

**/ Descriptions**

TO-251          PNP          Silicon PNP transistor in a TO-251 Plastic Package.

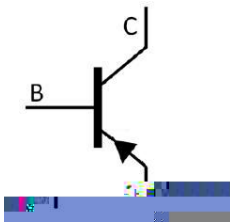
**/ Features**

$\beta$ ,  $h_{FE}$   
Low saturation voltage, excellent  $h_{FE}$  linearity and high  $h_{FE}$ .

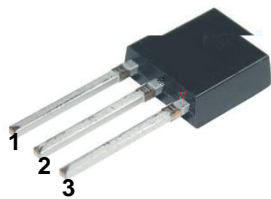
**/ Applications**

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

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

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

$h_{FE}$ Classifications Symbol	R	Q	P	E
$h_{FE}$ Range	60 120	100 200	160 320	200 400

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

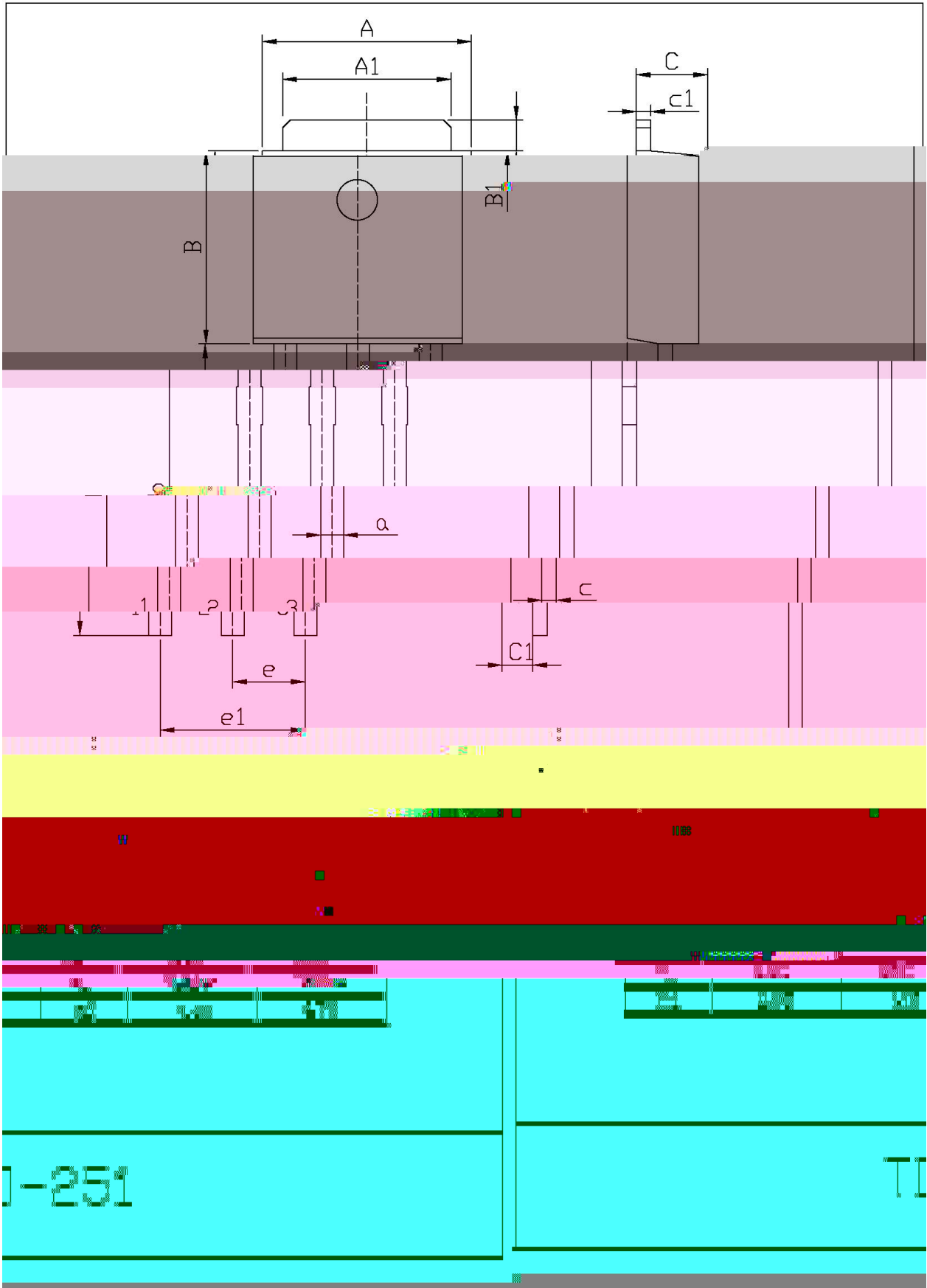
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-40	V
Collector to Emitter Voltage	$V_{CEO}$	-30	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-3.0	A
Collector Power Dissipation	$P_C$	1.0	W
Collector Power Dissipation	$P_C(T_C=25 )$	10	W
Junction Temperature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

**/ Electrical Characteristics(Ta=25 )**

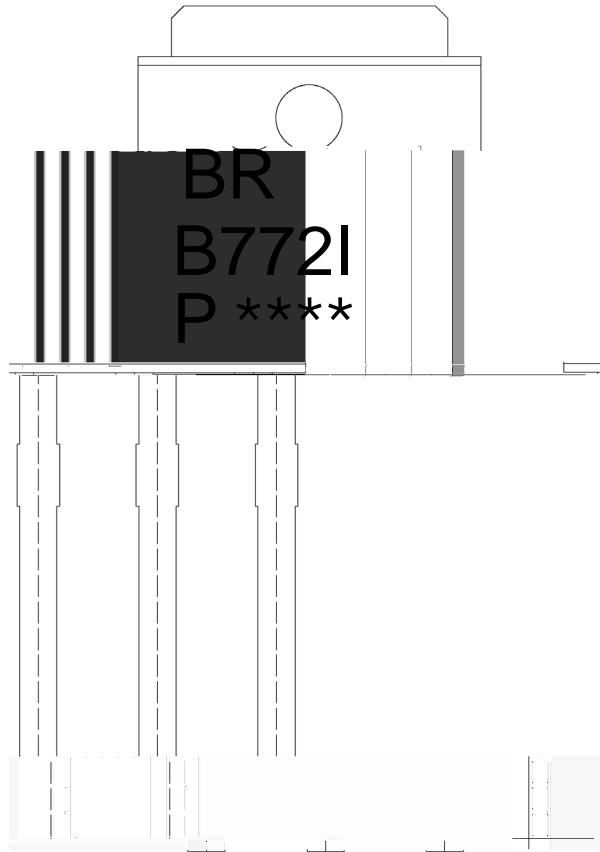
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-30V$ $I_E=0$			-1.0	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-3.0V$ $I_C=0$			-1.0	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2.0V$ $I_C=-1.0A$	60	160	400	
	$h_{FE(2)}$	$V_{CE}=-2.0V$ $I_C=-20mA$	30	220		
Collector 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	$f_T$	$I_C=-0.1A$ $V_{CE}=-5.0V$		80		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		55	-5.3pF	

**2SB772I**  
Rev.E Mar.-2016

/ Package Dimensions



/ Marking Instructions



BR

B772I

P:  $h_{FE}$

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Note:

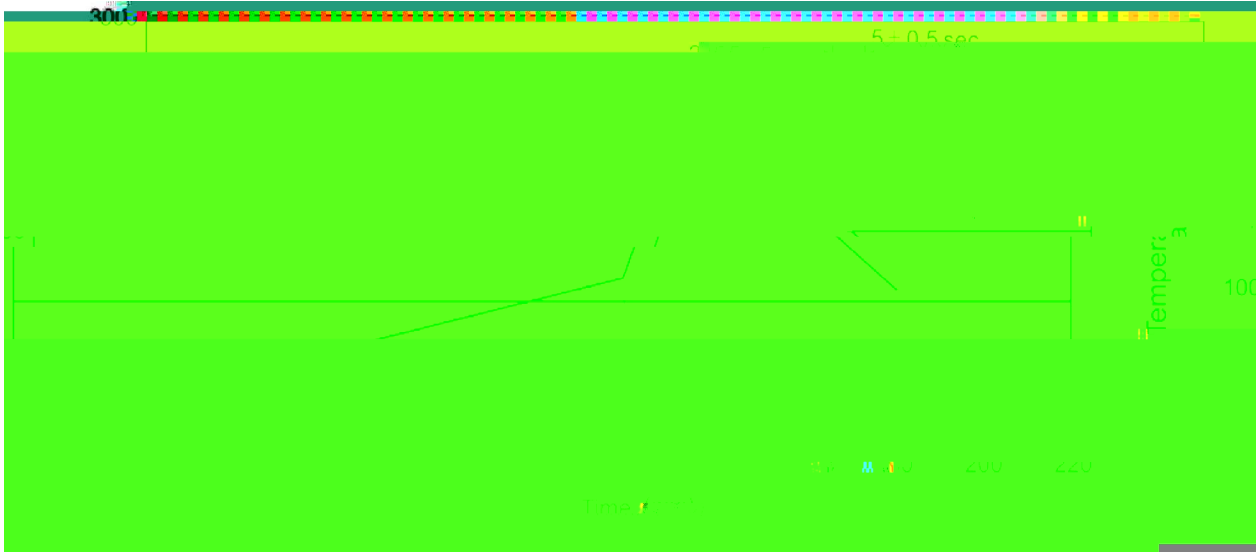
BR: Company Code

B772I: Product Type.

P:  $h_{FE}$  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 <sup>3</sup> )		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-251	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

/ **TUBE**

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ **Notices**