

**/ Descriptions**

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

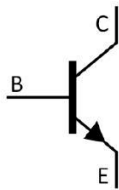
**/ Features**

3CG5610  
Low saturation voltage, complementary pair with 3CG5610.

**/ Applications**

Power amplifier and switching application, electronic governor applications.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

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

$h_{FE}$ Classifications Symbol	B	C
$h_{FE}$ Range	60 150	120 240

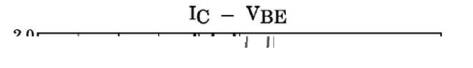
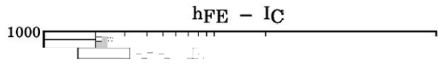
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	25	V
Collector to Emitter Voltage	$V_{CEO}$	20	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current (DC)	$I_C$	1.0	A
Collector Power Dissipation	$P_C$	900	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 150	°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=10\mu A$ $I_E=0$	25			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0mA$ $I_B=0$	20			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=10\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=25V$ $I_E=0$			1.0	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0$			1.0	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=0.5A$	60		240	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=1.0A$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=800mA$ $I_B=80mA$			0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=800mA$ $I_B=80mA$			1.2	V
Transition Frequency	$f_T$	$V_{CE}=2.0V$ $I_C=500mA$	80			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		15		pF

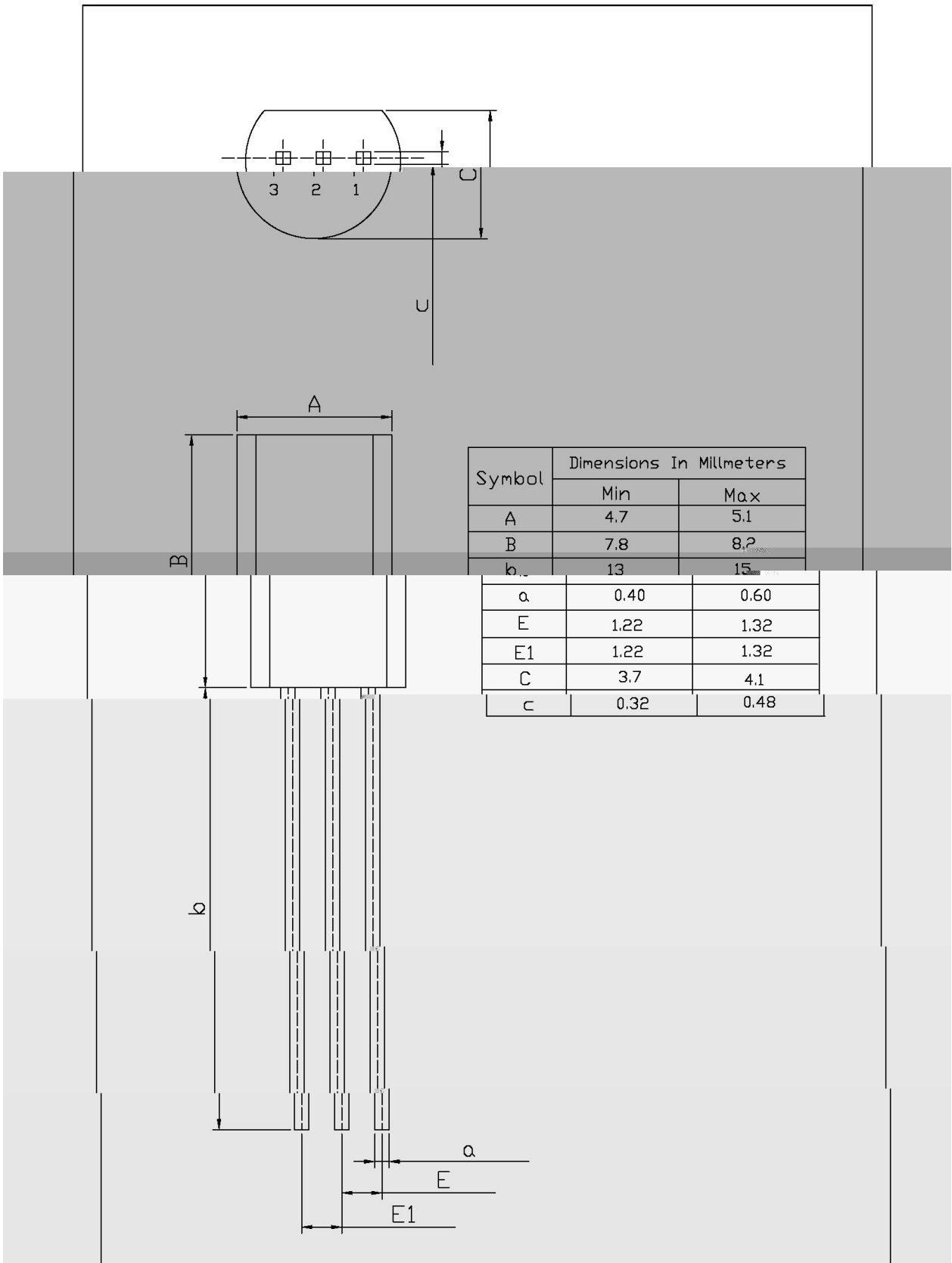
**/ Electrical Characteristic Curve**



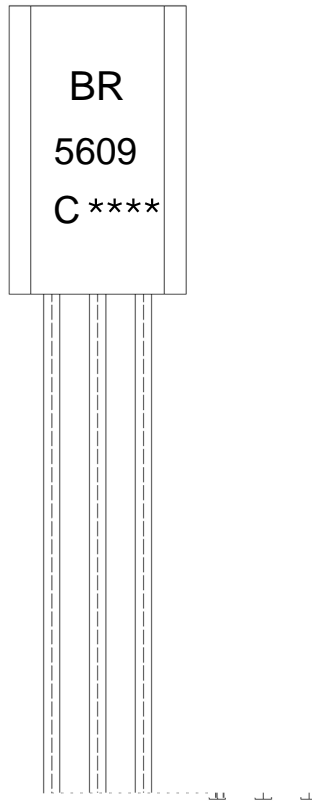
**/ Package Dimensions**

T0-92LM

Unit: mm



/ Marking Instructions



BR:

5609

C:  $h_{FE}$

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Note:

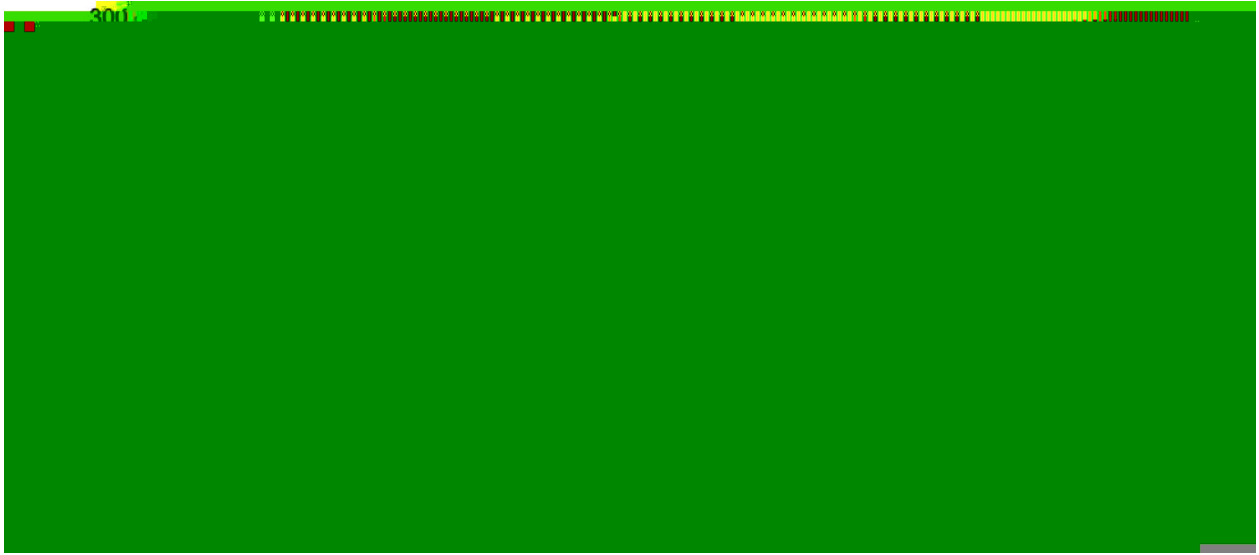
BR: Company Code.

5609: 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±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: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92LM	1,000	8	8,000	5	40,000	135×190	237×172×102	560×245×195

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92LM	2,500	1	100	10	25,000	328×230×42	小箱 480×346×235 大箱 547×407×268

/ Notices