

/ Descriptions

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

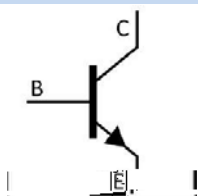
/ Features

2SA1507
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

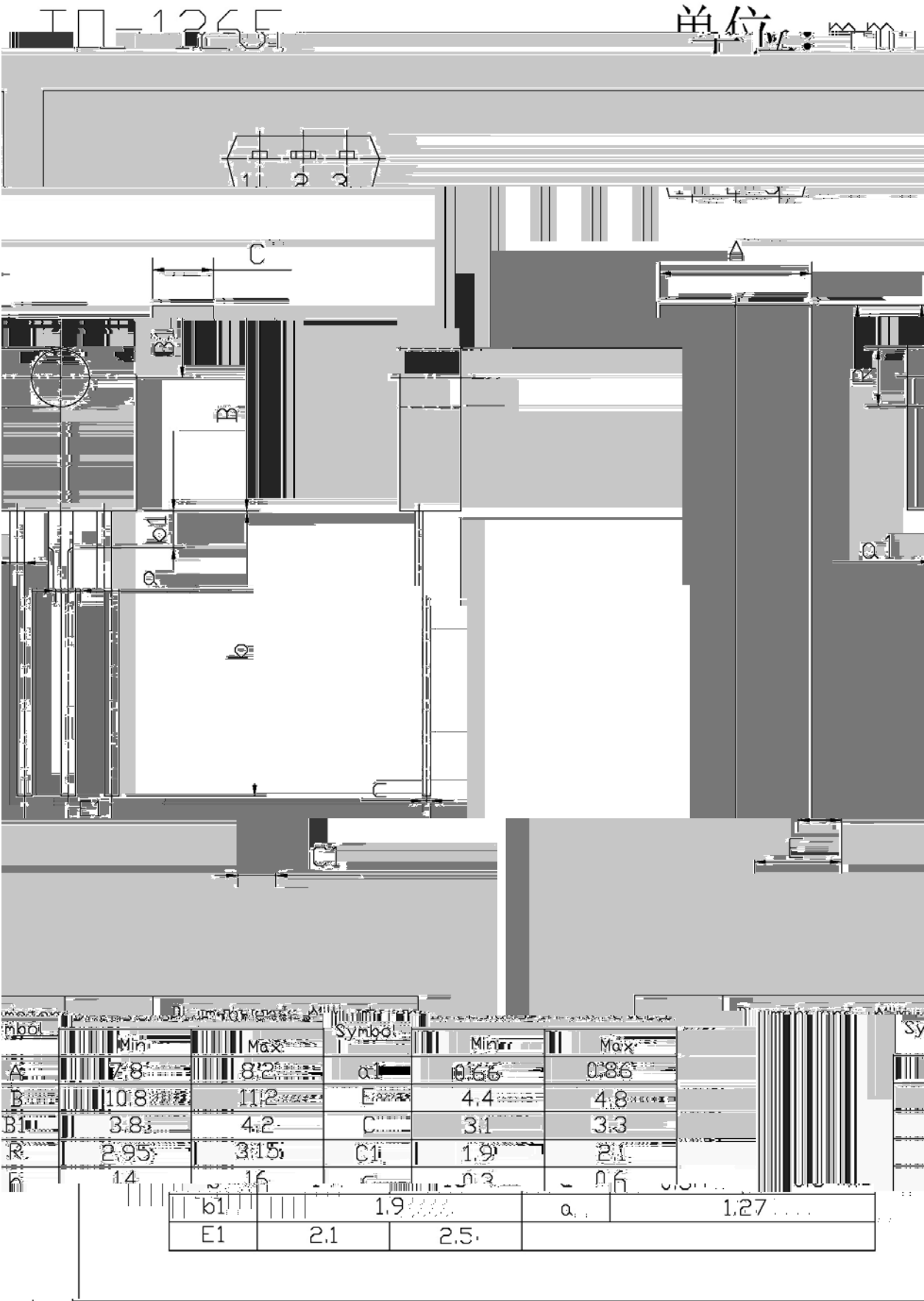
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	1.5	A
Collector Current – Continuous(Pulse)	I_{CP}	2.5	A
Collector Power Dissipation	P_C	1.5	W
Collector Power Dissipation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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	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}	$I_E=10\mu A$ $I_C=0$	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		

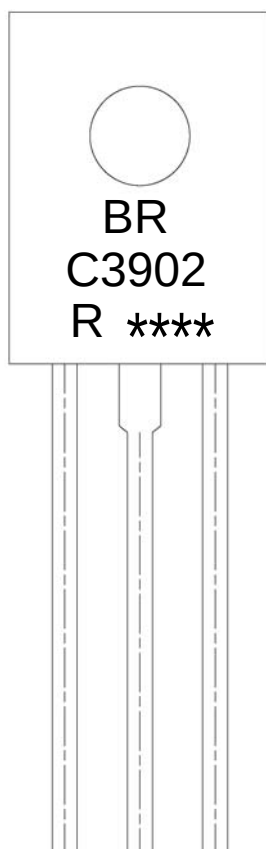
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

C3902

R: h_{FE}

Note:

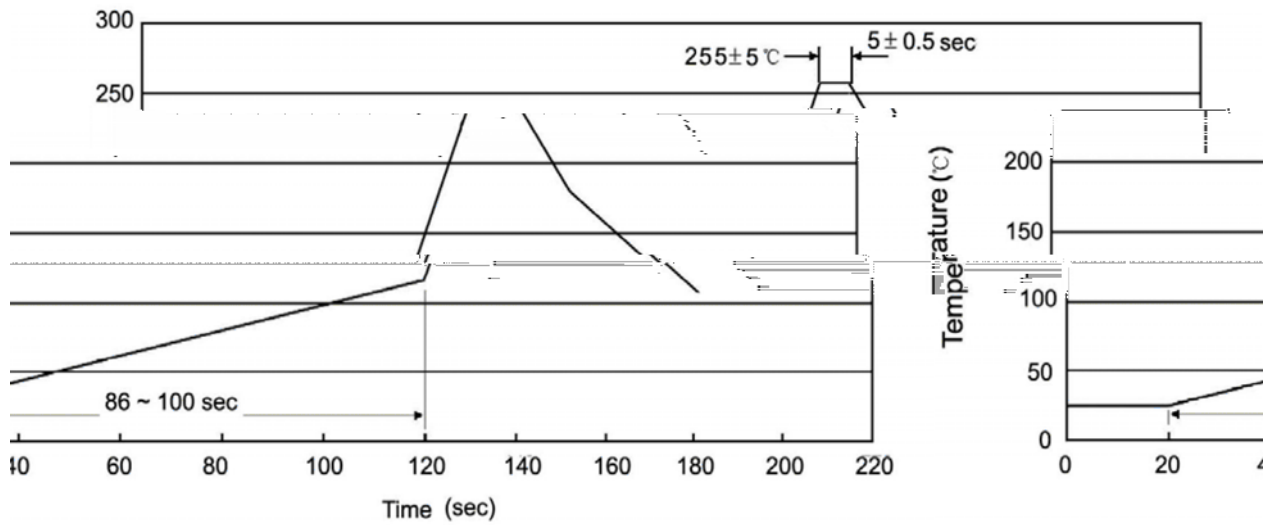
BR: Company Code

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 mm ³)
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box	