

/ Descriptions

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

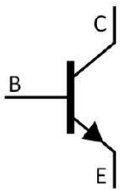
/ Features

3
Output stage of 3 watts audio amplifier, voltage regulator, DC-DC converter and relay driver.

/ Applications

$V_{CE(sat)}$, h_{FE} .
Low saturation voltage, excellent h_{FE} linearity and high h_{FE} .

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y	G
h_{FE} Range	60~120	100~200	160~320	200~400

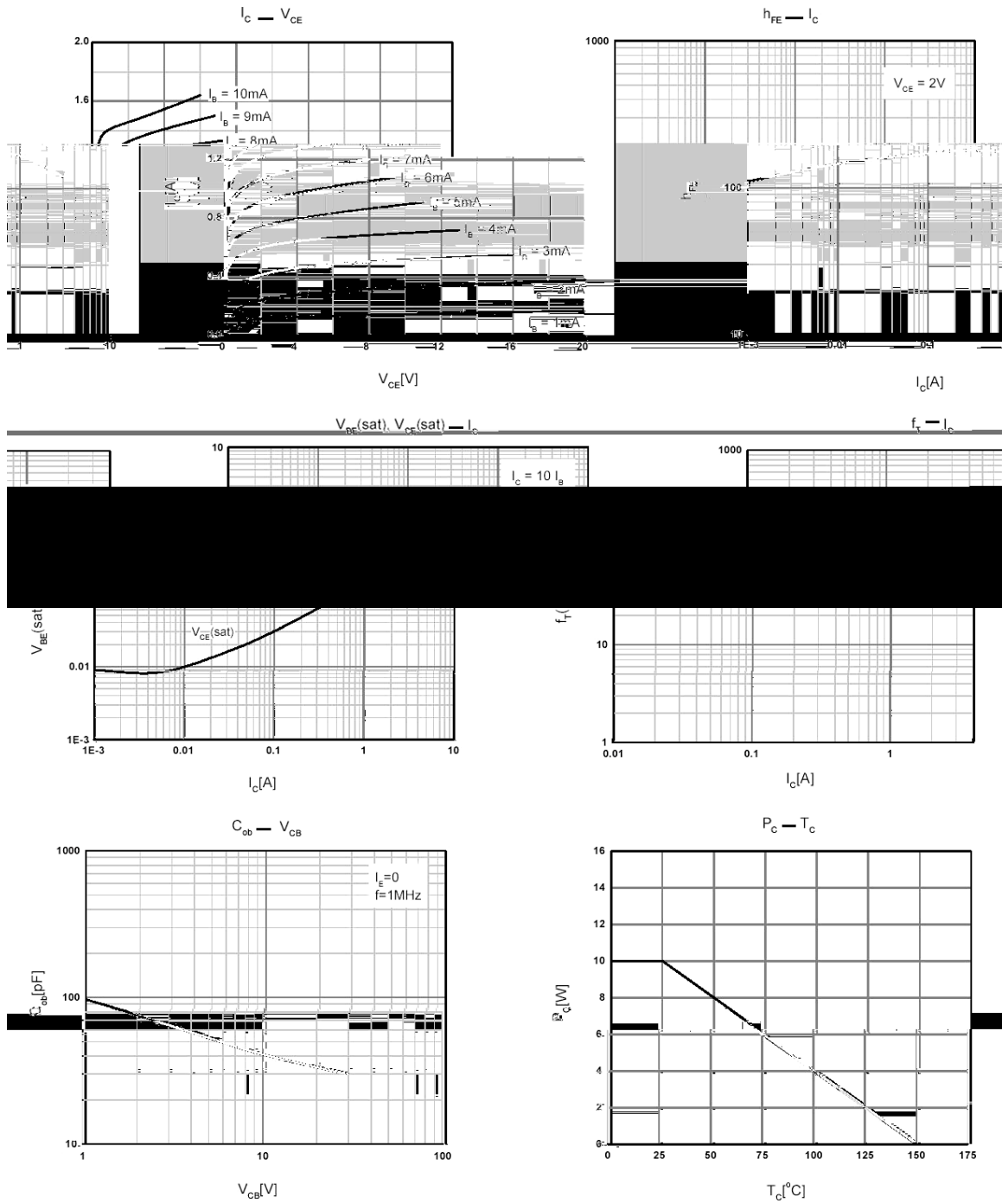
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current – Continuous	I_C	3.0	A
Collector Power Dissipation	P_C	1.0	W
	$P_C(T_C=25^{\circ}C)$	10	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}C$

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			1.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=1.0A$	60	160	400	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=20mA$	30	150		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=0.2A$		0.3	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A$ $I_B=0.2A$		1.0	2.0	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=0.1A$		90		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		45		pF

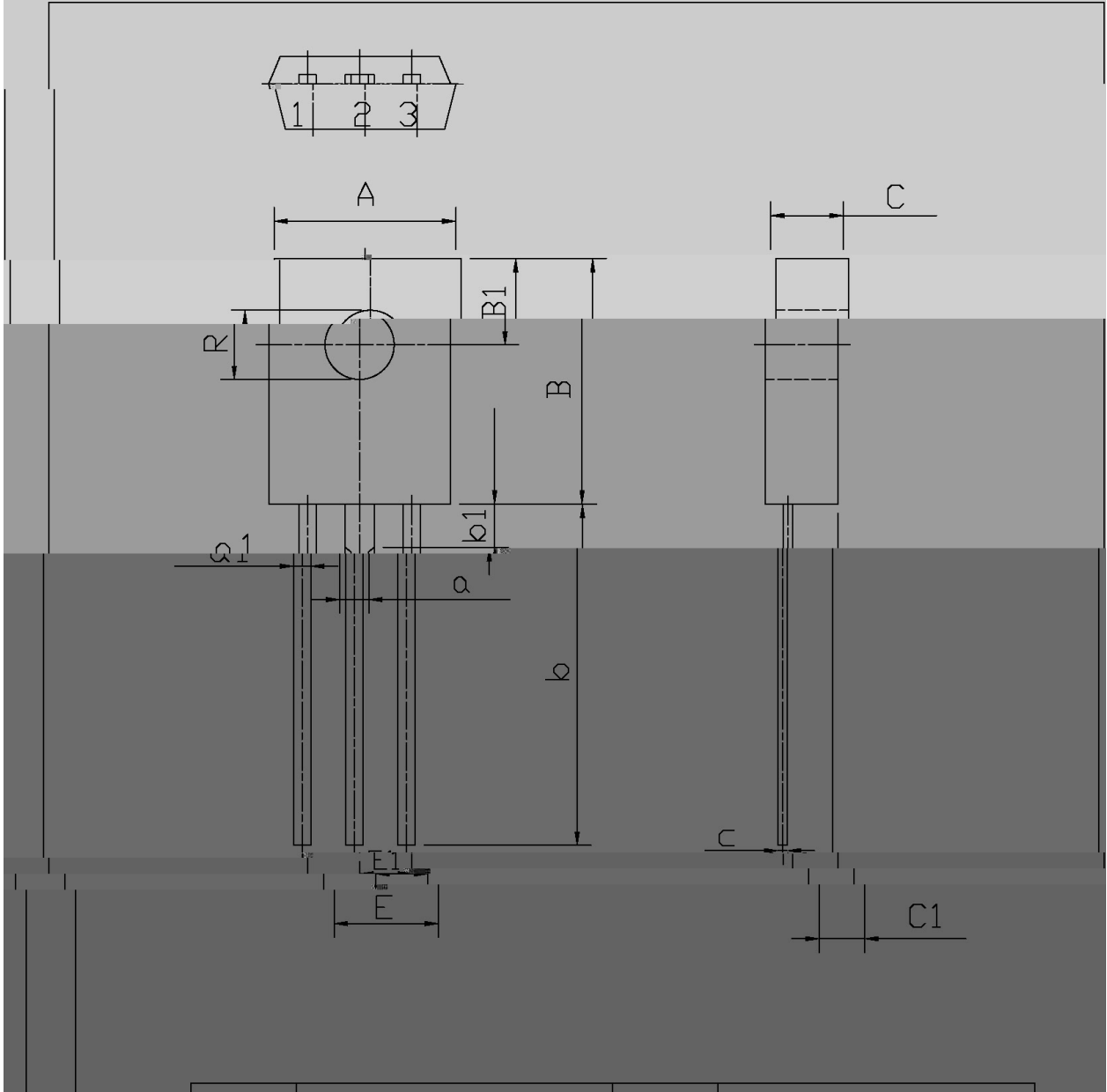
/ Electrical Characteristic Curve



/ Package Dimensions

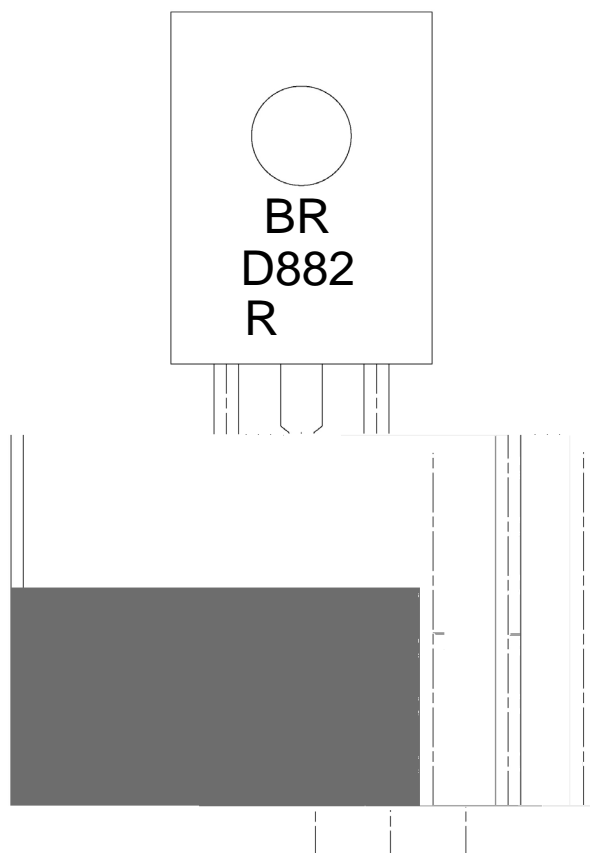
TU-126F

单位: mm



Symbol	Dimension in Millimeters		Symbol	Dimension in Millimeters	
	Min	Max		Min	Max
A	7.8	8.2	a1	0.65	0.85
B	10.0	11.2	E	4.4	4.8
B1	3.8	4.2	C	3.1	3.3
R	2.05	3.15	C1	1.9	2.1
b	14	16	c	0.3	0.6
b1	1.9		ϕ	1.27	
E1	2.1	2.5			

/ Marking Instructions



BR

D882

R

h_{FE}

Note:

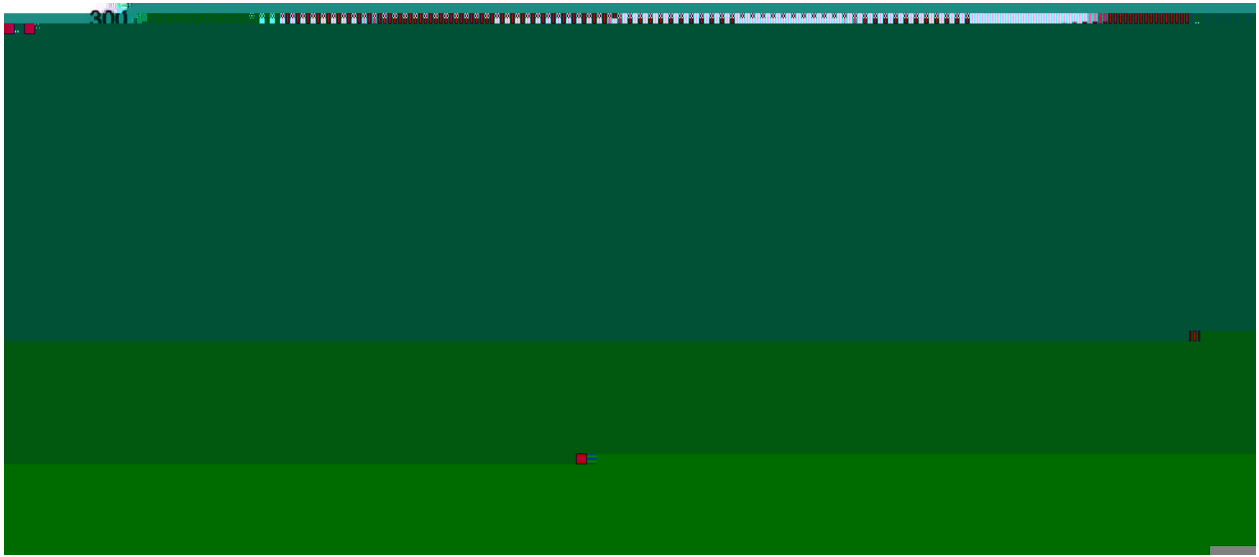
BR: Company Code

D882: 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 套管	套管 盒	只 盒	盒 箱	只 箱	套管	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 套管	套管 盒	只 盒	盒 箱	只 箱	套管	盒	箱

/ Notices