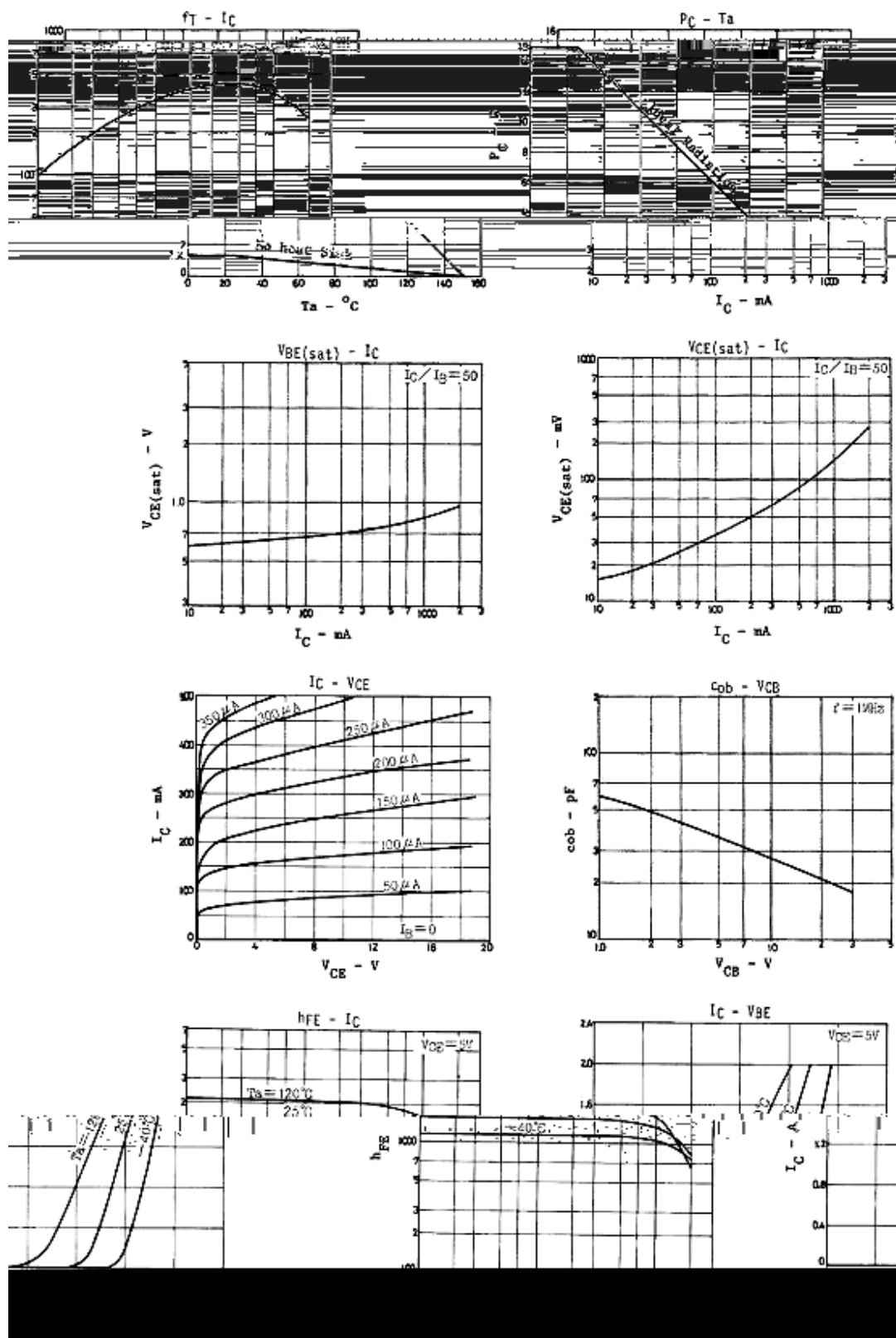
/ Absolute Maximum Ratings(Ta=25)

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

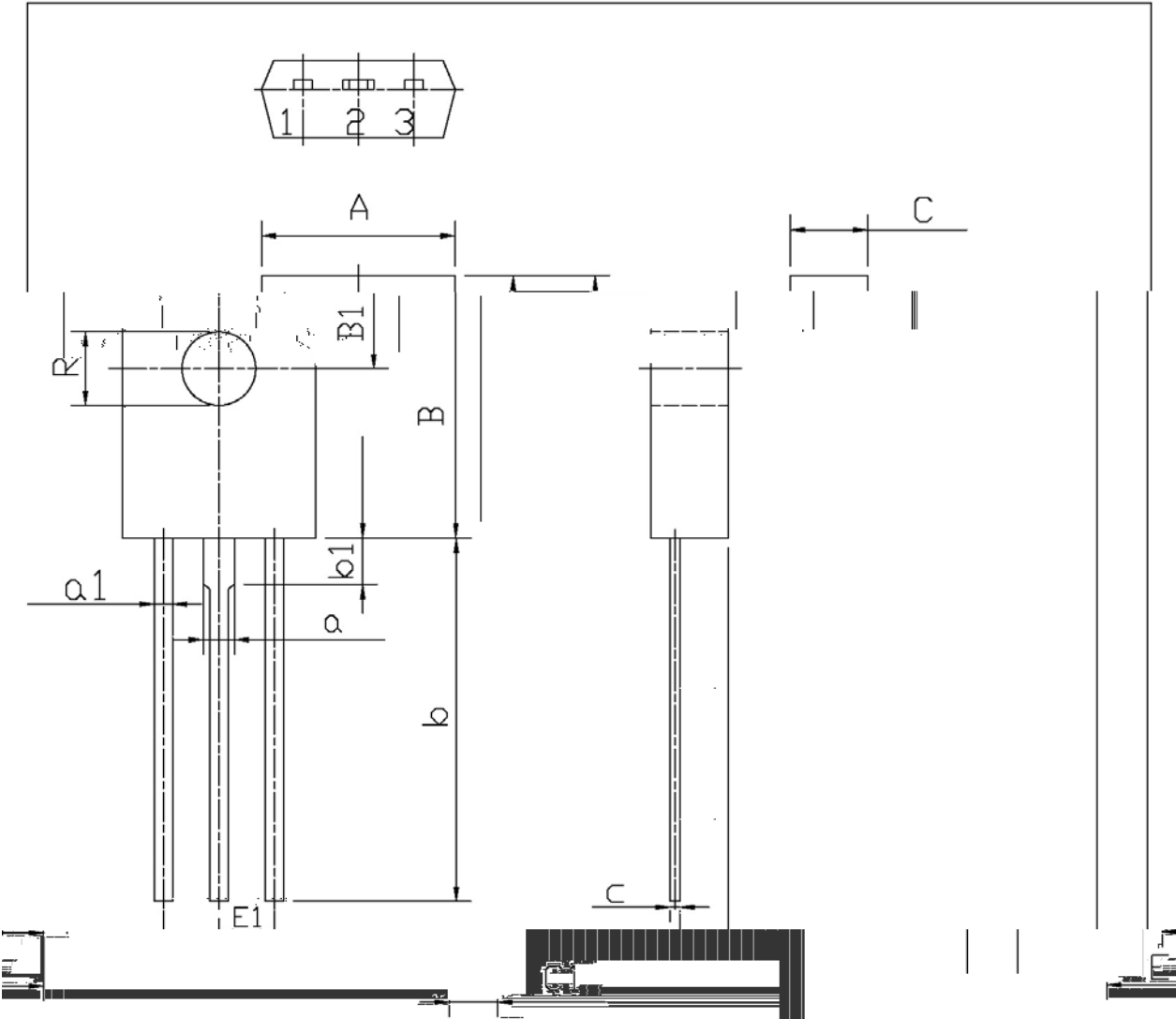
/ Electrical Characteristic Curve



/ Package Dimensions

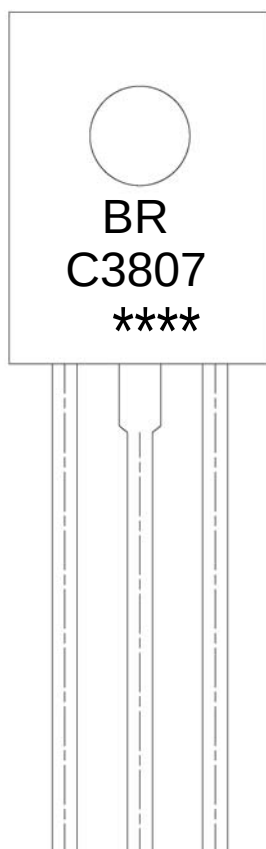
T□-126F

单位: mm



Symbol	Min	Max	Symbol	Min	Max
A	7.8	8.2	a1	0.66	0.86
B	10.8	11.2	E1	4.4	4.8
B1	3.8	4.2	C	3.1	3.3
R	2.95	3.15	b1	1.9	2.1
	1.4	1.6		0.3	0.5
b1	1.9		a	1.27	
E1	2.1	2.5			

/ Marking Instructions



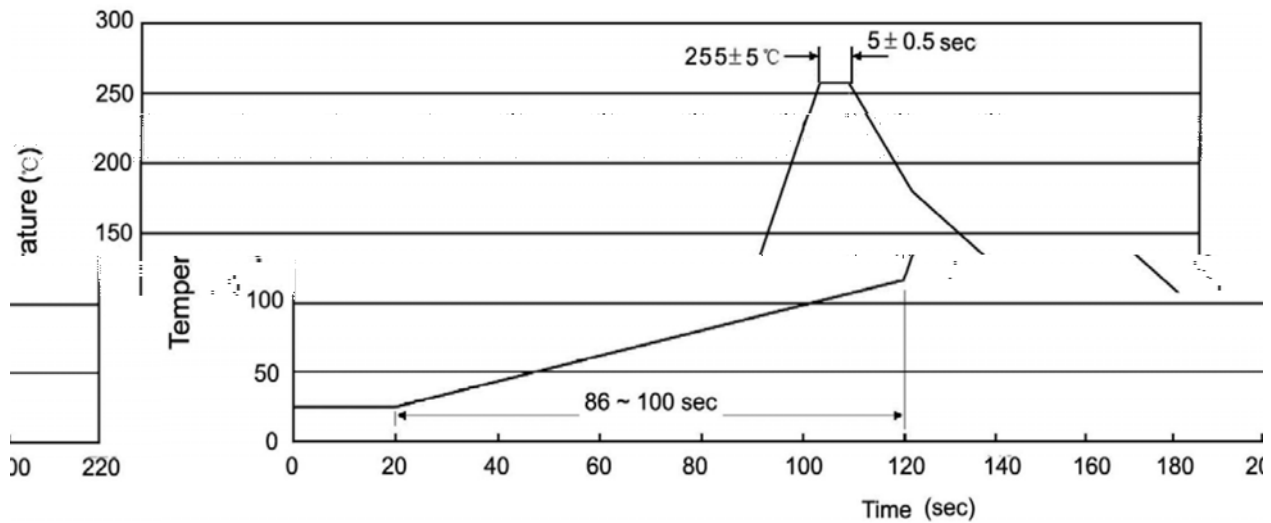
Note:

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 ³)		
	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 ³)		
	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