

/ Descriptions

TO-126F NPN Silicon NPN transistor in a TO-126F Plastic Package.

/ Features

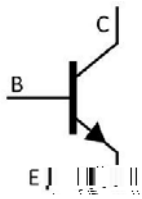
I_C , h_{FE} , $V_{CE(sat)}$, V_{EBO}

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

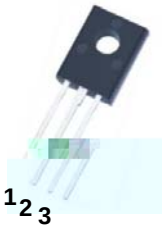
/ Applications

low frequency general-purpose amplifiers, drivers.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

/ h_{FE} Classifications & Marking

See Marking Instructions.

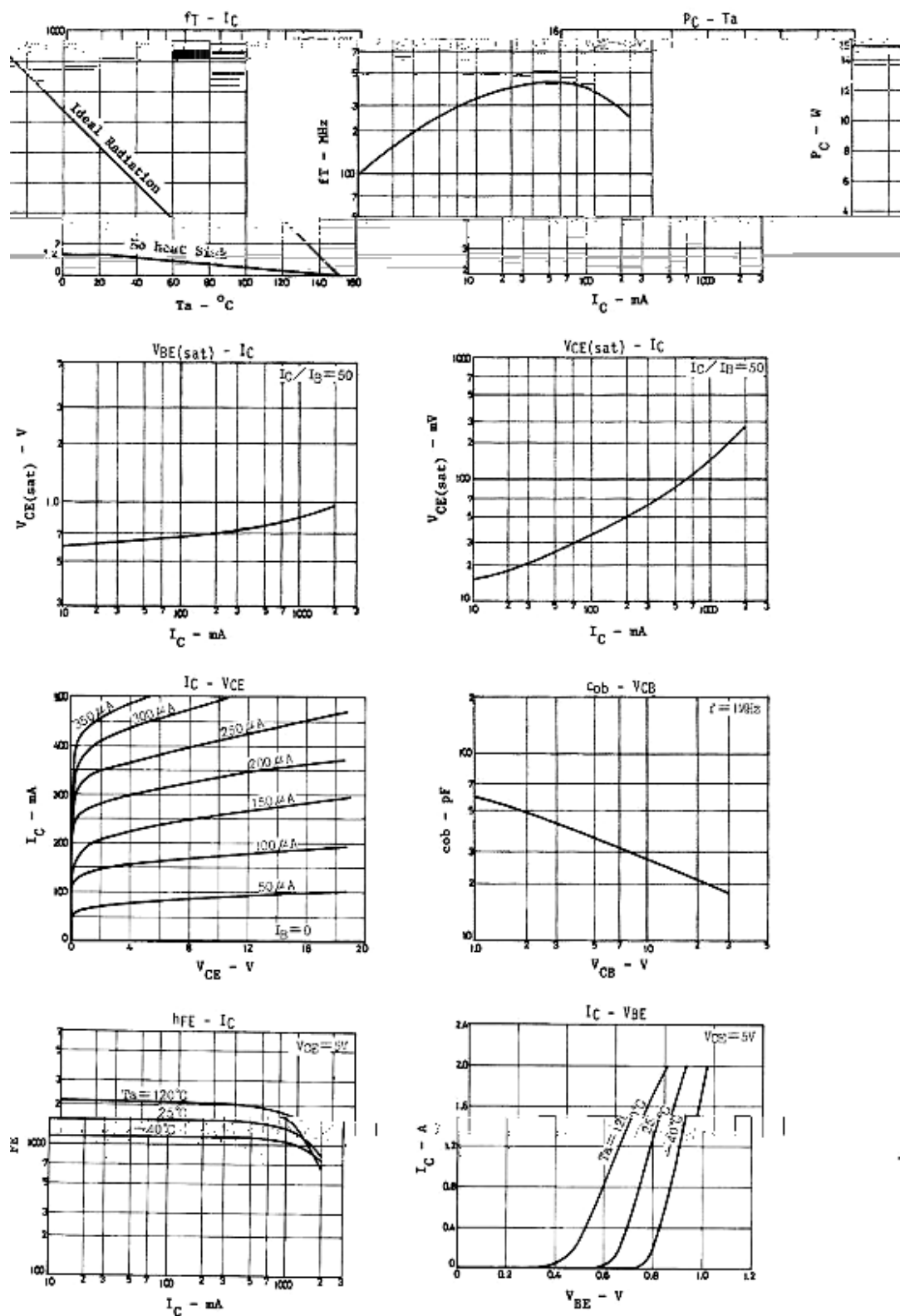
/ Absolute Maximum Ratings(Ta=25)

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

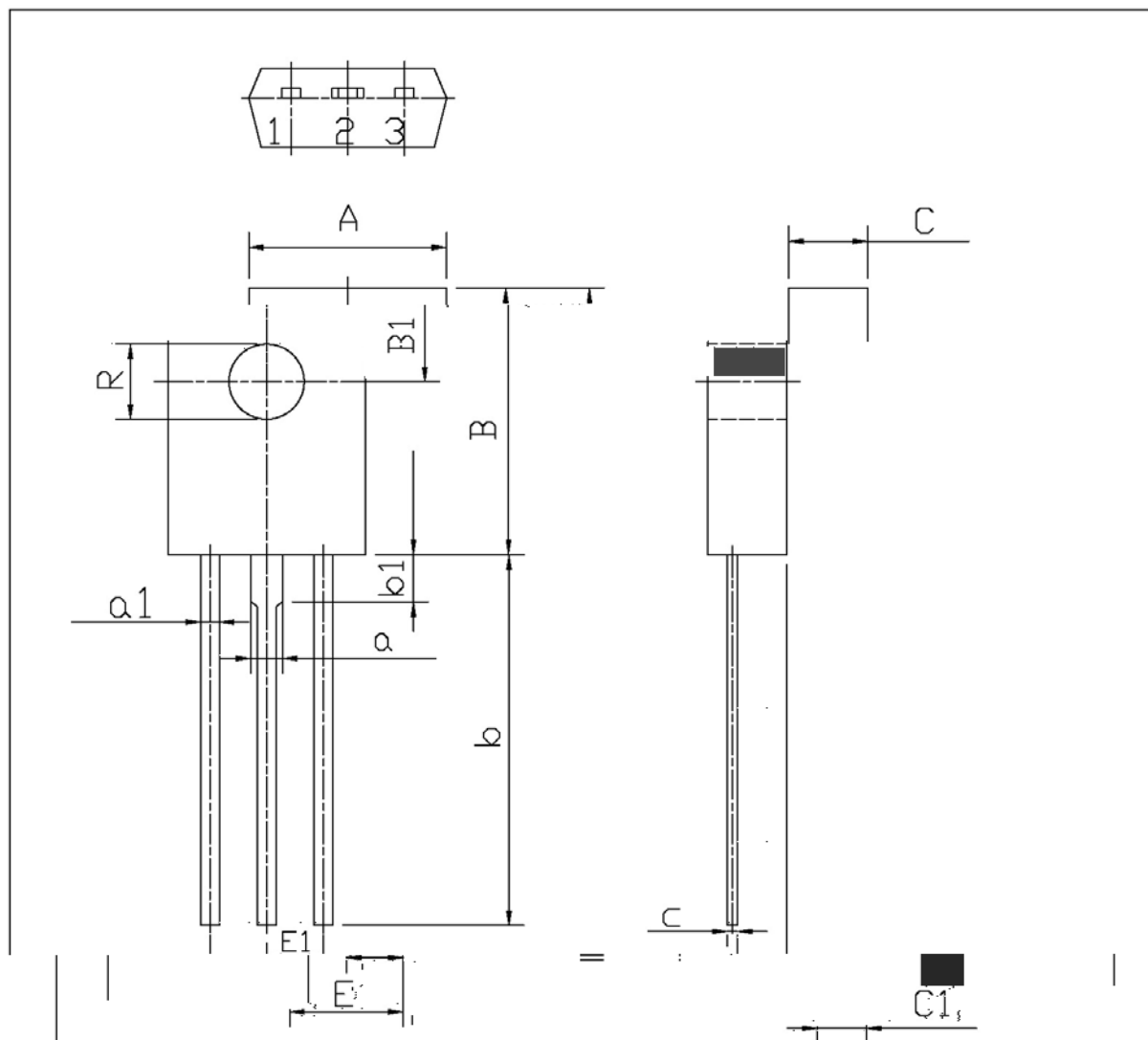
/ Electrical Characteristic Curve



/ Package Dimensions

T□-126F

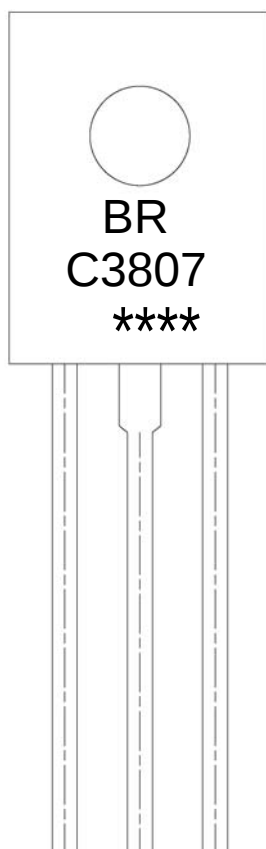
单位: mm



Symbol	Min	Max	Symbol	Min	Max
A	7.8	8.2	a1	0.66	0.86
B	10.8	11.2	E	4.4	4.8
B1	3.8	4.2	C	3.1	3.3
R	2.95	3.15	C1	1.9	2.1

1.27	b1	1.9	a
	E1	2.1	2.5

/ Marking Instructions



BR

C3807

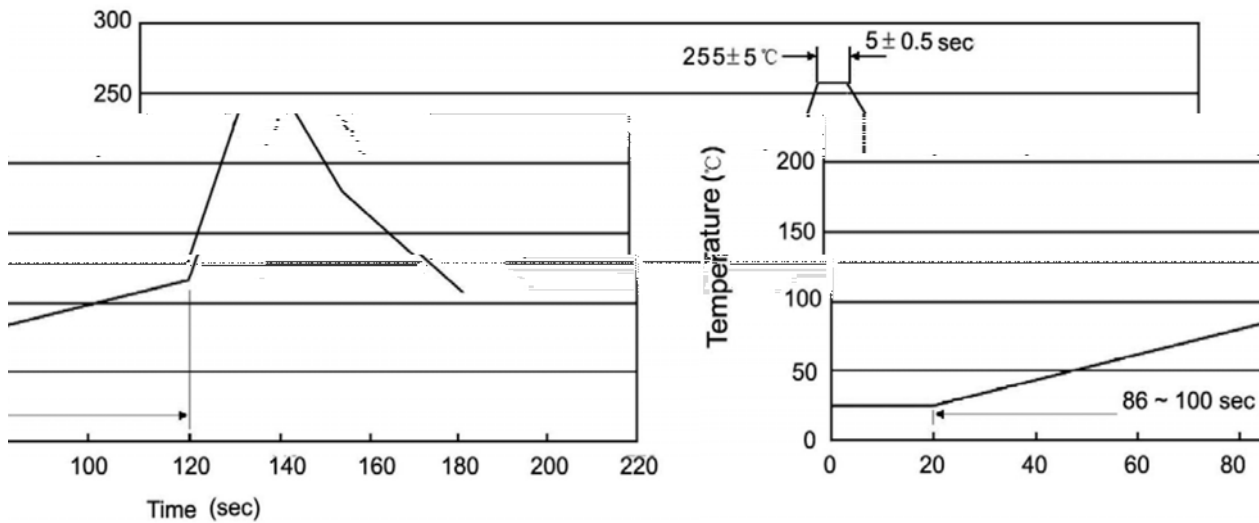
Note:

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