/ Descriptions

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

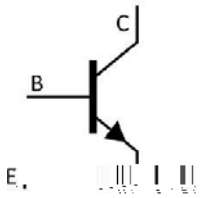
/ Features

High V_{CEO}, Large I_C, complementary to 2SA1507.

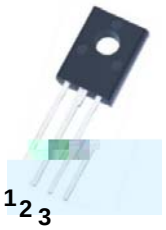
/ Applications

Color TV audio output, converters, inverters.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

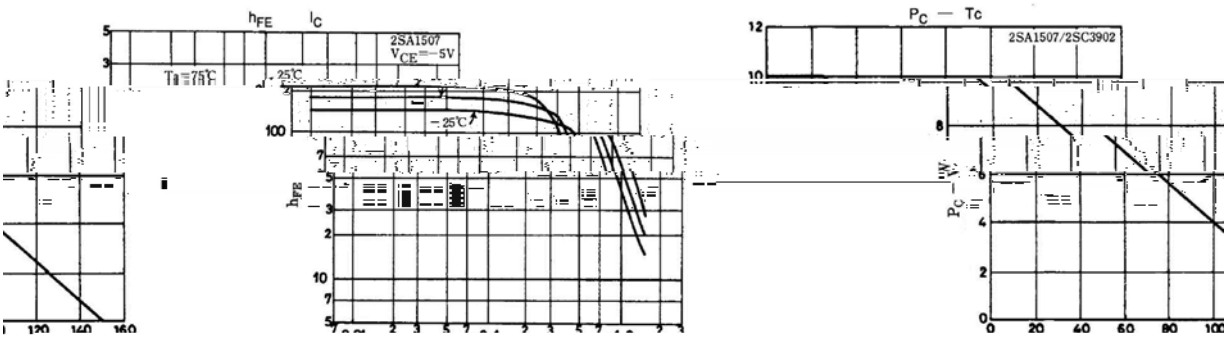
/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	S	T
h_{FE} Range	100 200	140 280	200 400

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	1.5	A
Collector Current – Continuous(Pulse)	I_{CP}	2.5	A
Collector Power Dissipation	P_C	1.5	W
Collector Power Dissipation	$P_C(T_C=25℃)$	10	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 150	℃

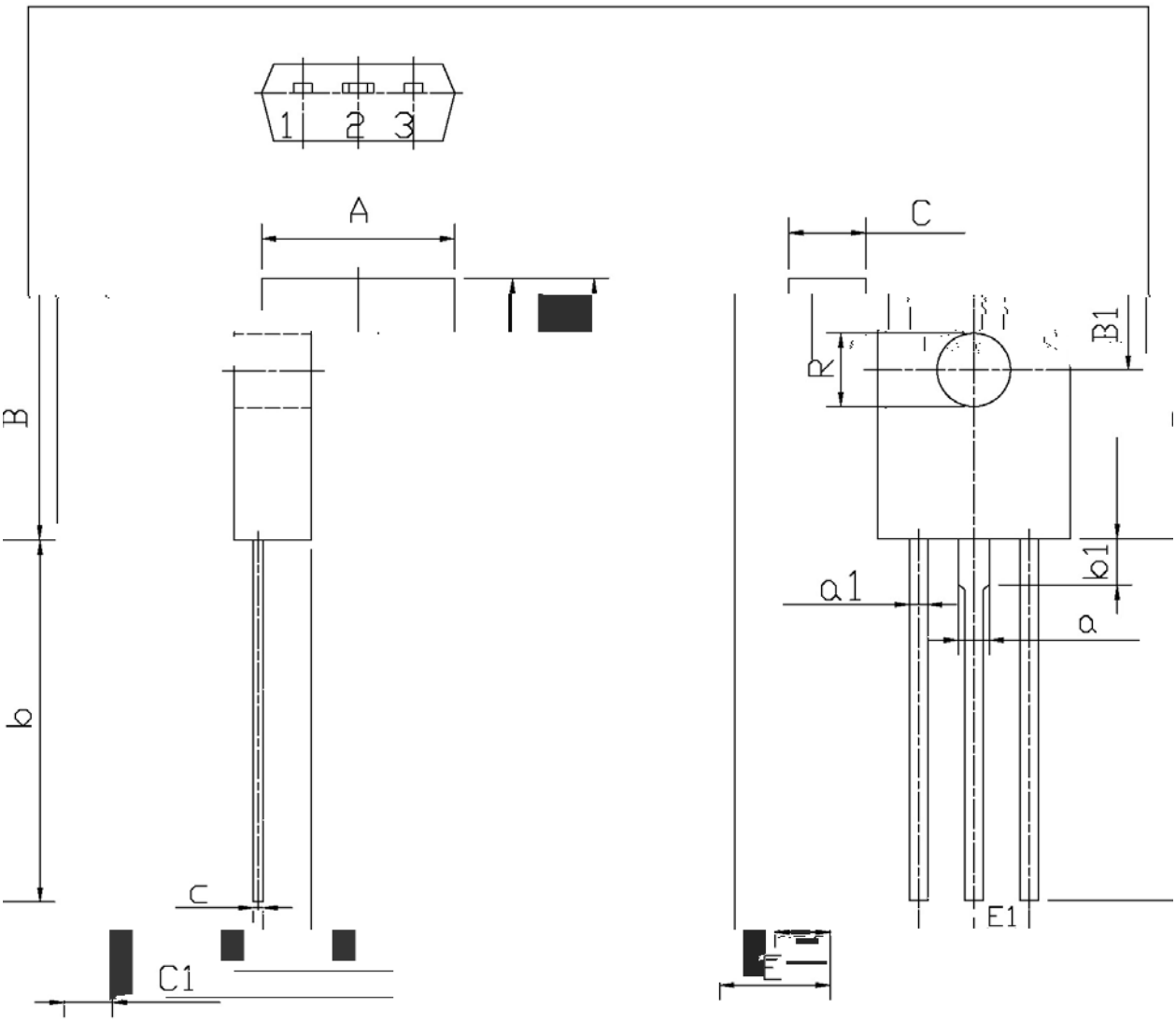
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0	180			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA I_B=0	160			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=120V I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V I_C=100mA	100		400	
	$h_{FE(2)}$	V_{CE}=5.0V I_C=10mA	90			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA I_B=50mA		0.13	0.45	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA I_B=50mA		0.85	1.2	V
Transition Frequency	f_T	V_{CE}=10V I_C=50mA		120		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V f=1.0MHz		14		pF
Turn-On Time	t_{on}	I_C=10I_{B1}=-10I_{B2}=700mA		0.04		μs
Storage Time	t_{stg}			1.2		
Fall Time	t_f			0.08		

/ Electrical Characteristic Curve



/ Package Dimensions

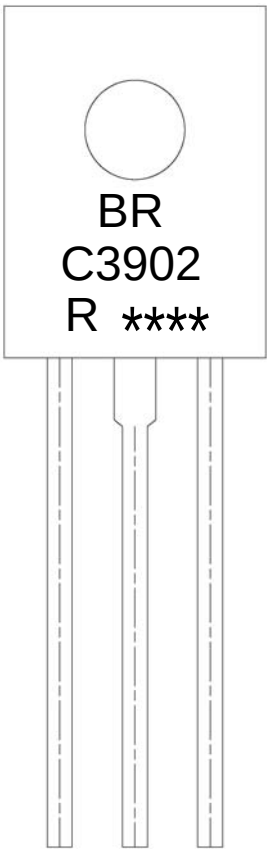
TO-126F 单位：mm



Min	Max
0.66	0.86
4.4	4.8
3.1	3.3
1.9	2.1
0.3	0.6
a	1.27

Symbol	Min	Max	Symbol
A	7.8	8.2	a1
B	10.8	11.2	E
B1	3.8	4.2	C
R	2.95	3.15	C1
b	14	16	c
b1	1.9		
E1	2.1	2.5	

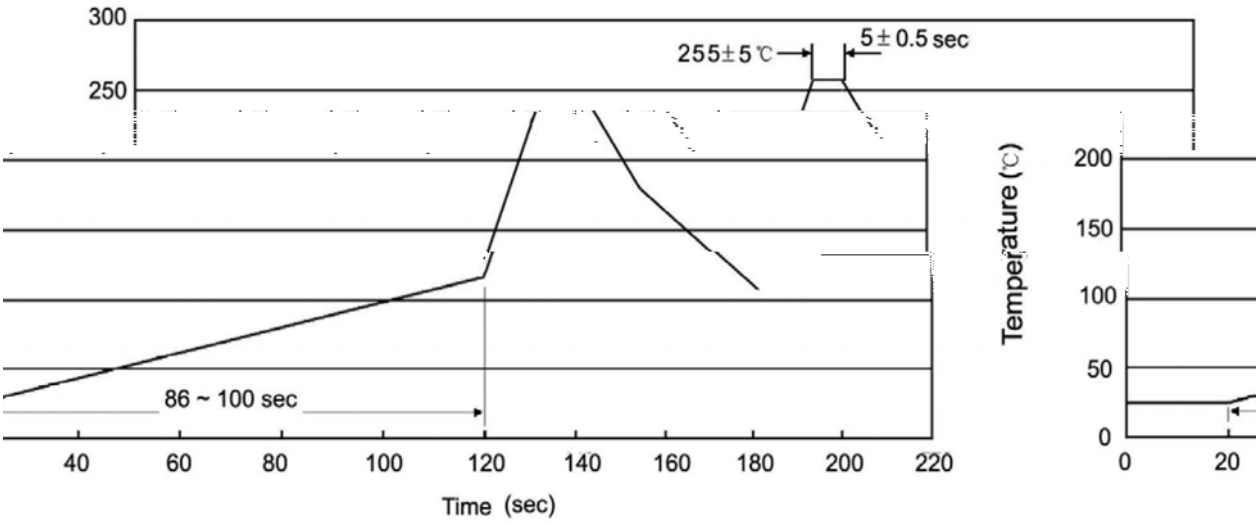
/ Marking Instructions



Note:

BR:	Company Code
C3902:	Product Type.
R:	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 mm³)
	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 mm³)
	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