

/ Descriptions

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

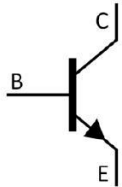
/ Features

High breakdown voltage, small reverse transfer capacitance and excellent high frequency characteristic.

/ Applications

CRT
Ultrahigh-definition CRT display, video output applications.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

/ h_{FE} Classifications & Marking

h _{FE} Classifications Symbol	C	D	E	F
h _{FE} Range	40~80	60~120	100~200	160~320

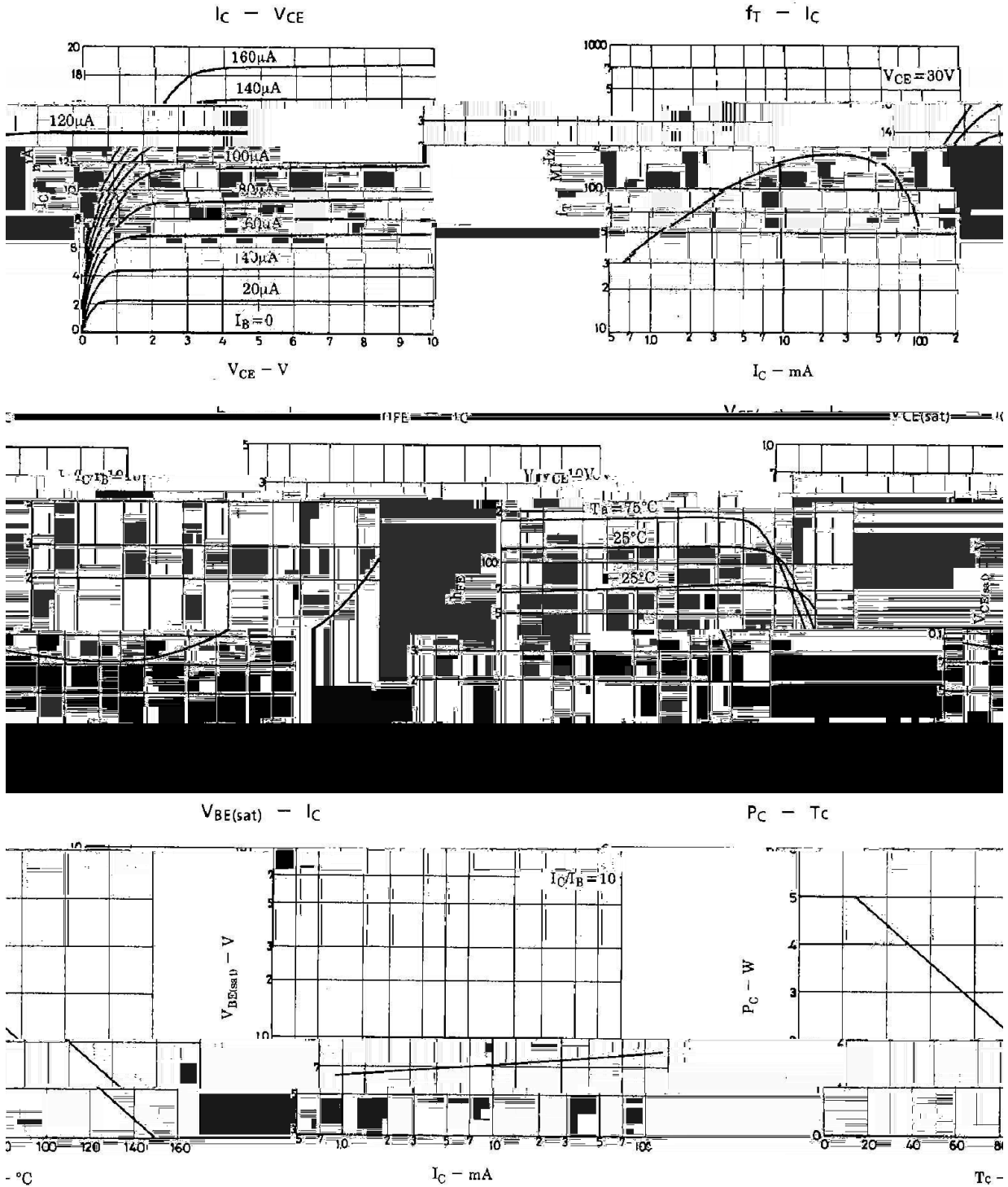
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	200	V
Collector to Emitter Voltage	V_{CEO}	200	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	100	mA
Collector Current – Continuous(Pulse)	I_{CP}	200	mA
Collector Power Dissipation	P_C	1.2	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}	$I_C=10\mu A$ $I_E=0$	200			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $R_{BE}=\infty$	200			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=150V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=10mA$	40		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20mA$ $I_B=2.0mA$			0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=20mA$ $I_B=2.0mA$			1.0	V
Transition Frequency	f_T	$V_{CE}=30V$ $I_C=10mA$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=30V$ $f=1.0MHz$		2.6		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=30V$ $f=1.0MHz$		1.7		pF

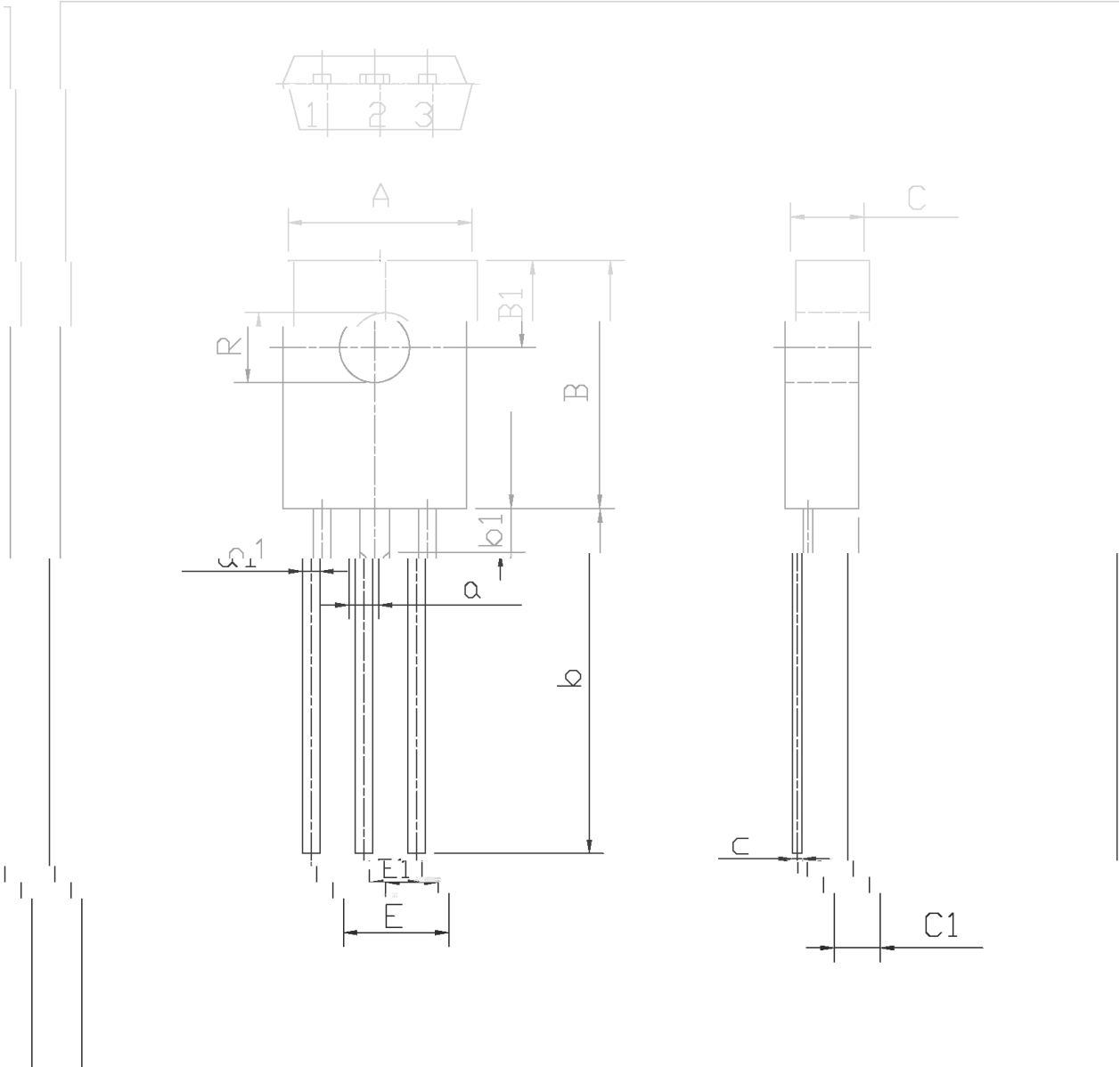
/ Electrical Characteristic Curve



/ Package Dimensions

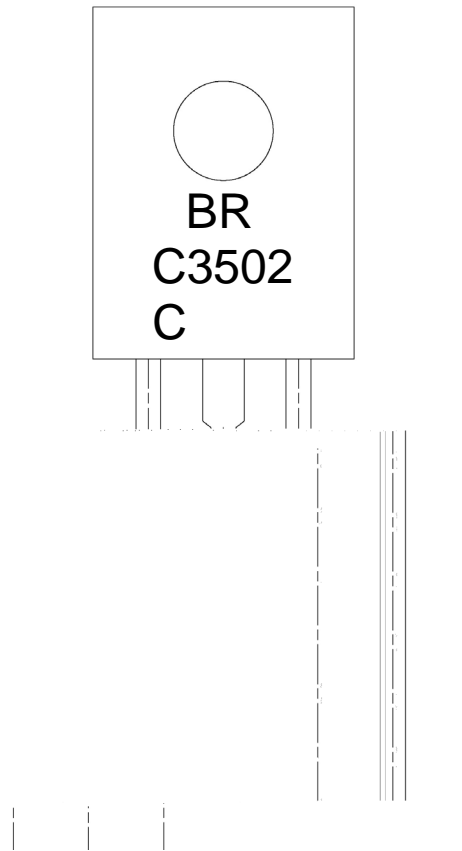
TU-12BT

单位: mm



Symbol	Dimension in Millimeters		Symbol	Dimension in Millimeters	
	Min	Max		Min	Max
A	7.8	8.2	a1	0.55	0.85
B ^P	10.8	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		a	1.27	
E1	2.1	2.5			

/ Marking Instructions



BR

C3502

C h_{FE}

Note:

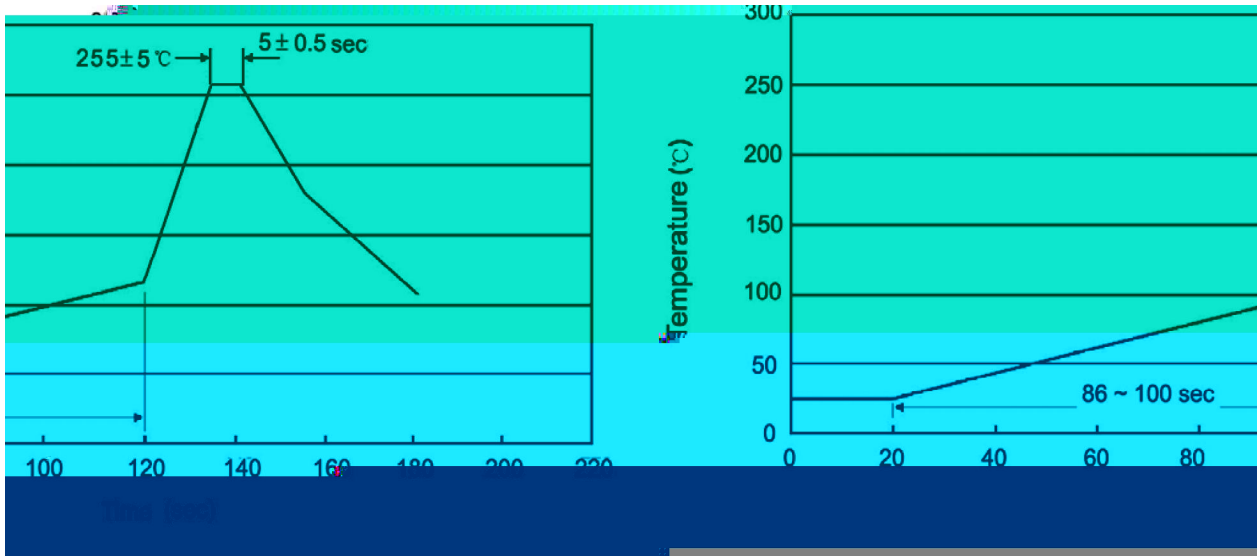
BR: Company Code

C3502: Product Type.

C 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 $10 \pm 1 \text{ sec.}$ Temp.: 270 ± 5 Time: $10 \pm 1 \text{ sec}$

/ 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)		