

# 2SB716

Rev.E Mar.-2016

## / Descriptions

TO-92LM      PNP      Silicon PNP transistor in a TO-92LM Plastic Package.

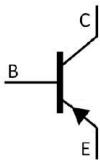
## / Features

2SD756  
Complementary pair with 2SD756.

## / Applications

Low frequency high voltage amplifier.

## / Equivalent Circuit



## / Pinning



PIN1   Base      PIN 2   Collector      PIN 3   Emitter

## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications<br>Symbol | D         | E         |
|------------------------------------|-----------|-----------|
| $h_{FE}$ Range                     | 250   500 | 400   800 |

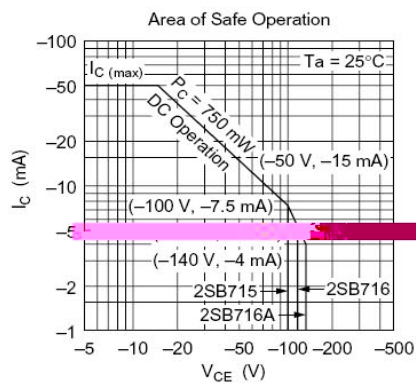
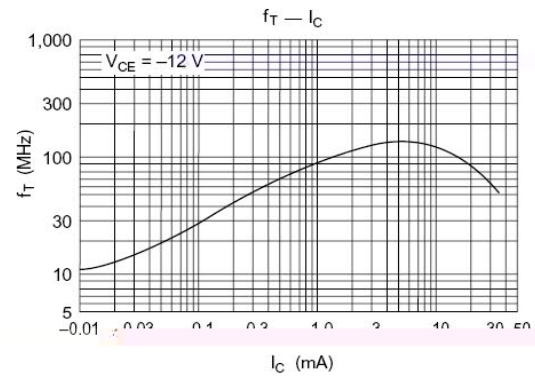
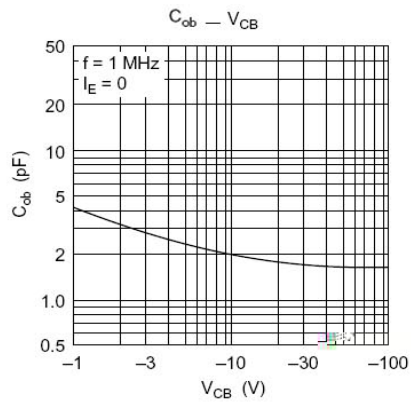
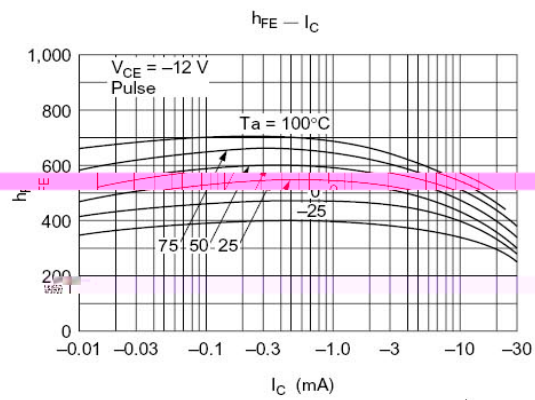
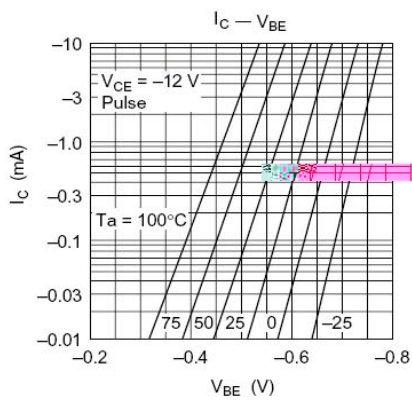
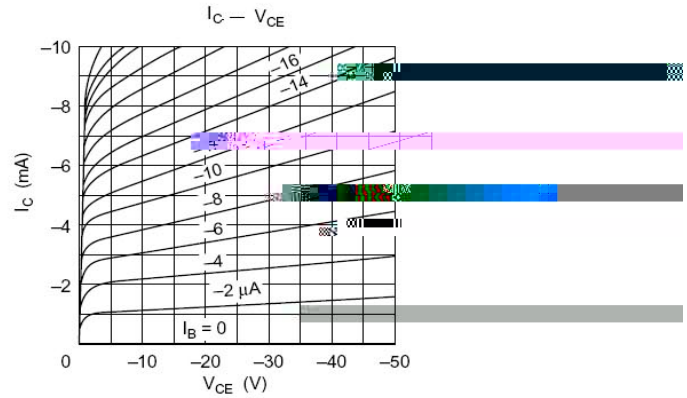
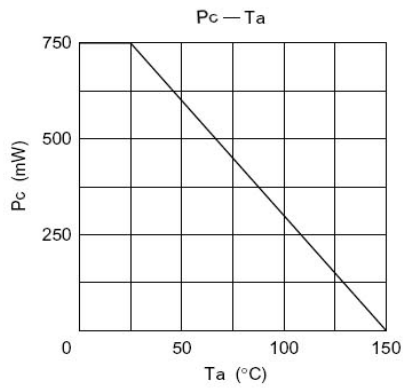
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | -120    | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | -120    | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | -5      | V    |
| Collector Current (DC)       | $I_C$     | -50     | mA   |
| Collector Power Dissipation  | $P_C$     | 750     | mW   |
| 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     | $V_{CBO}$     | $I_C = -10\mu A$ $I_E = 0$          | -120 |     |       | V       |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C = -1mA$ $R_{BE} = \infty$      | -120 |     |       | V       |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB} = -100V$ $I_E = 0$          |      |     | -0.5  | $\mu A$ |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE} = -12V$ $I_C = -2mA$        | 250  |     | 800   |         |
|                                         | $h_{FE(2)}$   | $V_{CE} = -12V$ $I_C = -10mA$       | 125  |     |       |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -10mA$ $I_B = -1mA$          |      |     | -0.2  | V       |
| Base to Emitter Voltage                 | $V_{BE}$      | $V_{CE} = -12V$ $I_C = -2mA$        |      |     | -0.75 | V       |
| Transition Frequency                    | $f_T$         | $V_{CE} = -12V$ $I_C = -5mA$        |      | 150 |       | MHz     |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB} = 25V$ $f = 1MHz$ $I_E = 0$ |      | 1.8 |       | pF      |

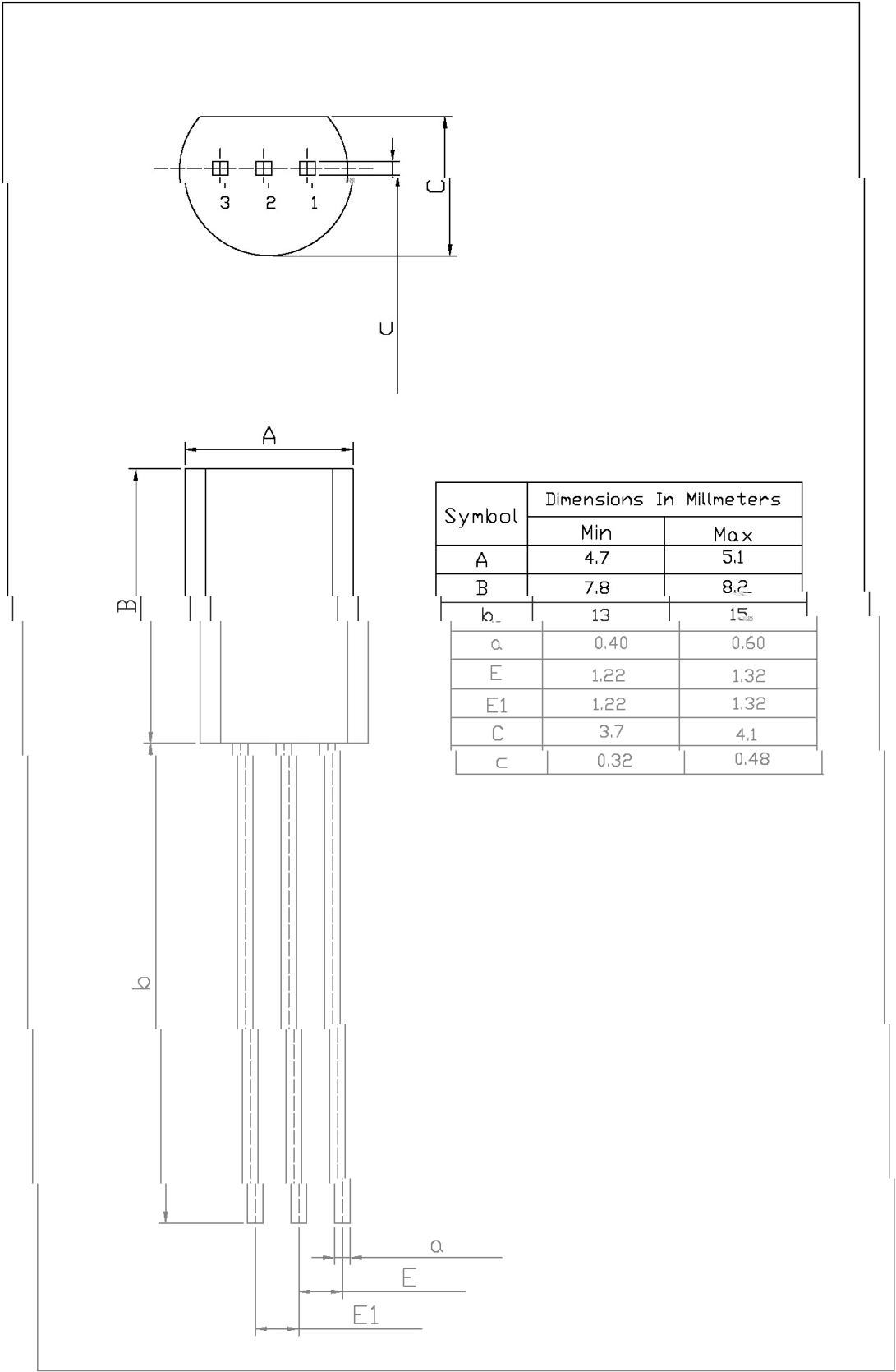
**/ Electrical Characteristic Curve**



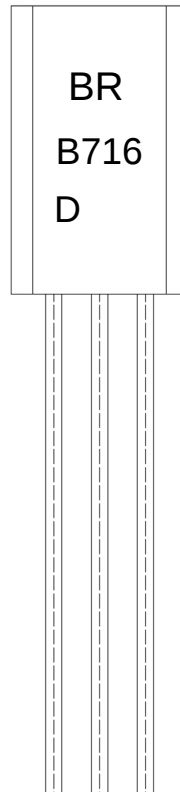
/ Package Dimensions

T0-92LM

Unit: mm



**/ Marking Instructions**



BR:

B716

D:  $h_{FE}$

\*\*\*\*

Note:

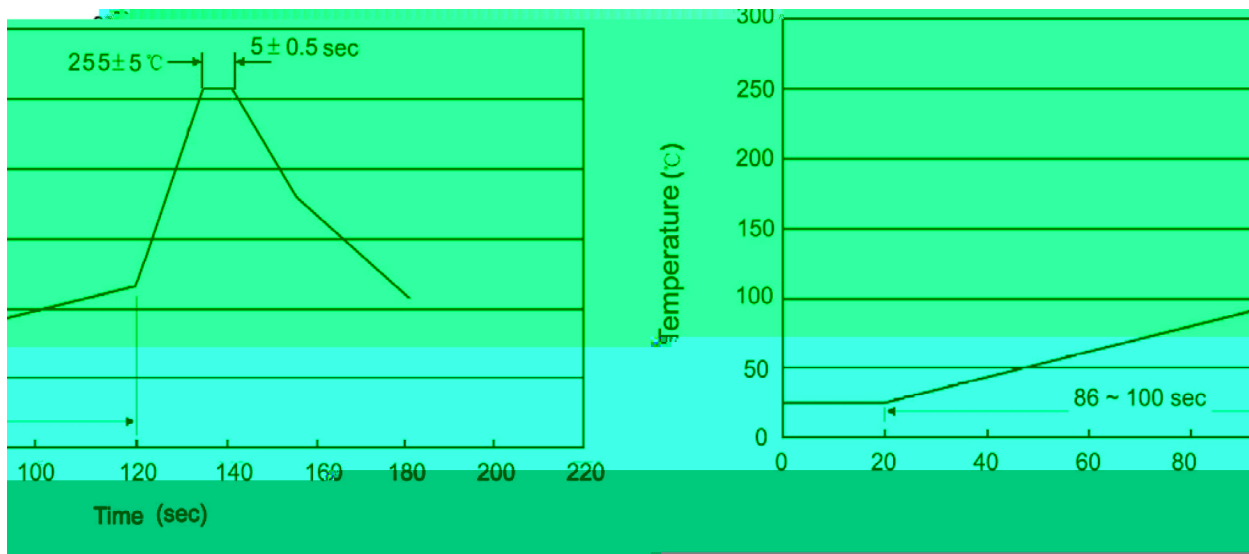
BR: Company Code.

B716: Product Type.

D:  $h_{FE}$  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<br>封装形式 | Units 包装数量 |    |    |    |    | Dimension 包装尺寸 (unit: mm3) |   |   |
|----------------------|------------|----|----|----|----|----------------------------|---|---|
|                      | 只袋         | 袋盒 | 只盒 | 盒箱 | 只箱 | 袋                          | 盒 | 箱 |
|                      |            |    |    |    |    |                            |   |   |

/ AMMO

| Package Type<br>封装形式 | Units 包装数量 |     |      |    |    | Dimension 包装尺寸 (unit: mm3) |          |
|----------------------|------------|-----|------|----|----|----------------------------|----------|
|                      | 只纸带        | 纸带盒 | 纸带层盒 | 盒箱 | 只箱 | 盒                          | 箱        |
|                      |            |     |      |    |    |                            | 小箱<br>大箱 |

/ Notices